Delgado Community College
Purchasing Department
501 City Park Avenue, Bldg. 37
New Orleans, Louisiana 70119
(504) 762-3027

Invitation to Bid

Bid Name:
R0026927 – Interior & Exterior Lighting Fixtures

Due by & to be opened on:
November 1, 2023 at 2:00PM CST

Contact Person:
Tracey Sheffield
Purchasing Director
(504) 762-3029

_____
NAME OF COMPANY

_____
ADDRESS

_____
CITY, STATE, ZIP

_____
PHONE NUMBER FAX NUMBER EMAIL

_____
SIGNATURE OF COMPANY REPRESENTATIVE

_____
NAME (PRINTED) & TITLE OF COMPANY REPRESENTATIVE

***** This form must be completed and submitted with your bid***

I. GENERAL INFORMATION

Any questions regarding this Invitation to Bid shall be in writing and shall be addressed to Tracey Sheffield at the following address:

Delgado Community College
O'Keefe Administration Building
501 City Park Avenue, Building 37
New Orleans, La 70119
Email: purchasingdept@dcc.edu
Fax: (504) 762-3089

Any additional information resulting from such inquiries shall be distributed to all bidders via addenda. The College will not be responsible for any other explanation of the documents.

Sealed bids may be submitted by mail or in person. Faxed or emailed Bids not accepted. Mailed bids and hand carried bids shall go to the address in item #1. If hand carried, Bids are to be delivered directly to the Purchasing Office. Do not leave on counter unattended. The bid name and number must be on the outside of the packaging, including any express mail packaging. Please note that express mail or USPS carriers may not deliver directly to 501 City Park Avenue. The bidder/proposer is solely responsible for ensuring that its courier service provider makes inside deliveries to 501 City Park Avenue.

3. Each bidder is solely responsible for the accuracy and completeness of its bid. Errors or omissions may be grounds for rejection, or may be interpreted in favor of the College.

4. Each bidder is solely responsible for the timely delivery of its bid. Delgado Community College will not be responsible for any delays in the delivery of bids, whether delayed in the mail, or for any reason whatsoever.

5. Only the issue of a purchase order or a signed acceptance of a proposal constitutes acceptance on the part of the College.

6. Assuming there is no prompt payment discount provision, payment will be made within 30 days from receipt of products in satisfactory condition, or within 30 days from receipt of invoice, whichever is later.

7. Proposer or bidder, contractor, etc. certifies, by signing and submitting a proposal for $25,000 or more, that their company, any subcontractors, or principals are not suspended or debarred by the General Services Administration (GSA) in accordance with the requirements in OMB Circular A-133. (A list of parties who have been suspended or debarred may be viewed via the internet at www.epls.gov .)

II. INSTRUCTIONS & REQUIREMENTS FOR BIDDERS

Delgado Community College is seeking bids to provide interior & exterior lighting fixtures as outlined on the Bid Form. No labor is associated with this purchase. Materials are to be shipped to the City Park Campus which is located at 615 City Park Avenue, New Orleans, LA 70119. Successful Bidder must contact the Receiving Department to arrange for onsite delivery of all materials. **Materials must be received within (4) four weeks from receipt of the purchase order**

QUALIFICATIONS

Vendors Bidding this contract shall be in the business of supplying commercial grade lighting products for at least eight (8) years.

PRE-BID/JOBSITE VISIT:

N/A

ADDENDA:

Any questions arising from the specifications must be addressed in writing to the individual indicated in Section I, General Information, and will be answered via an Addendum. All questions must be submitted no later than **Wednesday, October 18, 2023 by 12:00PM CST**. A final 48-hour period after the issuance of the Addendum will be granted for questions which are directly related only to the answers provided in the Addendum.

Any interpretation, correction or change of the Bidding Documents will be made by addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes. The Bidder must acknowledge all issued addenda in the space provided on the Bid Form. Failure to acknowledge addenda will render the bid informal and will cause its rejection.

Bid Documents and Addenda may be downloaded from
https://wwwcfprd.doa.louisiana.gov/osp/lapac/dspBid.cfm?search=department&term=39

BID SUBMITTAL:

Bids must be sealed with the **Bidder's name, along with the name and number of the bid clearly written on the front of the envelope**. Bids are to be delivered to the person and location in Section I, General Information by the date and time stated on the title page. Faxed or emailed bids are not acceptable. If shipping via express mail, all information as listed above must be on the outside of the shipping packaging. Bids received without this information or after the due date and time will be automatically disqualified.

Bids **must be submitted on the forms furnished** for this purpose and must be filled out in ink or typewritten and signed in ink. Do not erase, correct, or write over any prices or figures necessary for this proposal. If any corrections are necessary, each must be initialed by bidder. Failure to comply with the above requirements will cause your bid to be disqualified.

Effective August 15, 1997, in accordance with L.R.S. 39:1594 (Act 121), the person signing the bid must be:

a) A current corporate officer, partnership member or other individual specifically authorized to submit a bid as reflected in the appropriate records on file with the Secretary of State; or
b) An individual authorized to bind the vendor as reflected by an accompanying corporate resolution, certificate, or affidavit.

By signing the bid, the bidder certifies compliance with the above.

MODIFICATION OR WITHDRAWAL OF BID:

A bid may not be modified, withdrawn, or canceled by the Bidder for a period of thirty (30) calendar days for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with R.S. 39:1594,F.

Prior to the time and date designated for receipt of bids, bids submitted early may be modified or withdrawn only by notice to Delgado Community College Purchasing Office at the place and prior to the time designated for receipt of bids.

Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.

BIDDER REPRESENTATION:

By signing and submitting a bid, Bidder acknowledges that he/she has, read and understands the Bidding Documents and his bid is made in accordance therewith.

The Bidder agrees that his/her bid is based solely upon the materials, systems and equipment described in the Bidding Documents as advertised and as modified by addenda. The bid submitted is not based on any verbal instructions contrary to the Bidding Documents and addenda.

END OF SECTION II

III. TERMS AND CONDITIONS

GENERAL TERMS & CONDITIONS:

1. Effective September 1, 1991, in accordance with Act 1029 of the 1991 Regular Legislative Session, Delgado Community College will not be responsible for any sales tax, either state or local.

2. Bidder must be able to provide the materials within (4) weeks from receipt of the purchase order. Bids that cannot meet the required delivery timeframe may be disqualified.

3. All deliveries shall be made FOB Destination to the College unless otherwise specified by the College. All freight charges are to be clearly stated on the bid form. The College will not be responsible for freight charges not clearly stated as a part of this bid.

4. Delgado Community College reserves the right to reject any and all bids and to waive any informality.

5. It shall be distinctly agreed and understood that the price quoted must be a firm price, and not be subject to change at time of the shipment of goods or delivery of services.

6. All items delivered shall be subject to inspection as to grade and/or quality. If any item is inspected and fails to meet the specifications, the delivery already made will be held for the Vendor's disposition or returned to the Vendor via Freight Collect. If the Vendor fails to make satisfactory replacement within a reasonable time as determined by the College, the College reserves the right to cancel the item and to purchase it elsewhere.

7. If item(s) or services bid do not fully comply with specifications, including brand and/or product number, bidder must state in what respect the item(s)/services deviate. Failure to note exceptions on the bid form will not relieve the successful bidder from supplying the actual products or services requested.

8. It is the intent of the College to award to a sole Bidder. However, the College reserves the right to award the above items separately, grouped, or on an all-or-none basis, and to reject any or all bids and to waive any informalities including technicalities in specifications that preclude competition.

9. Bidders must bid as specified.

10. Bids must be submitted in a sealed envelope with the bidder's name, and the name and number of the bid written on the front of the envelope. Bids received without this information will be disqualified.

11. The above quantities are estimated to be the amounts needed. In the event a greater or lesser quantity is needed, the right is reserved by the College to increase or decrease the amount at the unit price stated in the bid.

12. In the event a greater quantity is needed, the right is reserved by the College to increase the amount, at the unit price stated in the bid, for six (6) months from the date of award.

13. If the Vendor fails to make delivery within a satisfactory time as determined by the College, the College reserves the right to cancel the item and to purchase it elsewhere, charging the increase in price and cost of handling, if any, to the Vendor making the original unsatisfactory or late delivery.

14. It shall be specifically agreed and understood that the Bidders may attend the Bid opening. They shall, whenever any award is considered, furnish specific samples for examination upon request by the College. It shall also be specifically agreed and understood that the decision of the College shall be final.

15. No information will be given out as to opinions concerning the ultimate outcome while consideration of the award is in progress.

16. The college reserves the right to cancel this contract upon thirty (30) days written notice for failure of the Vendor to deliver on time, for delivery of unsatisfactory merchandise, or for any unsatisfactory performance by the Vendor as determined by the College.

17. Materials must be new and sealed in their original packaging.

18. Successful bidder will be responsible for the unloading and placing of equipment and/or supplies in the location designated by the College. Bidder must schedule an appointment with the receiving department prior to delivery.

19. In case of default by the Vendor, the College reserves the right to purchase any or all items in default on the open market, charging Vendor with any excessive costs. Should such charge(s) be assessed, no subsequent bids of the defaulting Vendor will be considered until the assessed charge(s) have been satisfied.

20. List of distributors: The Vendor signing the bid shall be designated as the Prime Vendor on any contract/agreement resulting from this bid. If additional Vendors are authorized to receive orders for items covered under this proposal, the Vendor must submit, with bid, a list of those additional authorized distributors.

21. The terms and conditions of this purchase are to be governed by the laws of the State of Louisiana. No other terms and conditions may supersede.

22. By signing and submitting a Bid , the Bidder agrees to abide by all terms and conditions set forth in this solicitation.

FORM OF AGREEMENT:

The Form of Agreement between the College and Contractor for the work set forth herein will be the issuance of a purchase order.

PAYMENT:

Vendor will be paid via Net (30) terms after receipt of all materials. No pre-payment or deposits will be allowed.

Invoices must be submitted to the College's Office of Accounts Payable and clearly indicate the Purchase Order Number assigned by the Delgado Purchasing office. All material must be itemized per the unit pricing per their submitted Bid.

INQUIRIES, INTERPRETATION OR CORRECTION TO BIDDING

Any questions arising from the specifications must be addressed in writing and will be answered via an Addendum.

Any interpretation, correction or change of the Bidding Documents will be made by addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

DISCRIMINITORY PRACTICES:

Delgado Community College of the State of Louisiana is an equal opportunity employer and looks to its contractors, subcontractors, vendors, and suppliers to take affirmative action to affect this commitment in its operations.

Both the College and the bidder shall abide by the requirements of Title VII of the Civil Rights Act of 1964, and shall not discriminate against employees or applicants due to race, color, religion, sex, handicap or national origin. Furthermore, both parties shall take affirmative action to provide for positive posture in employing and upgrading persons without regard to race, color, religion, sex, handicap, or national origin, and shall take affirmative action as provided in the Vietnam Era Veteran's Readjustment Act of 1974. Both parties shall abide by the requirements of Title VI of the Civil Rights Act of 1964 and the Vocational Rehabilitation Act of 1974 to ensure that services are delivered without discrimination due to race, color national origin or handicap. Both parties shall comply with the requirements of the Americans with Disabilities Act of 1990 which bans discrimination in employment or in delivery of services on the basis of sexual orientation.

SUBCONTRACTORS/SUPPLIERS:

The successful Bidder will be the prime contractor. The College will not be responsible for any third-party agreements or negotiation between the Bidder and their supplier(s)

SUBSTITUTIONS AND EQUIVALENTS:

Bidders must Bid as specified.

END OF SECTION III

IV. BID FORM (2 Pages)

R0026927 – Interior & Exterior Lighting Fixtures

NOTES:

- Bidder must provide pricing per the unit of measurement as listed on the Bid Form.
- Bid prices listed in any other manner will not be accepted.
- **Bids must be submitted on this form. Vendors own quote is not be acceptable.**
- Bid as specified.
- Shipping must be included in the unit price. Separate Freight & Handling not accepted
- Installation labor and I-pads for Controls to be provided by others
- Materials are to be new and carry the manufacturer's warranty.

No.	Item	Qty	UOM	Price Ea	Extended Price
1.	Nora LED 2x2 Backlit Panels, Selectable Wattage & Amp; CCT (30/36/40K), 120-347V, White, 0-10V Dimming **Item #NPDBLSW-E22/334V**	111	EA		
2.	Nora Flange Kit, White Finish for 2x2 Recessed Mounting, LED Edge-Lit & Amp; Back Lit Panels **Item #NPDBL-22RFK/W**	25	EA		
3.	Nora 20W Emergency LED Driver with Remote Test Switch 100-347Vac **Item #NEPK-20LEDUNV**	16	EA		
4.	LUX Illuminaire Recessed LED Linear Light **Item #ARX.-R-XX-500-8-35K-8-UNV-S1-XX**	2	EA		
5.	Nora 6" Quartz LED Downlight with Selectable Lumens and CCT, Matt Powder White **Item #NQZ2-61TWTW-MPW**	37	EA		
6.	Matteo Reigndrop, Aged Gold Brass, Silver Fabric Cord **Item #C63101AG**	15	EA		
7.	Nora Compact Dual Head LED Emergency Light **Item #NE-612LEDW**	15	EA		

8.	Nora Adjustable LED Edge Lit Sign, Battery Backup, Green Letters, Double Face **Item #NX-812-LEDG2MA**	12	EA		
9.	Nora 20W Emergency LED Driver with Remote Test Switch 100-347Vac **Item #NEPK-20LEDUNV**	2	EA		
10.	AFX Rowan 36” LED Outdoor Wall Sconce **Item #RWNW073640LAJ2TG**	8	EA		
11.	AFX Dexter 2-Light LED Outdoor Wall Sconce **Item #DEXW060624L30MVBK**	8	EA		
12	Nora 6” Quartz LED Downlight with Selectable Lumens and CCT, Matt Powder White **Item #NQZ2-61TWTW-MPW**	21	EA		
13.	Satco Nuvo 40W Adjustable Wall Pack **Item #65/678**	2	EA		
14.	1882 Lighting Austin T52 Light Column **Item #1882 AUST52Q-F-1X18**	9	EA		
15.	Lutron Claro Single Pole Switch **Item #CA-1PS-WH**	21	EA		
16.	Lutron Claro 3-Way Switch **Item #CA-3PS-WH**	4	EA		
17.	LVS Emergency Power Control for 4-Wire Dimmable Loads **Item #LUT-ALCR-D (1-49 PC)**	3	EA		
18.	Lutron Maestro Motion Sensor Switch, No Neutral required, 250 Watts Single-Pole, White **Item #MS-OPS2-WH**	5	EA		
19.	Lutron Pico Wireless Control, 2-Button, White **Item #PJ2-2B-GWH-L01**	5	EA		

20.	Lutron Pico Wireless Remote Controller, 2-Button Raise/Lower **Item #PJ2-2BRL-GWH-L01**	20	EA		
21.	Lutron Pico Wireless Control – 4-Button Scene, White **Item #PJ2-4B-GWH-L31**	5	EA		
22.	Lutron PP-SH Power Pack **Item #PP-SH**	1	EA		
23.	Lutron Dual Technology Ceiling Mount Sensor, White, 2000' Coverage, 360 Degree Field of View **Item #LOS-CDT-2000-WH**	1	EA		
24.	Lutron Wall/Ceiling Mount Sensor, Touchless Control **Item #LRF2-OCR2B-P-WH**	3	EA		
25.	Lutron Vive Wireless Hub **Item #HJS-1-FM**	2	EA		
26.	Lutron Vive PowPak Relay Module with Softswitch **Item #RMJS-16R-DV-B**	1	EA		
27.	Lutron Vive PowPak Dimming Modules with 0-10 V Control **Item #RMJS-8T-DV-B**	27	EA		
28.	Lutron Vive PowPak Dimming Modules with 0-10 V Control **Item #RMJS-8T-DV-B-EM**	3	EA		
29.	Lutron PP-DV Power Packs **Item #PP-DV**	1	EA		
30.	Lutron Single Gang Wallplate, Gloss/Stainless Steel, White **Item #CW-1-WH**	51	EA		
31.	Lutron Double Gang Wallplate, Gloss/Stainless Steel, White **Item #CW-2-WH**	3	EA		

32.	Lutron Triple Gang Wallplate, Gloss/Stainless Steel, White **Item #CW-3-WH**	1	EA		
33.	Lutron Pico Wallbox Mounting Adapter **Item #PICO-WBX-ADAPT**	30	EA		
34.	Nova Flex RGBW-64' with Channel and Controls **Item #NF/SP-RGBW-60-24V-3225K**	64	EA		
35.	Nova Flex RGBW-16' **Item #NF/SP-RGBW-60-24V-3225K**	16	EA		
36.	Nova Flex 100W Non-Dimmable Driver **Item #NF-PS-HLG100W24V-HW**	5	EA		
37.	Nova Flex 35W Non-Dimmable Driver **Item #NF-PS-35W-24V-HW**	1	EA		
38.	Nova Flex S3i Wireless Receiver **Item #NF-S3I-WR-1009**	5	EA		
39.	Nova Flex S3i Controller RGBW Touch Panel **Item #NF-S3I-TP-RGBW**	1	EA		
40.	Nova Flex Surface 3525 Channel **Item #NF-CH-3525-2M**	12	EA		
41.	Nova Flex Surface 3525 Channel **Item #NF-CH-3525-C/CLEAR-2M**	12	EA		
42.	Nova Flex RGBW 42' **Item #NF/SP-RGBW-W-60-24V-3225K**	42	EA		
43.	Nova Flex RGBW 45' **Item #NF/SP-RGBW-W-60-24V-3225K**	45	EA		
44.	Nova Flex 100W Non-Dimmable Driver **Item #NF-PS-HLG100W24V-HW**	6	EA		
45.	Nova Flex 35W Non-Dimmable Driver **Item #NF-PS-35W-24V-HW**	1	EA		
46.	Nova Flex S3i Wireless Receiver **Item #NF-S3I-WR-1009**	6	EA		

47.	Nova Flex S3i Controller RGBW Touch Panel **Item #NF-S3I-TP-RGBW**	1	EA		
48.	Nova Flex Surface 3525 Channel **Item #NF-CH-3525-2M**	13	EA		
49.	Nova Flex Surface 3525 Channel **Item #NF-CH-3525-C/CLEAR-2M**	13	EA		
50.	Nova RGBW Programming **Item #BMLC-DMX-1**	1	EA		
51.	Lutron Vive System On-Site Full Scope Startup (for controls lines 15-33) **Item # LSC-OS-SU-VIVE**	1	EA		
52.	Lutron Commercial Systems 2-Year Limited Warranty **Item # LSC-B2**	1	EA		

TOTAL PRICE $ _____

Lines 1-8 – Interior Lighting
Lines 9-13 – Exterior Lighting
Line 14 – Landscape Lighting
Lines 15-23 – Interior& Exterior Lighting Controls
Lines 34-41 – Interior Tape Light Controls
Lines 42-49 – Exterior Tape Light Controls

For cut sheets of all items, please email your request to purchasingdept@dcc.edu for a secure download link

BID FORM PAGE 2 - R0026924

Acknowledgement of all addenda is mandatory.

Addendum No: _____ Dated: _____ Addendum No: _____ Dated: _____

Addendum No: _____ Dated: _____ Addendum No: _____ Dated: _____

Bidder declares and represents that he; a) has carefully examined the Bidding Documents, b) has a clear understanding of the Bidding Documents, c) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents, d) has had opportunity to submit any questions for clarification all in accordance with the Bidding Documents as prepared by the College Purchasing Office.

By signing below, the Bidder agrees that he/she complies with all bid requirements, instructions, specifications, terms and conditions and special conditions as stated in the bid.

Signature _____

Title_____

Company_____

***Bid must be submitted on this form**

NPDBL Series

LED Backlit Panels
Source: 30W to 45W LED
3500lm to 5700lm

Type Line 1
Project
Catalog No.
Notes

PRODUCT DESCRIPTION
LED Backlit can be utilized in offices, conference rooms, libraries and other tasks areas where general illumination is desired. The white diffused lens optimizes output while diffusing LED diode image. LED Backlit Panels are available in field selectable color temperature (3000K, 3500K or 4000K) or a dedicated 5000K.

FEATURES
- Dedicated 5000K CCT or Field Selectable Color Temperature (3000K, 3500K or 4000K)
- 1' x 4', 2' x 2' or 2' x 4' sizes
- Surface, pendant & hard ceiling recessed kits available
- Universal 120-347V input with 0-10V dimming
- cULus listed for damp location

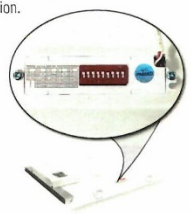
SPECIFICATION
Construction: An array of LEDs are mounted on the back of aluminum frame. White opalescent diffused lens optimizes output while reducing LED diode image. The construction seals the conditioned air from the plenum or non-conditioned air, eliminates bugs or dirt getting to top of lens for savings on maintenance cost.

Lens: PMMA (Polymethyl methacrylate) lens is lightweight and shatter resistant. Additional screws are provided to keep luminaire tight and free of bugs and insects.

Clearance: "IC" Insulated ceiling housings are direct contact rated. **Not to be used in direct contact with spray foam insulation.**

Installation: Wiring compartment is on the back of panel and includes replaceable driver, which is accessible via a service door secured with two screws. Wiring compartment consists of three ½" knockouts for romex or flex wiring.

Optional motion sensor: Microwave motion sensor can detect motion under the luminaire. Integral switches allow functionality to be changed in the field. Motion Sensor is preset at 100% sensitivity, 5s hold time, Disable daylight threshold, stand-by time off, and 10% dimming level. (See installation sheet for other setting). After each power cycle, the fixture will perform a start-up cycle and resume normal operation.



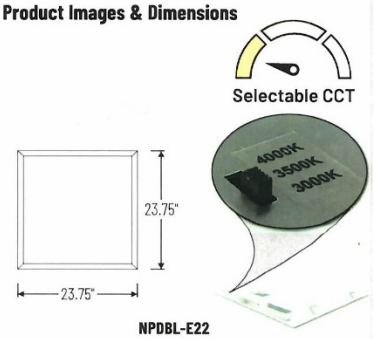
ELECTRICAL
Input: 120-347V (120-277V with emergency battery)
Lumens / Wattage:
2' x 2': Average of 3500lm / 30W (Tunable White) or 3500lm / 30W (5000K)
1' x 4': Average of 3500lm / 30W (Tunable White)
2' x 4': Average of 5600lm / 45W (Tunable White) or 5700lm / 45W (5000K)
Color Temperature:
Tunable White: Field Selectable - 3000K / 3500K / 4000K (Preset at 3000K)
Dedicated: 5000K
Color Rendering Index: 80+CRI
Operating Temperature: 0°C to 45°C
Lifetime: 60,000 hours @ L70
Dimming: 0-10V dimming down to 5%
(Motion sensor is not compatible with 0-10V dimming)
Click Here or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab

ACCESSORIES
NPDBL-JB4X4: 4" Junction Box to allow panels to be daisy chained (4-in / 4-out)
NPDBL-xxDFK/W: Surface Mount Frame to allow panels to be mounted over junction box
NPDBL-xxDDFK/W: Surface Mount Frame for panels with emergency or motion sensor
NPDBL-xxRFK/W: Recessed Mounting Kit to allow panels to be recessed into hard ceiling
NPDBL-PKW: Pendant Mounting Kit to suspend panels from monopoint canopy

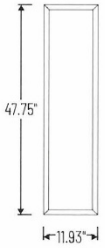
Emergency: Luminaire can be specified with 120-277V emergency battery with remote test switch. Battery operates luminaire at 7W for 90 minute emergency operation on fully charged battery.
Note: EM option not compatible with pendant mounting kit accessory

LABELS AND LISTINGS
- cULus Listed for Damp Locations
- DLC Listed
- FCC certified
- 5-Year Limited Warranty

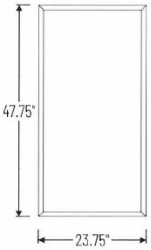
Product Images & Dimensions



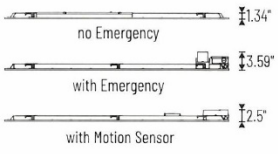
NPDBL-E22
2' x 2' LED Backlit Panel



NPDBL-E14
1' x 4' LED Backlit Panel



NPDBL-E24
2' x 4' LED Backlit Panel



LED Backlit Panels*

Size / Lumens / Wattage	Color Temperature	Finish	Optional Emergency
NPDBL-E22 = 2' x 2' / 3500lm / 30W **NPDBL-E14** = 1' x 4' / 3500lm / 30W **NPDBL-E24** = 2' x 4' / 5600lm / 45W	**/334** = Tunable White 3000K / 3500K / 4000K	**W** = White	**EM** = Emergency with Remote Test Switch **MS** = Motion Sensor
NPDBL-E22 = 2' x 2' / 3500lm / 30W **NPDBL-E24** = 2' x 4' / 5700lm / 45W	**/50** = Dedicated 5000K	**W** = White	**EM** = Emergency with Remote Test Switch

*** PACKAGED AND SOLD IN MULTIPLES OF TWO**

Optional Accessories

Accessories for all sizes
NPDBL-JB4X4 = 4" Junction Box for Daisy Chaining
NPDBL-PKW = Pendant Mounting Kit

Panel Size	Accessory Type
NPDBL-14 = 1' x 4'	**DFK/W** = Surface Mount Frame
NPDBL-22 = 2' x 2'	**DDFK/W** = Surface Mount for EM or MS
NPDBL-24 = 2' x 4'	**RFK/W** = Recessed Mounting Kit

Example: **NPDBL-E24/50W** = 2' x 4' LED Backlit Panel, 5700lm / 45W, 5000K, White finish

NORA LIGHTING
6505 Gayhart Street, Commerce, CA 90040
TEL 323.767.2600 | www.noralighting.com | e-mail: nora@noralighting.com

050323P1-2

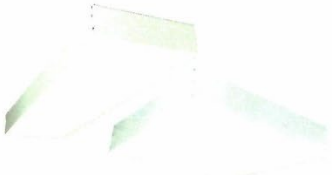
NPDBL Series
LED Backlit Panel Accessories

Type Line 2
Project
Catalog No.
Notes

Surface Mounting Frame

NPDBL-14DFK/W	1' x 4' / White Finish
NPDBL-22DFK/W	2' x 2' / White Finish
NPDBL-24DFK/W	2' x 4' / White Finish

The frame mounts over an existing junction box and the panel slides into place. Surface mounting frame only extends 2.5" from the ceiling. Can be used with NPDBL-PKW pendant kit.
Note: Junction box must be off center frame.



Surface Mounting Frame for Emergency or Motion Sensor

NPDBL-14DDFK/W	1' x 4' / White Finish
NPDBL-22DDFK/W	2' x 2' / White Finish
NPDBL-24DDFK/W	2' x 4' / White Finish

The frame mounts over an existing junction box and the panel slides into place. Surface mounting frame extends 4.33" from the ceiling. Can be used with NPDBL-PKW pendant kit.
Note: Junction box must be off center frame.

Recessed Mounting Kit

NPDBL-14RFK/W	1' x 4' / White Finish
NPDBL-22RFK/W	2' x 2' / White Finish
NPDBL-24RFK/W	2' x 4' / White Finish

The white finished flange kit consist of four pieces. The assembled frame installs into a hard ceiling. The panel lifts and shifts in the frame ending in a finished flush appearance.

Pendant Mounting Kit

NPD-PK	Aluminum Finish
NPDBL-PKW	White Finish

Allows LED panels to be suspended as a pendant. Grip lock fasteners allow for easy field adjustment of cables from 12" to 96". Canopy includes an 8' power card that can be shortened in the field. Pendant kit may be used with surface mount frames for an alternative appearance.

Canopy Dimension: 6" width / 0.75" height / 8'-6" cord & cable

4" Junction Box for Daisy Chaining

NPDBL-JB4X4

Junction box mounts on panel to allow them be daisy chained together on the same switch (4-in / 4-out)

NEPK-20LEDUNV

Emergency LED Driver with Remote Test Switch
Output Power: 20W

Type Line 3
Project
Catalog No.
Notes

PRODUCT DESCRIPTION

Emergency LED driver for use with new or existing LED luminaires. Driver's circuitry automatically switches the luminaire between emergency and normal power operation during power loss and restoration. Operates at a reduced level for a minimum of 90 minutes to allow safe egress during power outage. Upon restoration to normal AC operation, the emergency driver returns to charging mode.

FEATURES

- Listed for field installation - UL 924 and CSA C22.2 No 141-15
- Controlled power for predictable discharge
- Universal input (100 through 347VAC, 50/60Hz)
- Includes wall plate with test switch

ELECTRICAL

Input Voltage: 100-347VAC, 50/60Hz
Output Voltage: 170VDC
Input Power: 12W 0.1A max. (depending on luminaire)
Output Wattage: 20W
Emergency On-Time: 90 minutes
Operating Temperature: 5°-50°C

OPERATION

When AC power fails, the driver immediately switches to the emergency mode, operating the LEDs at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the emergency driver automatically returns to the charging mode.

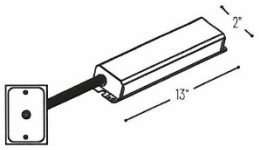
BATTERY

High-temperature, maintenance-free Li-ion battery. Requires 24 hours to recharge battery.

LABELS AND LISTINGS

- UL 924, Emergency LED Driver
- CSA 22.2 No 141-15
- cULus Listed for damp locations
- Certified to the energy efficiency standards of California Title 20
- 5-Year Limited Warranty
- FCC Compliant

PRODUCT IMAGES AND DIMENSIONS



Emergency LED Driver with Remote Test Switch

Catalog No.

NEPK-20LEDUNV = 20W Emergency LED Driver with Remote Test Switch

Example: **NEPK-20LEDUNV** = 20W Emergency LED Driver with Remote Test Switch

NORA LIGHTING
6505 Gayhart Street, Commerce, CA 90040
Tel 800.686.6672 | www.noralighting.com | e-mail: nora@noralighting.com

092122P1

THE EOS 3.0 RECESSED

LUX ILLUMINAIRE

Line 4

UP TO 112 lm/W PERFORMANCE	
DIRECT LIGHT	WATTS PER FOOT
375 lm/ft	3.65
500 lm/ft	4.70
750 lm/ft	7.25
1000 lm/ft	9.85

Performance based on 4-foot luminaire at 4,000K @ 25-degrees C

LIGHT LOSS FACTOR		
CCT	CRI	%
4000K	84+	100%
3500K	84+	97.1%
3000K	84+	95.7%
2700K	84+	94.1%
4000K	92+	88.9%
3500K	92+	85.5%
3000K	92+	83.8%
2700K	92+	82.4%

STANDARD FINISHES
Black, White, & Silver

LUX | ENABLED

CCEA Approved · IC Rated · Suitable for Damp Locations · UL CERTIFIED SAFETY US-CA · 5 YEAR WARRANTY · MADE IN U. S. A.

ORDER GUIDE

EOS 3.0-R										OPTIONS
A	B	C	D	E	F	G	H	I	J	K, L, M (Multiple Selections)

A. MODEL
- EOS 3.0-R

B. TRIM
- G — Grid
- FT — Flange Trim
- TL — Trimless Spackle Flange

C. DIRECT OPTICS
- LAM — Lambertian
- ASY — Asymmetric
- BAT — Batwing
- GRZ — Graze

D. DISTRIBUTION
- 375 — 375 lm/ft
- 500 — 500 lm/ft
- 750 — 750 lm/ft
- 1000 — 1000 lm/ft
- XXX — Custom lm/ft

E. LENGTH
- 2 — 2 ft (24 in)
- 3 — 3 ft (36 in)
- 4 — 4 ft (48 in)
- 5 — 5 ft (60 in)
- 6 — 6 ft (72 in)
- 7 — 7 ft (84 in)
- 8 — 8 ft (96 in)
- XXX — System Run Pattern
- PATxSH

NOTES

Asymmetric direction is determined by lens position. Field adjustable for right or left throw.

Consult factory for outputs between min and max.

Refer to Pattern configuration guide below for nomenclature.
Please see Pattern Guide on p.2 for further details.

PAT	12X24	L	H
W	X	Y	Z

F. COLOR TEMPERATURE
- 27K — 2700K
- 30K — 3000K
- 35K — 3500K
- 40K — 4000K
- WCT — White Color Tuning 2700K - 6500K

WCT - max lm/f is 1000 based on 80 CRI and 4000K.

G. CRI
- 8 — 80+CRI
- 9 — 90+CRI

90 CRI option has an R9 value greater than 60.

H. VOLTAGE
- UNV — 120-277v
- 347 — 347v

347 may not be available in all configurations.

I. DRIVER
- S1 — 1% Dimming (0-10v)
- LDE1 — Lutron Hi-Lume 1% Fade to Black
- EL0 — Lutron 5 Series
- DXL — 0.1% EldoLED 1% Dexal
- DXL2 — Dexal 2-Chanel
- DALI — DALI 2.0 Compatible
- PSQ — Lutron T Series

AWNR-W, AWNR-B, VDO, VRF, SPD, & CLM options supplied with DXL driver standard.

OPTIONS

J. FINISH
- W — White
- B — Black
- S — Silver
- CC — Custom Colors

Consult factory for custom colors.

K. CONTROLS & FACTORY OPTIONS
- NONE — Leave Blank
- AWNR-W — Lutron Athena Wireless Node (RF-only) in White
- AWNR-B — Lutron Athena Wireless Node (RF-only) in Black
- VDO — Lutron Vive (RF/Daylight/Occ)
- VRF — Lutron Vive RF Fixture Control
- SPD — Osram SensiLUM Daylight/Harvest/Occ
- CLM — Osram Connecting Light Module (CLM)
- DAY — Wattstopper Daylight Sensor (FD-301)
- OCC — Wattstopper Occ Sensor (FS-205v2)
- DOC — Enlighted Daylight/ Harvesting Occ (SU-5E-01)
- EB — Emergency Battery (10-Watt)
- EC — Emergency Circuit
- NL — Night Light Circuit
- CP — Chicago Plenum

AWNR-W, AWNR-B, VDO, VRF, SPD, & CLM options supplied with DXL driver standard.

EB option only available for lengths 4ft or greater.

May choose multiple options in this category.

L. QUICKSHIP
- QS10 — QuickShip 10 - Day (Depletion Policy: Subject to Availability)

Please see note on p.2 for further details regarding QuickShip.

LIGHT SOURCE
Long life name brand LED chips and boards to ensure the highest of quality while providing even and smooth illumination throughout our luminaires.

Our luminaires are available in 2700K, 3000K, 3500K and 4000K color temperature as well as White Color Tuning (2700-6500K).

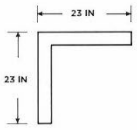
Optional 80CRI or 90CRI available in all CCT options.

LUMEN MAINTENANCE
The projected lumen maintenance of the name brand mid-powered LED's are projected to maintain 80% (L80) of their initial output for +80,000 hours.

CONSTRUCTION
The housings are constructed of (6063T5) extruded aluminum. Our internal joiner system is designed to the highest of standards to ensure our precision cut housings align and fit tightly without light leak. Our precision fitting end caps are constructed out of die cast aluminum and our steel reflectors are painted white.

FINISH
Polyester powder, low gloss textured paint finish applied after a multi-stage pretreatment. Standard luminaire finishes include white, silver, and black. Custom color options are available. (Consult Factory).

CORNERS
Precision mitered and seam welded corners are fully illuminated.



OPTICS
Snap in extruded frosted acrylic lens

DRIVERS
All of our luminaires come standard with 1% dimming and THD <20% utilizing 0-10v constant current protocol. 120v/277v is standard with the option of 347v. Driver ambient operating temperature -30°C to +50°C.

EMERGENCY
An integral factory installed 10 watt emergency battery pack. Emergency circuit and Night Light circuit options are available.

LUMINAIRE LENGTH
Our EOS 2.0 Recessed luminaire series are available in 2', 3', 4', 5', 6', 7' and 8' individual lengths or continuous row configurations. Continuous row configurations are joined together on-site utilizing the joiner kits provided.

LUMINAIRE WEIGHT
The approximate weight of a four foot luminaire is 16.8 lbs Including end caps assembled.

QUICKSHIP
QUICKSHIP

Indicates QuickShip option 10-day lead times.

Up to 750 linear feat or 150 individual luminaires.
Consult Factory for larger projects.

PLEASE NOTE:
- 10-day lead times do not include weekends or holidays.
- A clean order must be received by 12:00 PM EST. All orders received after 12:00 PM EST will be entered the following day.
- Changing orders of any kind will require a new ESD.
- All QuickShip items must be on a separate PO.

PATTERN GUIDE

W. PATTERN		X. PATTERN DIMENSIONS		Y. PATTERN CODE		Z. PATTERN ORIENTATION	
Pattern	PAT	Enter length of each segment in pattern separated by an "x"	AxB AxBxC	L Pattern Square or Rectangle T Pattern U Pattern X Pattern Z Pattern Custom Pattern - Sketch or Drawing Required	L S T U X Z C	Horizontal Vertical Custom Pattern - Sketch or Drawing Required	H V C

NOTES

Dimensions for Patterns are based on outside dimensions of the pattern.

Patterns in all cases will require a signed-off submittal prior to release of an order.

For Patterns created against walls, the layout will be created using inside wall dimensions from drawings received.

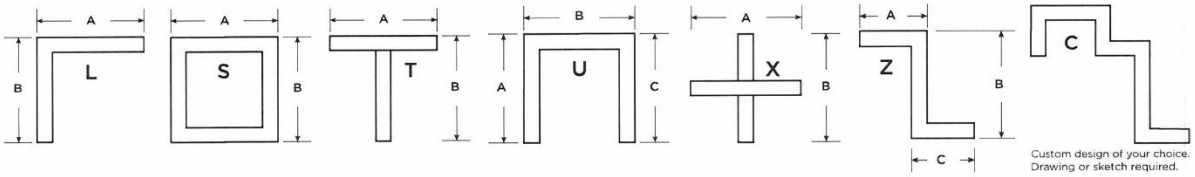
PAT X H

PAT = Pattern
AxBxC = Length of each segment in Pattern separated by an "x"
@ = Pattern Code (See reference examples)
H = Pattern Orientation

PAT	12X24	L	H
W	X	Y	Z

D

Above code gets entered in "D" LENGTH field of ordering guide.



CONTINUOUS RUN ORDER GUIDES

Please use the following run guides for fixture ordering. If your product will require a submittal, our in-house Application Engineering Team will work closely with you on your project.

ALUMINUM PRODUCT ORDER GUIDE	
RUN LENGTH (ft)	RUN CONFIGURATION - SECTION LENGTHS
9	6' + 3'
10	6' + 4'
11	6' + 5'
12	6' + 6'
13	6' + 7'
14	8' + 6'
15	8' + 7'
16	8' + 8'
17	6' + 5' + 6'
18	6' + 6' + 6'
19	6' + 7' + 6'
20	8' + 4' + 8'
21	8' + 5' + 8'
22	8' + 6' + 8'
23	8' + 7' + 8'
24	8' + 8' + 8'
25	5' + 8' + 8' + 4'
26	4' + 6' + 6' + 6' + 4'
27	6' + 8' + 8' + 5'
28	6' + 8' + 8' + 6'
29	7' + 8' + 8' + 6'

*Standard Run Configurations Shown, Consult Factory for Custom Configurations.

ALUMINUM PRODUCT ORDER GUIDE	
RUN LENGTH (ft)	RUN CONFIGURATION - SECTION LENGTHS
30	6' + 6' + 6' + 6' + 6'
31	6' + 6' + 7' + 6' + 6'
32	8' + 8' + 8' + 8'
33	5' + 8' + 8' + 8' + 4'
34	6' + 8' + 8' + 8' + 4'
35	6' + 8' + 8' + 8' + 5'
36	6' + 8' + 8' + 8' + 6'
37	8' + 8' + 5' + 8' + 8'
38	8' + 8' + 6' + 8' + 8'
39	8' + 8' + 7' + 8' + 8'
40	8' + 8' + 8' + 8' + 8'
41	5' + 8' + 8' + 8' + 8' + 4'
42	6' + 8' + 8' + 8' + 8' + 4'
43	6' + 8' + 8' + 8' + 8' + 5'
44	6' + 8' + 8' + 8' + 8' + 6'
45	7' + 8' + 8' + 8' + 8' + 6'
46	3' + 8' + 8' + 8' + 8' + 8' + 3'
47	4' + 8' + 8' + 8' + 8' + 8' + 3'
48	8' + 8' + 8' + 8' + 8' + 8'
49	5' + 8' + 8' + 8' + 8' + 8' + 4'
50	6' + 8' + 8' + 8' + 8' + 8' + 4'

*Standard Run Configurations Shown, Consult Factory for Custom Configurations.

NQZ2-61TWTW-MPW

6" Quartz LED Downlight with Selectable Lumens & Selectable CCT
Source: 12W to 20W LED
1350lm to 2200lm

Type Line 5, Line 12
Project
Catalog No.
Notes

PRODUCT DESCRIPTION
Quartz Series series is an architectural and commercial grade LED high lumen downlight. Each luminaire includes two tunable switches; Selectable Lumens allows the end user to determine the wattage input & Selectable CCT changes the color temperature appearance. Reflectors include two tension steel spring clips, which allow the luminaires to install without any frame-in or housing for an easy installation.

FEATURES
- Can-less installation (No frame-in or housing required)
- Easy installation for retrofit, remodel or new construction applications
- Selectable Lumen switch changes output from 1350lm to 2200lm
- Selectable CCT switch changes color temperature from 3000K / 3500K / 4000K
- Field changeable reflector allows for easy customization
- 120-277V input and 0-10V dimming
- 5-year limited warranty
- ENERGY STAR certified
- cULus Listed for Wet Locations

SPECIFICATION
Reflector: Aluminum spun reflector with deep set diffused lens for excellent visual comfort while providing high lumen output. Each reflector comes standard with matte powder white finish, optional snap-in reflectors are available and field changeable.

Tunable Switches: Each luminaire includes two switches on the top of the driver enclosure. Selectable Lumen switch changes the lumen output and wattage. Seletable CCT switch changes the color temperature.

Clearance: "IC" Insulated ceiling housings are direct contact rated. Not to be used in direct contact with spray foam insulation.

Mounting: No housing is required, two tensions steel spring clips accommodate ceiling thickness from ½" to 1-½". New construction frame-in can be ordered separately (NQZ-6R-F).

ELECTRICAL
Input Voltage: 120-277V
Lumens / Wattage: Selectable Lumens: 1350lm / 12W, 1850lm / 16W and 2200lm / 20W (*Note: Preset to 20W*)
Beam Spread: 94° Wide Flood
Color Temperature: Selectable CCT: 3000K / 3500K / 4000K (*Note: Preset to 3000K*)
Color Rendering Index: 90+CRI
Operating Temperature: 0°C - 40°C
Lifetime: 72,000 hours @ L70
Dimming: Dimmable down to 10% with 0-10V dimmer
Click Here or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab

Emergency: Luminaire is compatible with NEPK-20LEDUNV (ordered separately). Battery operates luminaire at 20W for 90 minute emergency operation with a fully charged battery.

LABELS AND LISTINGS
- cETLus Listed for Wet Locations
- cETLus classified for retrofit installations
- ENERGY STAR certified
- 5-Year Limited Warranty
- FCC compliant
- Certified to the high efficacy requirements of California Title 24 JA8-2022

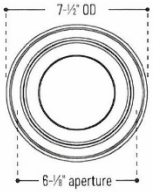
Performance Data			
CCT	12W	16W	20W
3000K	1354lm	1756lm	2079lm
3500K	1378lm	1894lm	2238lm
4000K	1333lm	1743lm	2045lm
Delivered lumens will vary depending on finish			

PRODUCT IMAGES AND DIMENSIONS

Selectable Lumens
Three position sliding switch
1350lm / 1850lm / 2200lm

Selectable CCT
Three position sliding switch
3000K / 3500K / 4000K

Ceiling Cut-Out: 6-¼" Ø



NQZ2-61TWTW-MPW / NQZ-61REFLC
6" Quartz with Specuar Clear Reflector Insert

NQZ2-61TWTW-MPW / NQZ-61REFLD
6" Quartz with Clear Diffused Reflector Insert

NQZ2-61TWTW-MPW / NQZ-61REFLHZ
6" Quartz with Haze Reflector Insert

6" Quartz LED Downlight with Selectable Lumens & Selectable CCT

Aperture	Lumens / Wattage / Color Temperature	Reflector / Flange Finish
NQZ2-61 = 6" Quartz	**TWTW** = 1350lm / 1850lm / 2200lm 3000K / 3500K / 4000K	**-MPW** = Matte Powder White

Optional Accessories

Description
NQZ-6R-F = 6" New Construction Frame-In
NQZ-61REFLC = 6" Specular Clear Snap-in Reflector Insert
NQZ-61REFLD = 6" Clear Diffused Snap-in Reflector Insert
NQZ-61REFLHZ = 6" Haze Snap-in Reflector Insert
NEPK-20LEDUNV = 20W Emergency Battery w/Remote Test Switch

Example: **NQZ2-61TWTW-MPW** = 6" Quartz LED Downlight with Selectable Lumens & Selectable CCT, Matte Powder White

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6505 Gayhart Street, Commerce, CA 90040
Tel 800.686.6672 | www.noralighting.com | e-mail: nora@noralighting.com

032323P4

NQZ2-61TWTW-MPW
6" Quartz LED Downlight Accessories

Type
Project
Catalog No.
Notes

New Construction Frame-In Kit

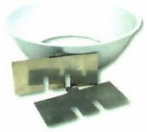
NQZ-6R-F
For new construction pre-wiring and easier layout planning.

Specular Clear Reflector Insert

NQZ-61REFLC
Snap-in reflector is field changeable and fits over 6" Quartz downlight.

Diffused Clear Reflector Insert

NQZ-61REFLD
Snap-in reflector is field changeable and fits over 6" Quartz downlight.



Haze Reflector Insert

NQZ-61REFLHZ
Snap-in reflector is field changeable and fits over 6" Quartz downlight.

20W Emergency Battery with Remote Test Switch

NEPK-20LEDUNV
120-277V 20W emergency battery operates luminaire for 90 minute emergency operation with a fully charged battery. Requires 24 hours to for full charge.

Type

Project

Catalog No.

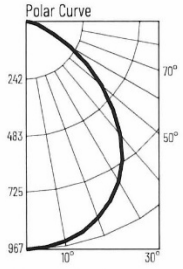
Notes

PHOTOMETRICS

6" Quartz LED Downlight with Selectable Lumens & Selectable CCT

Test Information
Test Number: NTR1958R2
Part Number: NQZ2-61TWTW-MPW
Beam Spread: 94° Wide Flood
Lumens: 2079lm
Wattage: 20.07W
Efficacy: 104lpw
CCT / CRI: 3000K / 90 CRI
Spacing Criteria (0°-180°): 1.22
Spacing Criteria (90°-270°): 1.2

Polar Curve



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	26.9fc	12'-11"
8'	15.1fc	17'-4"
10'	9.7fc	21'-7"
12'	6.7fc	25'-11"
14'	4.9fc	30'-2"

Zonal Lumen Summary

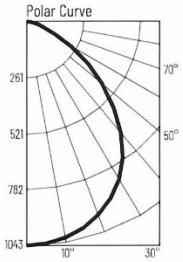
Zone	Lumens	% Luminaire
0-30	737	35.4
0-40	1180	56.8
0-60	1870	90
0-90	2079	100
90-180	0	0
0-180	2079	100

Candela Table

Vertical Angles	Candela
0	967
5	962
15	924
25	845
35	716
45	528

Test Information
Test Number: NTR1959R2
Part Number: NQZ2-61TWTW-MPW
Beam Spread: 94° Wide Flood
Lumens: 2238lm
Wattage: 19.13W
Efficacy: 117lpw
CCT / CRI: 3500K / 90 CRI
Spacing Criteria (0°-180°): 1.22
Spacing Criteria (90°-270°): 1.2

Polar Curve



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	29fc	12'-11"
8'	16.3fc	17'-2"
10'	10.4fc	21'-6"
12'	7.2fc	25'-10"
14'	5.3fc	30'-1"

Zonal Lumen Summary

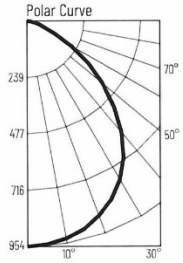
Zone	Lumens	% Luminaire
0-30	794	35.5
0-40	1272	56.8
0-60	2013	90
0-90	2238	100
90-180	0	0
0-180	2238	100

Candela Table

Vertical Angles	Candela
0	1043
5	1038
15	995
25	911
35	772
45	567

Test Information
Test Number: NTR1960R2
Part Number: NQZ2-61TWTW-MPW
Beam Spread: 94° Wide Flood
Lumens: 2045lm
Wattage: 19.89W
Efficacy: 103lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 1.22
Spacing Criteria (90°-270°): 1.2

Polar Curve



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	26.5fc	12'-10"
8'	14.9fc	17'-1"
10'	9.5fc	21'-5"
12'	6.6fc	25'-8"
14'	4.9fc	29'-11"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	726	35.5
0-40	1162	56.8
0-60	1838	89.9
0-90	2045	100
90-180	0	0
0-180	2045	100

Candela Table

Vertical Angles	Candela
0	954
5	949
15	911
25	833
35	705
45	516

Lumen Output Multipliers
Wattage: 12W (0.64), 16W (0.85)

NORA LIGHTING
6505 Gayhart Street, Commerce, CA 90040
Tel 800.686.6672 | www.noralighting.com | e-mail: nora@noralighting.com

MATTEO

Line 6

C63101AG

Dimensions:	Ø4 1/2" x 23 5/8"H Max.
Lamping:	1 x 10W G9 120V
Finish:	Aged Gold Brass
Cord Color:	Silver Fabric
Canopy:	Ø4 3/8" x 3/8"H
Canopy Color:	Aged Gold Brass
Wire Length:	120" Max.
Location:	Dry

Reigndrop Inspired by the Reign Series - designed with cylinders reminiscent of a wind chime, the Reigndrop also comes with built in diversity. It is a G9 bulb that includes a mix and match option of frosted acrylic lens cap, opal glass globe and metal disc to cap it off. The fixture comes with all pieces to allow the look to be varied on an ongoing basis to spark creativity. This bold collection is available in 2 finishes: Aged Gold Brass, and Matte Black and will be a great addition to any room.
*LIGHTBULBS NOT INCLUDED

Similar Products

C63101MB

C63103AG

C63103MB

C63105AG

C63105MB

C63107AG

NE-612LED

Compact Dual Head LED Emergency Light with Optional Remote Capability
Source: (2) 0.9W or 1W LED
(2) 90lm to 150lm

Type Line 7
Project
Catalog No.
Notes

PRODUCT DESCRIPTION

Luminaire provides 90 minutes of light from two adjustable heads for illuminating paths of egress upon failure of normal power. Emergency unit is available in higher lumen output and remote capability.

FEATURES

- Compact housing with (2) adjustable LEDs
- Lightweight snap together design
- Plastic enclosure with 5VA flame retardant
- 3.6V maintenance-free, rechargeable NiMH battery
- Self-diagnostic and self-testing option available
- Ceiling or wall mounted
- Universal 120/277VAC input
- Remote capability

SPECIFICATION

Construction: Injection-molded thermoplastic ABS housing. Plastic enclosure with 5VA flame retardant. Quick connector design for easy installation. Two fully adjustable glare-free round heads for emergency lighting.

Mounting: Plastic enclosure includes a top and side knockout for conduit application. Suitable for wall mounting or ceiling mounting. Waterproof vandal resistant enclosure available, must specify NEG-602.

Operation: Luminaire will operate for a minimum of 90 minutes during a loss of power with a 24-hour maximum recharge time per battery.

ELECTRICAL

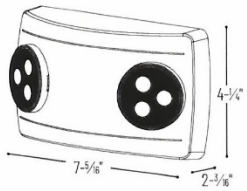
Input Voltage: 120/277VAC 60Hz
Lumens / Wattage:
NE-612LED: (2) 110lm / 0.9W
NE-612LEDRC: (2) 90lm / 0.9W
NE-612LEDHORC: (2) 150lm / 1W
Color Temperature: 5700K
Operating Temperature: 10°C to 40°C ambient temperature (-25°C to 50°C when used with NEG-602)
Batteries: NiMH 3.6V 2W maintenance-free

Remote Option: Luminaire is capable of including an additional 3.6V / 4W battery. Additional battery is used to power an additional remote emergency light. Upon power failure, each additional battery requires an additional 24 hours to recharge.

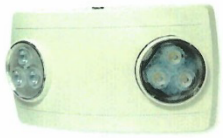
LABELS AND LISTINGS

- cULus Listed for Damp Locations (Wet Location Listed when used with NEG-602)
- Meets or exceeds all requirements in NFPA 70, NFPA 101 life safety code
- 3-Year Limited Warranty

PRODUCT IMAGES & DIMENSIONS



NE-612LEDB



NE-612LEDW

NEG-602

NEB-NICAD8

NEB-NICAD9

NFPA 101 requires 1.0 foot-candle average and 0.1 foot-candle minimum with a 40:1 maximum/minimum ratio.
Below is a recommended mounting height and spacing on surface with reflectance at 80% ceiling, 50% walls, and 20% floor.

Item Number	Mounting Height	Center to Center Spacing	Path of Egress
NE-612LED	7.5'	27'	6'
	10'	24'	
NE-612LEDRC	7.5'	24'	6'
	10'	20'	
NE-612LEDHORC	7.5'	37'	6'
	10'	34'	

Compact Dual Head LED Emergency Light

Description

NE-612LEDB = (2) 0.9W / 110lm LED Heads without Battery for Remote Capability, Black Finish
NE-612LEDW = (2) 0.9W / 110lm LED Heads without Battery for Remote Capability, White Finish
NE-612LEDRCW = (2) 0.9W / 90lm LED Heads with 3.6V / 2W Battery for Remote Capability and Self-Diagnostics / Self-Testing, White Finish
NE-612LEDRCW = (2) 0.9W / 90lm LED Heads with 3.6V / 2W Battery for Remote Capability and Self-Diagnostics / Self-Testing, White Finish
NE-612LEDHORCW = (2) 1W / 150lm LED Heads with 3.6V / 2W Battery for Remote Capability and Self-Diagnostics / Self-Testing, White Finish
NE-612LEDHORCW = (2) 1W / 150lm LED Heads with 3.6V / 2W Battery for Remote Capability and Self-Diagnostics / Self-Testing, White Finish

Optional Accessory

Description

NEG-602 = Waterproof Vandal Resistant Enclosure
NEB-NICAD8= Replacement Battery for NE-612LED
NEB-NICAD9= Replacement Batteries for NE-612LED with Remote (RC)

Example: **NE-612LEDHORCW** = Compact Dual Head LED Emergency Light with (2) 1W / 150lm LED Heads with 3.6V / 2W Battery for Remote Capability and Self-Diagnostics / Self-Testing, White finish

NORA LIGHTING
6505 Gayhart Street, Commerce, CA 90040
TEL 323.767.2600 | www.noralighting.com | e-mail: nora@noralighting.com

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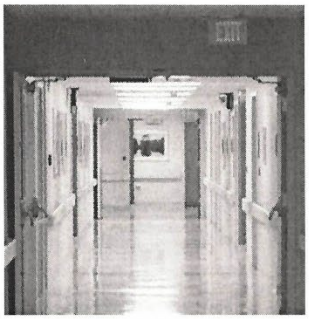
Line 8

EXIT & EMERGENCY

Building lighting is generally thought of as something that allows occupants to live, move, and work in comfort and safety. Just as importantly, lighting must also help the same people safely and quickly leave a location, whether it is one individual, or a large group.



Situations differ...

They range from those that are simply leaving after a visit, to escaping a catastrophic event.

Environments differ...

The location can be an office building, a restaurant on a beach promenade, a sparsely visited storage area, or an oil rig in the middle of the ocean. The atmosphere can range from dry and hot to air conditioned and cool.

Solutions differ...

Nora Lighting offers fixtures ranging from simple LED emergency lights to efficient LED exit signs, some combined with high performance LED emergency lights. Some have gaskets for salt spray and fog; some have faces that can adjust in the field for wall or ceiling mount. Others have fine brush finished faces to complement architectural settings. Some hang from a wall or ceilings, others are recessed completely inside a ceiling.

One thing remains the same: all Nora signs and fixtures are designed to provide the safest possible egress regardless of the situation, location, or environment and are accessible for virtually any budget consideration.

LED EDGE-LIT EXITS

- Adjustable Face
- Recessed and Surface Mount
- AC, 2-Circuit, and Battery Backup
- Housings in Black, Aluminum, and White
- 120/277V

LED DIE-CAST ALUMINUM EXITS

- Available in Self-Diagnostic
- Brushed Aluminum Face
- AC, 2-Circuit, and Battery Backup
- 120/277V

LED POLYCARBONATE EXITS

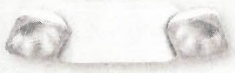
- Black and White Housings
- AC, 2-Circuit, and Battery Backup
- Universal - Double Face, Blank Plate
- Ceiling, Wall, or End Mounted
- Available for Wet, NEMA-4X locations
- 120/277V

LED EXIT/EMERGENCY COMBINATIONS

- 120/277V
- Adjustable Head Position
- Wet Location with enclosure

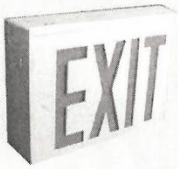
EMERGENCY LED LIGHTS

- Low Profile
- Adjustable heads
- Wall or Ceiling Mount
- 120/277V

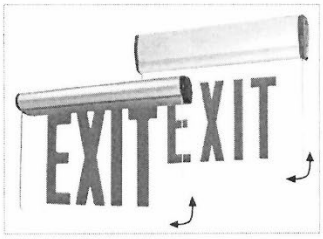


STEEL BODY LED

- New York City Approved
- 120/277V



EXIT & EMERGENCY
LED EXIT SIGN

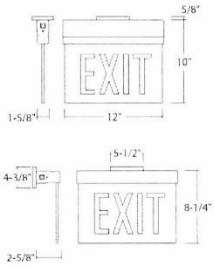


Adjustable LED Edge-Lit

NX-810-LED	AC Only
NX-811-LED	2-Circuit
NX-812-LED	Battery Backup
NX-822-LED	Battery Backup & NY Approved

FINISH: Green or Red Letter
Aluminum, Black or White Housing

LISTING: ETL Listed, NEC, NFPA

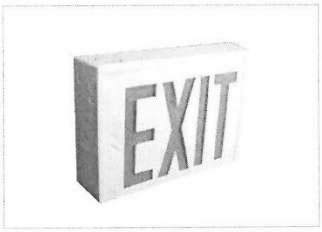


Universal LED Exit Sign

NX-503-LED	AC Only
NX-504-LED	2-Circuit
NX-603-LED	Battery Backup

FINISH: Green or Red Letter,
Black or White Housing

LISTING: UL Listed, NEC, NFPA

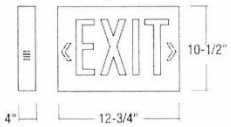


Steel LED Exit Sign (NY Approved)

NX-550-LED	Battery Backup

FINISH: Red Letter,
Black or White Housing

LISTING: UL Listed, NEC, NFPA, NY Approved



NEPK-20LEDUNV

Emergency LED Driver with Remote Test Switch
Output Power: 20W

Type Line 9
Project
Catalog No.
Notes

PRODUCT DESCRIPTION

Emergency LED driver for use with new or existing LED luminaires. Driver's circuitry automatically switches the luminaire between emergency and normal power operation during power loss and restoration. Operates at a reduced level for a minimum of 90 minutes to allow safe egress during power outage. Upon restoration to normal AC operation, the emergency driver returns to charging mode.

FEATURES

- Listed for field installation - UL 924 and CSA C22.2 No 141-15
- Controlled power for predictable discharge
- Universal input (100 through 347VAC, 50/60Hz)
- Includes wall plate with test switch

ELECTRICAL

Input Voltage: 100-347VAC, 50/60Hz
Output Voltage: 170VDC
Input Power: 12W 0.1A max. (depending on luminaire)
Output Wattage: 20W
Emergency On-Time: 90 minutes
Operating Temperature: 5°-50°C

OPERATION

When AC power fails, the driver immediately switches to the emergency mode, operating the LEDs at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the emergency driver automatically returns to the charging mode.

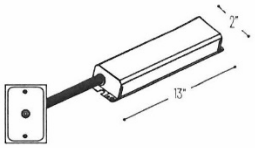
BATTERY

High-temperature, maintenance-free Li-ion battery. Requires 24 hours to recharge battery.

LABELS AND LISTINGS

- UL 924, Emergency LED Driver
- CSA 22.2 No 141-15
- cULus Listed for damp locations
- Certified to the energy efficiency standards of California Title 20
- 5-Year Limited Warranty
- FCC Compliant

PRODUCT IMAGES AND DIMENSIONS



Emergency LED Driver with Remote Test Switch

Catalog No.

NEPK-20LEDUNV = 20W Emergency LED Driver with Remote Test Switch

Example: **NEPK-20LEDUNV** = 20W Emergency LED Driver with Remote Test Switch

NORA LIGHTING
6505 Gayhart Street, Commerce, CA 90040
Tel 800.686.6672 | www.noralighting.com | e-mail: nora@noralighting.com

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Line 10

AFX Rowan 36" LED Outdoor Wall Sconce

The Rowan LED exterior wall sconce by AFX lighting is an excellent choice to provide long lasting, energy efficient LED illumination for your exterior facade application. This fixture features a steel metal housing with a sealed thick white acrylic diffuser. Being CCT-tunable, these fixtures allow the user to select between 3 different white light color temperatures to find the right light output to suit your application. The high color rendering (90+ CRI) produces rich and vibrant colors in the area of illumination.

The RWNW073640LAJD2BZ is a 42 watt, 36" tall LED exterior wall sconce in a bronze finish that provides 2,360 lumens of CCT-tunable white light and the following features:

- 120-227V operation
- 0-10V dimmable
- CCT-selectable: choose between warm 30K, warm-neutral 35K or neutral 40K white light color temperatures
- High CRI of 90+ for true color rendering
- Wet location rated
- ADA compliant
- 50,000 hour rated

Manufacturer: AFX
Lumens: 2,360
Wattage: 42
Dimmable: 0-10V
Color: Bronze
Rated Hours: 50,000
Width: 7" Height: 36"

Manufacturer Part # RWNW073640LAJD2TG
Lumens Per Watt: 56.19
Input Voltage: 120-277V
Color Temperature: 3000K, 3500K, 4000K
Lamp / Base Type: Integrated LED
CRI: 90+

Special Features: CCT Selectable, High CRI 90+. Wet Location Rated, ADA Compliant

Line 11

AFX Dexter 2-Light LED Outdoor Wall Sconce

The Dexter LED exterior wall sconce by AFX lighting is an excellent choice to provide long lasting, energy efficient LED illumination for your exterior facade application. This fixture features an aluminum body with a clear glass diffuser and provides both up and down light illumination

The DEXW060624L30MVBK is a 24 watt, 5.5" tall LED exterior wall sconce in a black finish that provides 1,025 lumens of warm 3000K white light and the following features:

- 120-227V operation
- Up + down light
- Wet location rated
- ADA compliant
- 50,000 hour rated

Manufacturer: AFX
Manufacturer Part # DEXW060624L30MVBK
Lumens: 1,025
Lumens Per Watt: 42.71
Wattage: 24
Input Voltage: 120-277V
Color Temperature: 3000K
Color: Black
Lamp / Base Type: Integrated LED
Rated Hours: 50,000
CRI: 80+
Width: 5.5" Height: 5.5"
Special Features: Title 20/24 Compliant, ADA Compliant

SATCO | NUVO

Project Name: Line 13

Location: Prepared By:

NUVO 65-678

40W ADJUSTABLE WALL PACK

Notes

General	
Status	Active
Fixture Type	Wall Pack
Finish	Bronze
Wattage	40W
Lumen Output	4800L-5000L
CCT (Kelvin)	3000K/4000K/5000K
Temperature	Warm to Cool White
IP Rating	IP65
Indoor or Outdoor Fixture	Outdoor

Specifications	
Technology	LED
CRI	80
Voltage	120V-277V
Beam Angle	65x95
Rated Hours	50000
Operating Temperature	-40C (-40F) to a maximum of +40C (+104F)
Dimmable	Yes-Dimmable
Dimming Note	1-10V Dimming Only; Dimming range from 100 to less than or equal to 20 percent depending on dimmer control
Lens Material	Impact Resistant PC
Surge Protection	Built-in surge protection - 4KV
Weight (lb.)	3.2
Material	Die Cast Aluminum

Dimensions	
Height (in.)	8.07
Width (in.)	6.50
Extension (in.)	10.46

Compliance	
Safety Listing	cULus - Listed; cULus - Certified
Location Rating	Wet
Energy Star	No
DLC Approved	Yes
DLC ID	PLT2GPIMGGD6
B.U.G. Rating	B2-U2-G1
Dark Sky Compliant	Yes
CA T20 / T24 Rationale	California T24 2016 & 2019 JA8 Compliant - Outdoor LED
California Status	Lawful for sale in California
California Prop 65	Lead
RoHS Compliant	Yes
FCC Compliant	Yes
SDS Sheet	LED_Fixture

Additional Information	
Additional Information	Fixture head is adjustable 0-90 degrees from wall
	For International Dark Sky compliance, the fixture CCT must

Specification Note	be set to 3000K and installed in a downward facing and locked position.
Warranty	5 Year Limited - Fixtures

For More Information Visit:
http://www.satco.com/

1882 LIGHTING
A QSSI Company

Line 14

Austin T52
Light Column

QUICK SHIP

BUY AMERICAN ACT COMPLIANT

BUY AMERICAN ACT COMPLIANT

2X18 Twin Light Engine Shown

1X18 Single Light Engine Shown

12FT Twin Light Engine Shown

180=Light Engine 180˚

S=Same Side

1882 Lighting's AUST52 Side Light Column provides full cutoff lighting for provide contemporary pedestrian lighting. These fixtures are ideal for retail centers, schools and universities, public transit and airports, park walkways, plazas, office buildings, and medical facilities.

Specifications and Features:

Housing:
Cast and Extruded Aluminum Housing with Flat Top and Die Cast Mounting Base. Optical Windows Can Be on the Same Side or at 180˚. Specify Orientation When Ordering. Includes PBR1 Decorative Clamshell Base Cover with Stainless Steel Hardware.

Listing & Ratings:
CSA: Listed for Wet Locations, ANSI/UL 1598, 8750; IP66 Sealed LED Compartment.

Finish:
Textured Architectural Powdercoat Finish Over a Chromate Conversion Coating. Custom Colors Available Upon Request.

Lens:
Clear UV-Stabilized Polycarbonate Vandal-Resistant Lenses. Specify Orientation When Ordering (see Housing Description).

Mounting Options:
Mounts with Four M18 x 15˝ Anchor Bolts, Included.

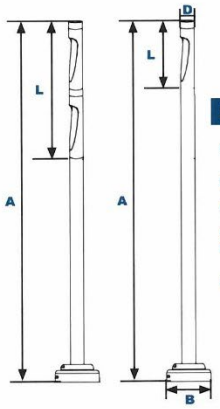
EasyLED LED:
Aluminum Boards

Wattage:
18w: Array: 18w, System: 20.5w

Driver:
Electronic Driver, 120-277V, 50/60Hz; Less Than 20% THD and PF>0.90. Standard Internal Surge Protection 2kV. 0-10V Dimming Standard for a Dimming Range of 100% to 10%; Dimming Source Current is 150 Microamps.

Warranty:
5-Year Warranty for -40°C to +50°C Environment.

See Page 3 for Projected Lumen Maintenance Table.



Dimensions	
Height (A)	12'-0˝ (3,048mm) See Cat Logic for Other Heights
Diameter (D)	4¾˝ (120mm)
Mounting Base (B)	8˝ (205mm) Square
Decorative Round Base Cover (B)	16⅝˝ (422mm) Diameter
Light Engine (L)	25˝ (635mm) Single 50˝ (1270mm) Double

IP66

1882 150 Pemco Way-Wilmington,DE 19804 Phone 302.892.9000 Fax 302.892.9005 www.1882lighting.com info@1882lighting.com

Austin T52
Light Column

QUICK SHIP

BUY AMERICAN ACT COMPLIANT

Order Information Example: **AUST52F2X18U4KCB180LBC**

AUST52 F U C B

Model	Optics	Wattage	Driver	CCT	Lens	Color	Height	Orientation	Options
AUST52=EasyLED Side Light Column	**F**=Asymmetric	**1X18**=18w Single Light Engine **2X18**=36w Twin Light Engines	**U**=120-277V	**3K**=3000K **4K**=4000K **5K**=5000K	**C**=Clear Molded UV-Stabilized Polycarbonate Lens	**B**=Black	**(Leave Blank)**= 12' Standard Height **10**=10' Height **8**=8' Height	**S**=Twin Light Engines on Same Side **180**=Twin Light Engines @ 180°	**LBC**=Less Base Cover

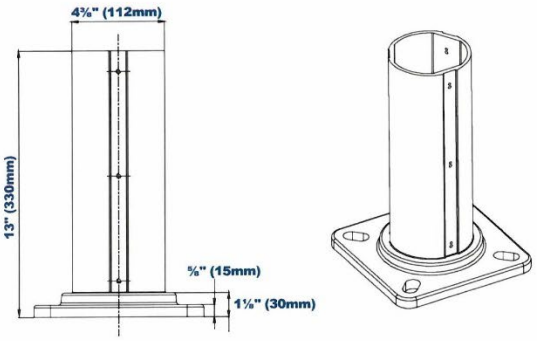
Accessories & Replacement Parts:

Replacement Parts (Order Separately, Field Installed)	
PBR1B	Decorative Clamshell Base Cover, 16⅝" Diameter, Powdercoat Finish

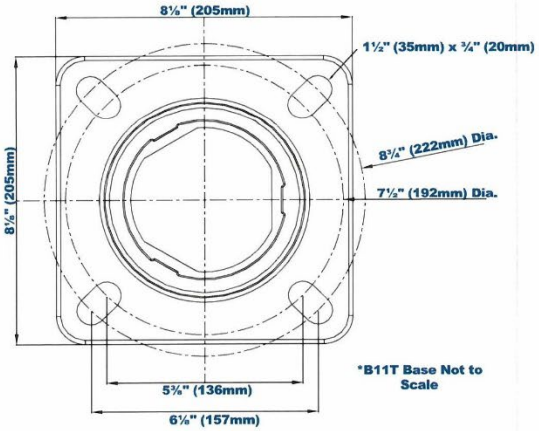
PBR1B*

***Shown Mounted**

Base Information:



Shaft Base Size	Bolt Circle A	Base Size B	Anchor Bolt Size
B11T	Min 7.5" (192mm); Max 8.75" (222mm)	8.125" x 8.125"	M18 x 15"



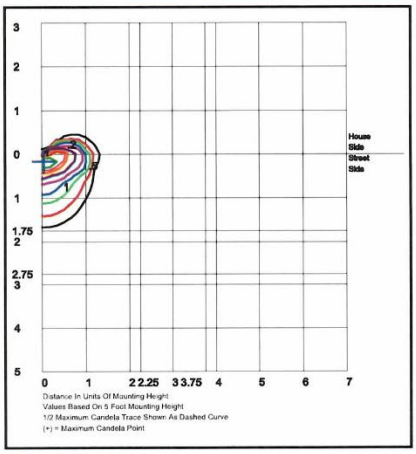
***B11T Base Not to Scale**

Austin T52
Light Column

QUICK SHIP

BUY AMERICAN ACT COMPLIANT

Photometric Data



AUST52F2X18U5KC
Grid in feet, Mounting Height = 5 ft.
Note: Photometrics are for one light engine. For lighting design, place two files in desired orientation (same side or at 180˚)

Photometric Performance

	Wattage (Catalog Logic)	18W (2X18)
	Input Watts	20.5W
Optic	CCT	Delivered Lumens
F=Asymmetric	3000K	311
	4000K	324
	5000K	337
	BUG Rating	B0-U0-G0

Projected Lumen Maintenance

Data shown for 5000 CCT			Compare to MH			
TM-21-11	Input Watts	Initial	25,000 Hrs	50,000 Hrs	100,000 Hrs	Calculated LED Life
L70 Lumen Maintenance @ 25°C / 77°F	All wattages up to and including 36w	1.00	0.95	0.90	0.80	147,000
L70 Lumen Maintenance @ 50°C / 122°F		1.00	0.89	0.78	0.55	67,000
L80 Lumen Maintenance @ 40°C / 104°F		1.00	0.92	0.85	0.70	66,000

NOTES:
1. Projected per IESNA TM-21-11. Data references the extrapolated performance projections for the base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.
2. Compare to MH box indicates suggested Light Loss Factor (LLF) to be used when comparing to Metal Halide (MH) systems.

Line 15

Lutron Claro Single-Pole Switch

he Lutron CA-1PS Claro series of single pole switches combine durability with a sleek, sophisticated design to flow smoothly with your walls. Featuring dual wiring options, the switch allows for rear push-in connections or side terminal connections. The general purpose CA-1PS paddle switch can be installed with all lighting sources and motor loads up to 15 amps. A sophisticated accent for your home's lighting, the Lutron switch features a high gloss finish.

- Available in seven gloss color finishes
- Durable thermoplastic construction
- Simple to install

Manufacturer: Lutron

Manufacturer Part No: CA-1PS-WH

Color: White

Switch Type: Rocker/Paddle

Input Voltage: 120V

Line 16

Lutron Claro 3-Way Switch

The Lutron CA-3PS Claro 3-Way Switch is simple to install and features dual wiring options for a rear push-in or side terminal connection. Featuring a sophisticated low-profile design, the Lutron 3-way switch flows smoothly with the contour of your walls and works with all lighting and motor loads up to 15 amps. In addition, the paddle switch is constructed of a durable Thermoplastic finish, preserving the switch's gloss color and sheen.

- Available in seven gloss color finishes
- Durable thermoplastic construction
- Simple to install

Manufacturer: Lutron

Manufacturer Part : CA-3PS-WH

Color: White

Switch Type: Rocker/Paddle

Input Voltage: 120V

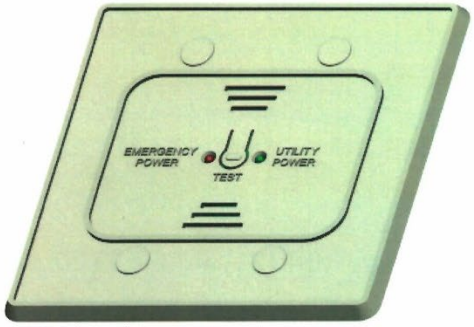
LUT-ALCR-D

Emergency Power Control
For 4-Wire Dimmable Loads

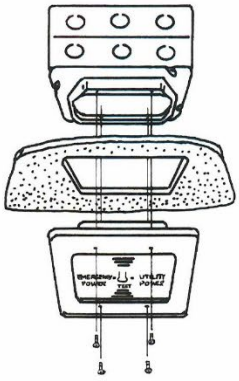
Project: Line 17

Model No.:

Comments:



MOUNTING



LED COMPATIBLE

UL924 LISTED

5 YEAR WARRANTY

0-10 V Dimmer Compatible

APPLICATION

In the past, emergency lights were kept on 24 hours a day to meet life safety codes. Now, you can use a UL 924 listed Emergency Power Control, Model LUT-ALCR-D, to convert normal light fixtures into approved emergency lights. The LUT-ALCR-D saves energy and money while ensuring compliance with both life safety and energy codes.

During normal operation, the same dimmer, occupancy sensor, dimming panel, or lighting control can switch and dim normal and emergency fixtures on and off simultaneously.

During a utility power interruption, the LUT-ALCR-D automatically bypasses the normal lighting controls, turning the emergency lights ON at full brightness, regardless of dimmer position.

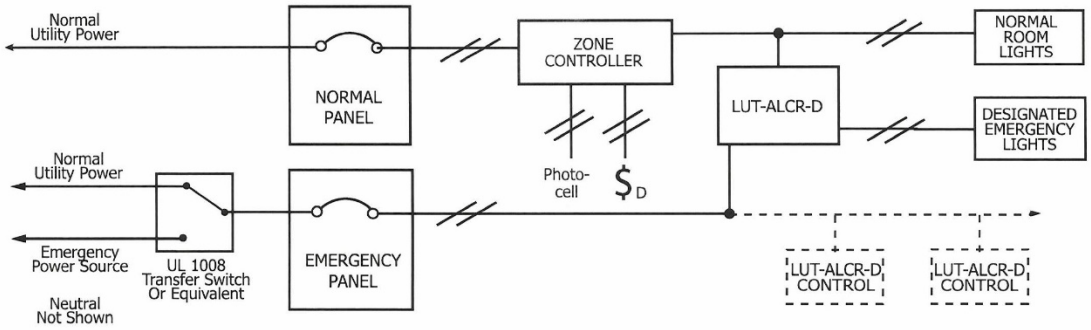
The LUT-ALCR-D is ceiling or wall mounted in a junction box with a single gang plaster ring and is usually located in the area where the emergency fixtures are installed.

FEATURES

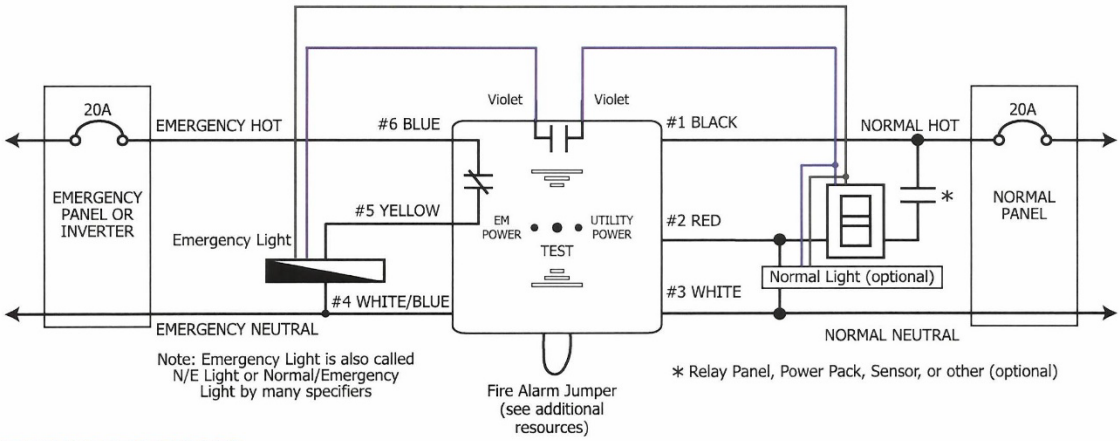
- Isolated 0-10V relay contact ensures full brightness during utility power interruption, regardless of dimmer model.
- Unique, Patented Automatic Diagnostic
  When the room switch is turned off, the LUT-ALCR-D will run a 2.5 self-test routine, verifying that the emergency power source was available and that the LUT-ALCR-D , ballast, and lamp(s) are all functioning correctly. This feature eliminates the need for time-consuming and costly manual monthly testing and is approved for this purpose. This also allows the unit to be installed in remote or inaccessible locations, because the unit does not rely on access to its manual test switch.
- Fire Alarm, Remote Test & 0-10V Dimming Option
- Utility & Emergency Power Indicator LED's
- Slim, attractive flush mount profile allows easy access to manual test switch and LED's.

LVS, Inc. 2555 Nicholson Street, San Leandro, CA 94577-4216
Phone: 510-352-9600 1-800-982-4587 Fax: 510-352-6707
www.lvscontrols.com

SINGLE LINE DRAWING



WIRING DIAGRAM



SPECIFICATIONS

ELECTRICAL	MODEL NO.	LUT-ALCR-D
	SENSING INPUT	120V - 277V
	LOAD RATING	120V - 277V (20A)
	BALLAST LOAD RATING	20A (120-277V)
	INCANDESCENT LOAD	1200W (120V) / 1500W (277V)
	WARRANTY	5 Year Replacement Warranty

MECHANICAL	MOUNTING	4-11/16" Junction Box w/ single gang plaster
	RATING	UL94-5VA
	SHIPPING WEIGHT / COLOR	12 oz. / White
	TEMPERATURE	32ºF - 140ºF (0ºC - 60ºC)
	FLUSH MOUNTED SIZE	5" x 5" x 0.2" (W X L X D)
	BODY SIZE	3.5" x 2.75" x 1.5" (W X L X D)

ORDERING INFORMATION

LUT-ALCR-D

ADDITIONAL RESOURCES

- Installation Sheet
- FAQ Sheet
- Alternative Wiring Sheet
- Terms & Conditions/Warranty Information
- Fire Alarm Tie-In/Override
  www.lvscontrols.com/assets/UL924FAI.pdf

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www.lvscontrols.com

Line 18

Lutron MS-OPS2-WH Maestro Motion Sensor Switch, No Neutral Required, 250 Watts Single-Pole, White

The Lutron® Maestro® Occupancy sensing switch combines a Maestro® switch with a passive infrared occupancy or vacancy
sensor. The sensor detects the heat from occupants moving within an area to determine whether the space is occupied.
Based on the feedback from the sensor, the occupancy sensing switch will adjust the load accordingly.

Features:

- Passive infrared sensors with exclusive Lutron® XCT Technology for fine motion detection
- 180° sensor field-of-view
- Up to 30 ft x 30 ft (9 m x 9 m) [900 ft 2 (81 m2)] major motion coverage and 20 ft x 20 ft (6 m x 6 m) [400 ft2 (36 m2)] minor motion coverage
- Occupancy version can be set to Auto-ON / Auto-OFF or Manual-ON / Auto-OFF
- Vacancy version available to meet CA Title 24 requirements
- Adjustable timeout (1, 5, 15, or 30 minutes) and high/low sensitivity adjustment
- Occupancy sensing switch loads: incandescent, halogen, ELV, MLV, CFL, LED, magnetic fluorescent, electronic fluorescent, and fan.
- Wallplates sold separately.

Specification	Description
Item #:	LUT-MS-OPS2-WH
Brand:	Lutron
MPN:	MS-OPS2-WH
UOM:	EA
UPC:	027557982825
Condition:	New
Sub Brand:	Maestro
Type:	Occupancy Sensing Switch
Sensor:	Passive infrared motion detection with dependable Lutron XCT technology
Color:	White
Sensing Range:	30ft x 30ft major motion, 20ft x 20ft minor motion
Mounting:	Wallbox
Supply Voltage:	120VAC
Environmental Conditions:	0% to 90% humidity, non-condensing. Indoor use only.
Standard:	UL, cUL, NOM

Line 19

Lutron Pico Wireless Control - 2-Button - White

This Lutron Pico wireless controller works with Maestro wireless and RadioRA 2 components. It includes an adhesive wall mount bracket for use as a secondary switch. Purchase the PICO-FP-ADAPT for mounting inside a junction box or opt for the PICO-SM-KIT screw kit for a wall-mounted solution. The wireless light control fits inside a standard faceplate (sold separately) to look like a typical wall switch. The 2 button Pico wireless controller has a simple on and off design for ease of use.

- Keypad with on/off buttons
- Compatible with Maestro wireless and RadioRA2 components

Manufacturer:	Lutron
Manufacturer Part Number:	PJ2-2B-GWH-L01
UPC:	784276067287
Color:	White

Line 20

Lutron Pico PJ2-2BRL-GWH-L01 Wireless Remote Controller 2-Button Raise/Lower

- Control your Lutron Vive dimming modules with this wireless remote controller. Also to be used with GRAFIK Eye QS, RadioRA 2, HomeWorks, Caséta Wireless, Energi Savr Node Solutions, Quantum, myRoom, RA2 Select, Athena Less

Manufacturer:	Lutron
Manufacturer Part Number:	PJ2-2BRL-GWH-L01

Line 21

Lutron Pico Wireless Control - 4-Button Scene - White

This Lutron Pico four-button wireless remote lets you control Lutron wireless control devices from anywhere in the area. This battery-powered device is easy to set up and use. It requires no external power or communication wiring to operate.

With this four-button wireless control, you have complete control of your Caseta wireless dimmers at your fingertips. Select the top three buttons to choose various scenes, and the bottom button to turn the lights off. This product also features a red night light. It works through walls up to 30 feet from the dimmer and up to 60 feet within line of sight.

The included battery boasts a life of 10 years

Manufacturer:	Lutron
Manufacturer Part Number:	PJ2-4B-GWH-L31
UPC:	784276102346
Color:	White

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PP and UPP Series Power Packs

PP and UPP[1] Series Power Packs provide both the 24 V⎓ power supply to operate Lutron® wired occupancy sensors, as well as the 16 A line-voltage relay to control the load, in one compact housing. The unit can be mounted inside a ballast enclosure or inside/outside a junction box.

The manual-ON Power Pack (-DV-M) is used to provide a vacancy solution when paired with Lutron® wired occupancy sensors. A low-voltage momentary switch should be used to manually turn ON the load while the sensor automatically shuts the load OFF when unoccupied. Pressing the momentary switch can also turn the load OFF.

The auxiliary Power Pack (-SH) must be used in conjunction with at least one line-voltage Power Pack and one Lutron wired occupancy sensor to switch additional loads.

(-DV)
(-DV-M)
(-347H)

(-SH)

Features

- High-impact UL94 flammability-rated plastic case construction
- Relay: Class B 266 °F (130 °C) insulating material; silver alloy contacts
- Power Pack units (PP-DV/UPP-DV, PP-347H, PP-DV-M/UPP-DV-M) power up to 3 total devices. PP-SH/UPP-SH counts as 1 device, each occupancy sensor counts as 1 device.
- For indoor use only, 32 °F to 104 °F (0 °C to 40 °C), 0% to 90% humidity, non-condensing

Model	Power Input	Relay Contact Rating	Control Input	IEC PELV/ NEC® Class 2 Output
PP-DV **UPP-DV** **PP-DV-M** **UPP-DV-M**	120-277 V~ 50/60 Hz 6.5 W	• 120-277 V~ 16 A; All lighting loads[2] • 120-277 V~ 1 HP Motor Load	24 V⎓ 5 mA	24 V⎓ 150 mA up to 3 Devices[3]
PP-347H	347 V~ 60 Hz 6.5 W	• 347 V~ 15 A Ballast	24 V⎓ 5 mA	24 V⎓ 100 mA up to 3 Devices[3]
PP-SH **UPP-SH**	24 V⎓ (At least one line-voltage Power Pack must be used)	• 120-277 V~ 16 A; All lighting loads[2] • 120-277 V~ 1 HP Motor Load • 347 V~ 15 A Ballast	24 V⎓ 5 mA	N/A

[1] "U" denotes BAA compliance
[2] Lighting loads include (but are not limited to): Incandescent, MLV, ELV, Resistive, Inductive
[3] PP-SH/UPP-SH counts as 1 device and each occupancy sensor counts as 1 device

LUTRON® SPECIFICATION SUBMITTAL Page 1

Job Name:	Model Numbers:	
Job Number:		

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Specifications

Regulatory Approvals

- UL® and cUL® Listed
- Complies with requirements for use in other spaces used for environmental air (plenums) per NEC® 2014 300.22(C)(3)

Power / Performance

- PP-DV, UPP-DV, PP-DV-M, UPP-DV-M: 120-277 V~ 50/60 Hz
- PP-347H: 347 V~ 60 Hz only

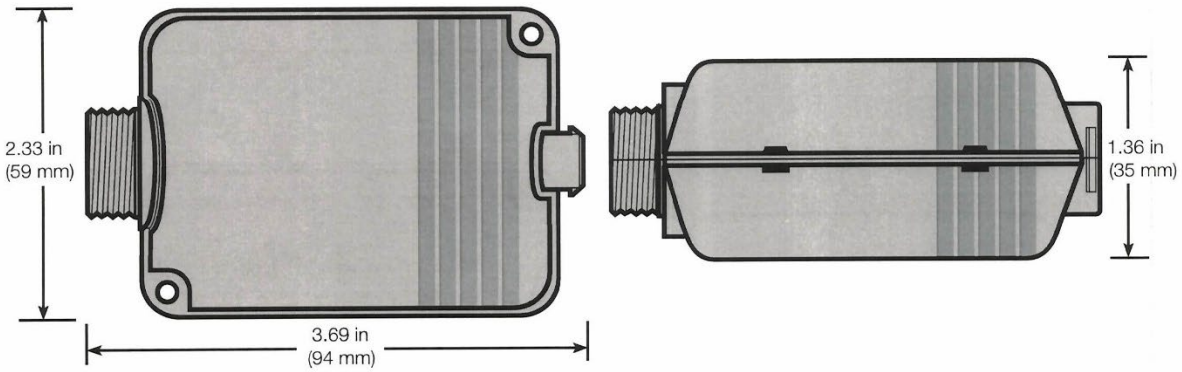
Wiring

- 7 in (178 mm) wire leads, 18 AWG (0.75 mm^2) input; 7 in (178 mm) leads, 16 AWG (1.5 mm^2) contacts.

Mounting

- Fits inside standard 4 in x 4 in (102 mm x 102 mm) junction box or standard fluorescent fixture ballast cavity
- Mount with 6/32 in (5 mm) x 1¼ in (32 mm) pan head screws
- Mounts inside junction box through knockout, with 1/2 in (13 mm) Electrical Metallic Tubing (EMT) threaded nipple. Recommended volume is 30 in^3 (762 mm^3).

Dimensions



LUTRON® SPECIFICATION SUBMITTAL Page 2

Job Name:	Model Numbers:	
Job Number:		

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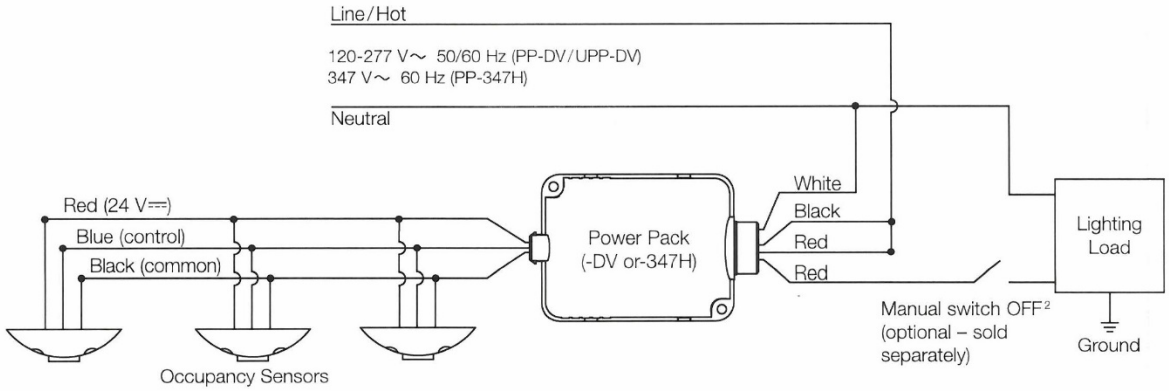
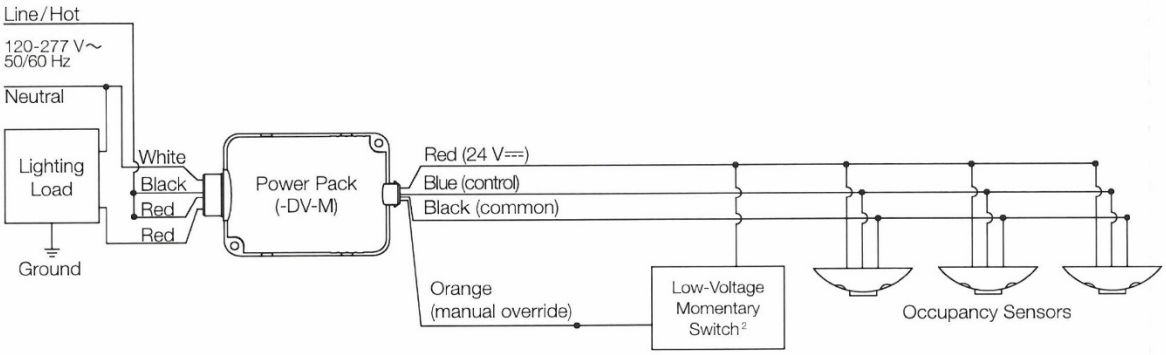
Wiring

3 Sensors with Power Pack (PP-DV, UPP-DV or PP-347H)[1]



[1] Maximum 3 occupancy sensors can be used with PP-DV/UPP-DV or PP-347H.
[2] When lights are manually turned off, switch must be returned back to the on position for occupancy sensors to function as set.

3 Sensors with Power Pack - Vacancy Solution (PP-DV-M, UPP-DV-M)[1]

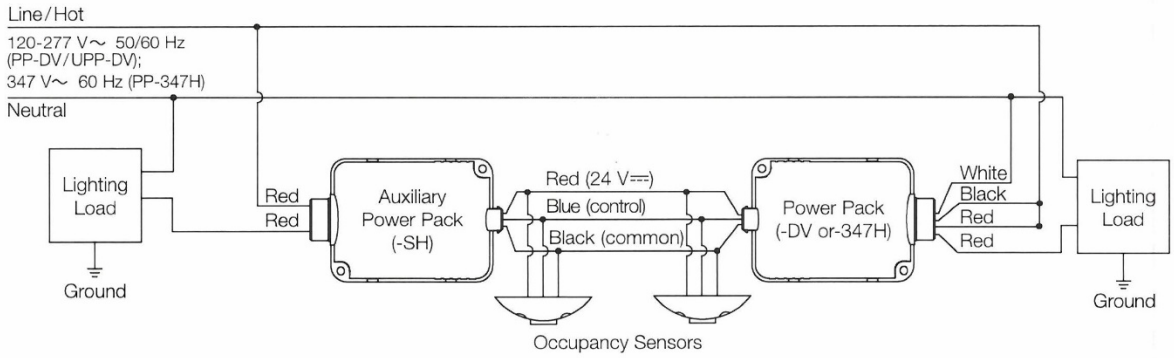


[1] Maximum 3 devices (excluding low-voltage momentary switches) can be used with PP-DV-M/UPP-DV-M. Each PP-SH/UPP-SH counts as one device, each occupancy sensor counts as one device.
[2] NTRCS-1 (Nova T☆® momentary switch) or any low voltage momentary switch rated for at least 24 V⎓, 100 mA.

continued on next page...

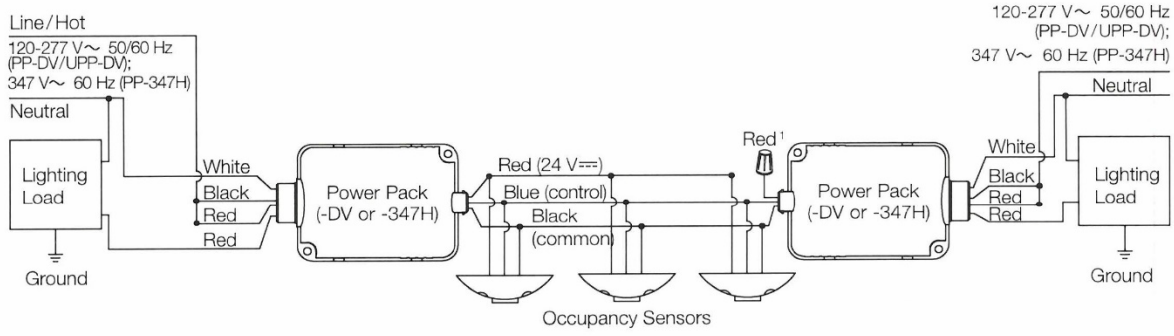
Wiring *(continued)*

Switching Multiple Loads with 1 Power Pack and 1 Auxiliary Power Pack[1]



[1] Maximum of 3 devices can be used with PP-DV, UPP-DV, or PP-347H. Each PP-SH/UPP-SH counts as one device, each occupancy sensor counts as one device.

Switching Multiple Loads with 2 Power Packs (PP-DV/UPP-DV)



[1] Only 1 Power Pack (PP-DV/UPP-DV) should power the occupancy senors. This 24 V⎓ output is left disconnected.

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Line 23

Dual Technology Ceiling Mount Sensor

The LOS-CDT Series dual technology ceiling-mount sensors can integrate into Lutron® systems or function as stand-alone controls using a Lutron® power pack. The technology eliminates manual sensitivity and timer adjustments during installation and over the life of the product.

Features

- Intelligent, continually adapting sensor
- Ultrasonic (US) combined with Passive Infrared (PIR) sensing provide high sensitivity, high noise immunity, and excellent false tripping immunity
- Suited for complex environments that are difficult to control with single-technology sensors
- Snap-locks to ceiling-mounted cover plate
- Non-Volatile Memory: settings saved in protected memory are not lost during power outages
- 500 ft² to 2000 ft² (46 m² to 186 m²) coverage when mounted on an 8 ft to 12 ft (2.4 m to 3.7 m) ceiling
- Affords choice of turning lights off or dimming to a preset level in the unoccupied state when integrated with a Lutron® system.

Models Available

Model	Color	Coverage	Field of View
LOS-CDT-500-WH	White	500 ft² (46 m²)	180°
LOS-CDT-500R-WH	White	500 ft² (46 m²)	180°
LOS-CDT-1000-WH	White	1000 ft² (93 m²)	180°
LOS-CDT-1000R-WH	White	1000 ft² (93 m²)	180°
LOS-CDT-2000-WH	White	2000 ft² (186 m²)	360°
LOS-CDT-2000R-WH	White	2000 ft² (186 m²)	360°

Self-Adaptive Feature

The LOS-CDT Series sensors combine both Ultrasonic (US) motion detection for maximum sensitivity and Passive Infrared (PIR) motion detection for false triggering immunity. The self-adapting internal microprocessor analyzes the composite sum of both signals to eliminate time-consuming adjustments and callbacks found in non-intelligent sensors.

LUTRON® SPECIFICATION SUBMITTAL Page 1

Job Name:	Model Numbers:	
Job Number:		

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Specifications

Regulatory Approvals

- UL® and cUL® listed

Power

- Operating voltage: 20 – 24 V⎓, IEC PELV/NEC® Class 2
- Operating current: 33 mA nominal
- Control output: 20 – 24 V⎓ active high logic control signal with short-circuit protection, open collector when unoccupied

Environment

- Temperature: 32 °F to 104 °F (0 °C to 40 °C)
- Relative humidity: less than 95%, non-condensing
- For indoor use only

Timer Adjustment

- Automatic mode: Continually adapting sensor automatically adjusts settings to the space
- Manual mode: 8 to 30 minutes
- Test mode: 8 seconds

LED Lamp

- Red: infrared motion detected
- Green: ultrasonic motion detected

Housing

- Rugged, high-impact, injection-molded plastic
- Color-coded leads 6 in (15 cm)

Adaptive Functions

- Installation: 60 minutes
- Learning: 4 weeks for response to error conditions, air current adaptation, and timer optimization
- Post-learning occupancy periods
  - —24 hour circadian occupancy periods learned
  - —Weekly occupancy periods learned
- Adjustments in post-learning period
  - —Generally occupied periods (threshold = high-sensitivity mode)
  - —Generally unoccupied periods (threshold = miser mode)

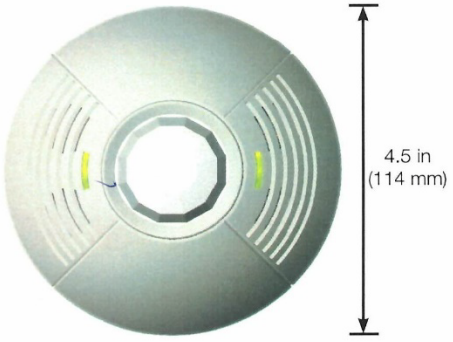
Contact Rating (R Models only)

- SPDT 500 mA rated at 24 V⎓ isolated relay

Photo Cell (R Models only)

- Prevents light from turning on when there is sufficient natural light
- Sensitivity: 0 lx to 1000 lx adjustable

Dimensions



Front View

Side View

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Wiring: System Control

Power packs may be required when interfaced to Lutron® lighting control systems. If more than 1 occupancy sensor is connected to the same input, a power pack is required. A maximum of 3 occupancy sensors can be connected to the same input. If more than 3 sensors are required per input, use one of the following models: LOS-CDT-500R-WH, LOS-CDT-1000R-WH, or LOS-CDT-2000R-WH.

Power Supply Options

Lutron® Lighting Control System	Power Pack Required?
Digital microWATT™	No
EcoSystem®	No
Energi Savr Node™	No*
GRAFIK 5000™/6000®/7000™	No, when used with seeTouch® wallstations with occupancy sensor connections.
GRAFIK Eye® 3000/4000	Yes
GRAFIK Eye® QS	No*
HomeWorks®	Yes
HomeWorks® QS	No*
LCP128™	No, when used with seeTouch® wallstations with occupancy sensor connections.
microWATT®	No
Quantum®	No*
RadioRA®	Yes
RadioRA® 2	Yes
Softswitch128®	No, when used with seeTouch® wallstations with occupancy sensor connections.

* Some system components do not supply external power for occupancy sensors. Refer to individual product specifications for more information.

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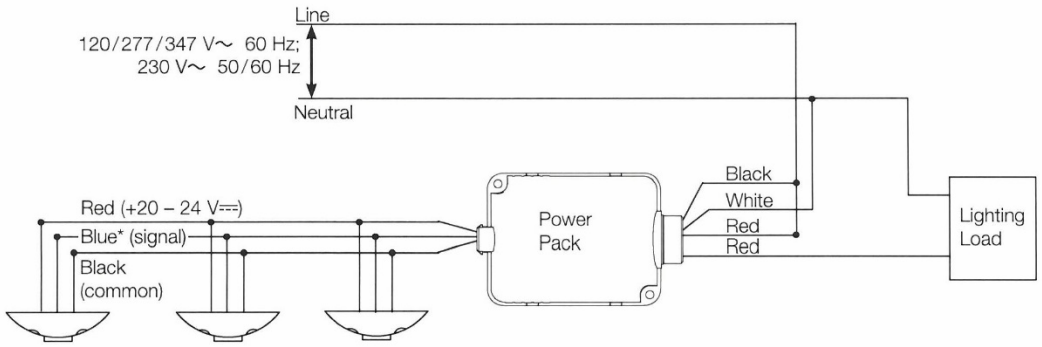
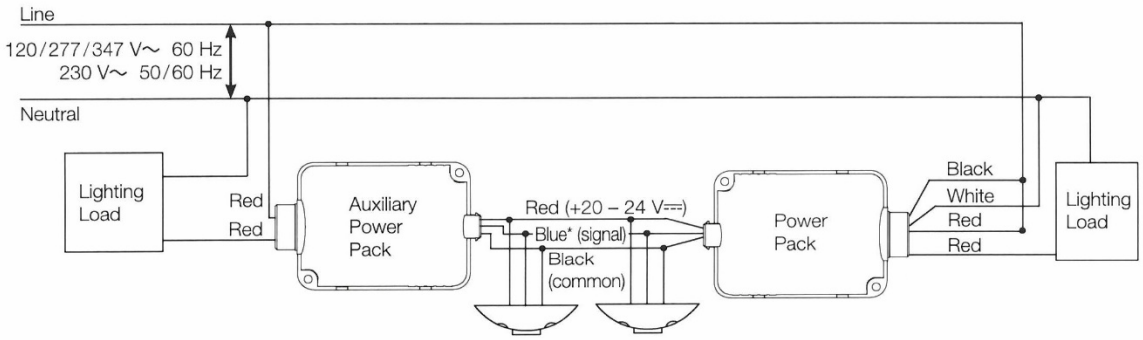
Wiring: Stand-Alone Control

1 to 3 Sensors with Power Pack



NOTE: Maximum 3 occupancy sensors.

Switching Multiple Loads with Auxiliary Power Packs



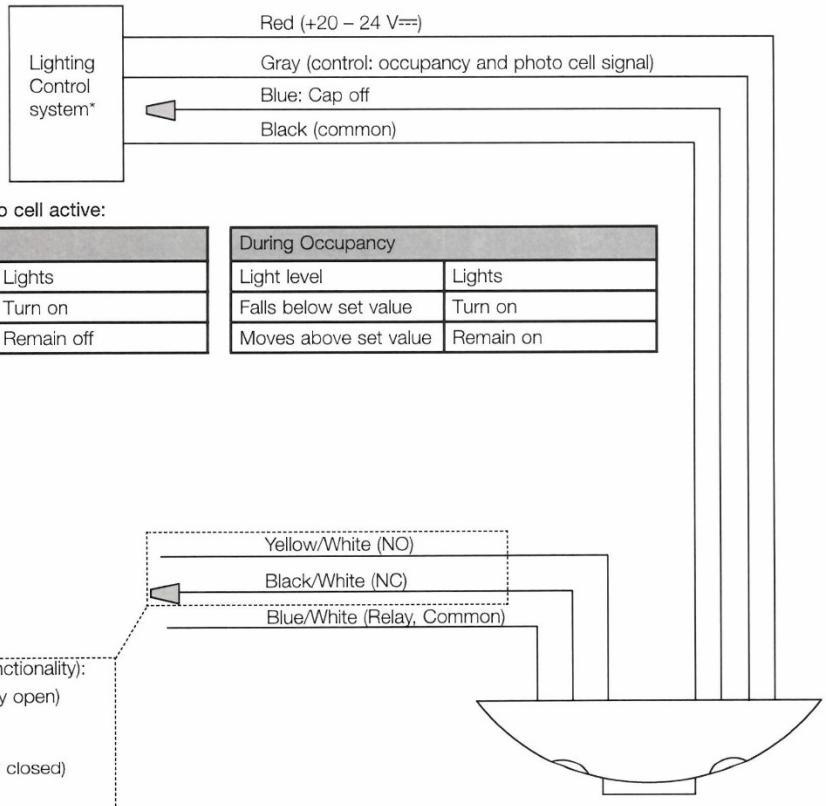
NOTE: Maximum of 3 devices total (occupancy sensors and auxiliary power packs) can be connected to a power pack.

*Use gray wire for LOS-CDT-500R-WH, LOS-CDT-1000R-WH, and LOS-CDT-2000R-WH.

Wiring

Relay Model Option

LOS-CDT-500R-WH, LOS-CDT-1000R-WH, and LOS-CDT-2000R-WH only



Gray wire logic with photo cell active:

Room First Occupied	
Light level	Lights
Below set value	Turn on
Above set value	Remain off

During Occupancy	
Light level	Lights
Falls below set value	Turn on
Moves above set value	Remain on

*May require power pack

Installation

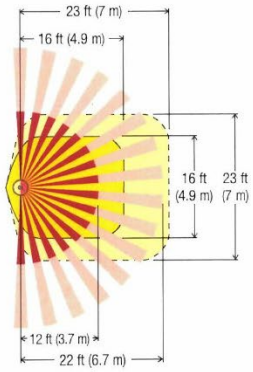
Sensor Setup

- Sensor setup is available as a service by Lutron. For more information see the **Sensor Layout and Tuning** service document (Lutron® P/N 3601235).

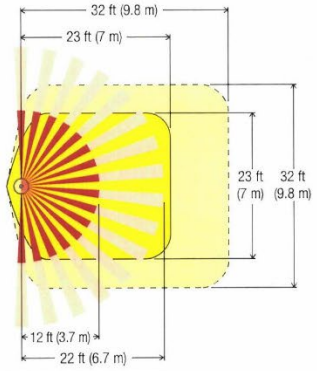
Sensor Placement

- Mount the sensor so the grilles face the open portion of the room and are not facing a nearby wall, window, or other obstructing object.
- Do not place sensor within 6 ft (1.8 m) of air vents, air handlers, windows, fans, etc., as this may cause false triggering.
- If installing a 180° occupancy sensor (500 and 1000 models), place the sensor on the same wall as the doorway so that traffic in a hallway will not affect the sensor; otherwise, place in center of room.
- Closely follow the diagrams shown concerning major and minor motion coverage. The sensor can detect major motion (e.g. person taking a half-step) at a greater distance than it can detect minor motion (e.g. writing at a desk or reading a book).
- Decrease total coverage area by 15% for "soft" rooms (e.g. heavy draperies or thick carpeting).

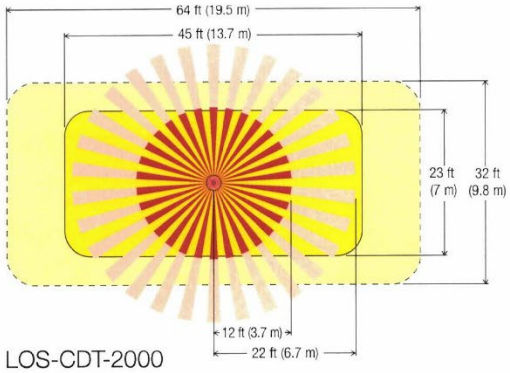
Range Diagrams



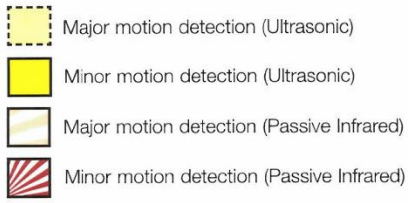
LOS-CDT-500



LOS-CDT-1000



LOS-CDT-2000



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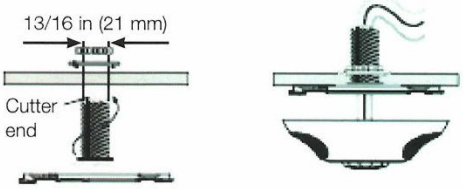
Mounting

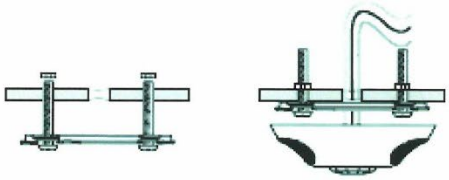
Normal Mounting

Twist and lock threaded mounting post onto cover plate. Drill through ceiling tile with assembly, using cutter end of the threaded mounting post. Secure with washer and nut.

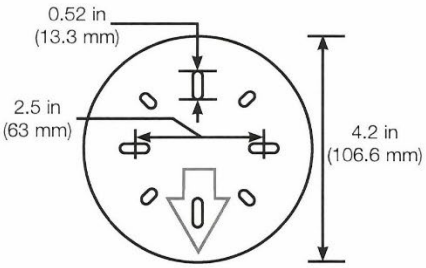


Mounting to Non-Standard Ceiling or Fixture

Mount twist-lock cover plate using mounting screws, nuts, and washers (included). Drill/punch wire routing hole through ceiling tile at center of cover plate.



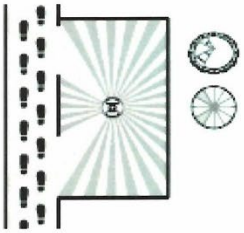
Mounting Plate Dimensions



Wire Lengths

Number of Sensors	1	2	3	1	2	1
Number of Auxiliary Power Packs	0	0	0	1	1	2
22 AWG	750 ft	375 ft	250 ft	375 ft	250 ft	250 ft
0.5 mm²	365 m	180 m	120 m	90 m	120 m	120 m
20 AWG	1200 ft	600 ft	400 ft	600 ft	400 ft	400 ft
0.75 mm²	730 m	365 m	240 m	365 m	240 m	365 m
18 AWG	2400 ft	1200 ft	800 ft	1200 ft	800 ft	800 ft

Using the Infrared Mask



Center Ceiling Mount
(Mask blocks sensor seeing out doorway into hall)

Corner Ceiling Mount
(No mask needed)

Typical Mask Patterns

Conference Room Mask

180° Mask

Full Mask

Rectangular Areas

Over the Door

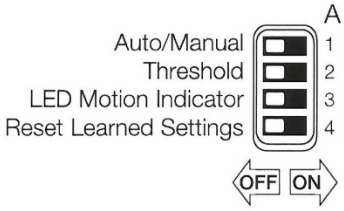
Specific Areas You Wish to Mask

LUTRON® SPECIFICATION SUBMITTAL Page 7

Job Name:	Model Numbers:	
Job Number:		

Sensor Adjustments

Override Settings



A	Off (Default)	On
1	Automatic (Normal)	Manual on/off (Override)
2	Auto Threshold Adjustment	High Sensitivity (Low turn-on threshold)
3	Lights indicate motion	Disable LED Indicator
4	Retain Settings (Normal)	Erase all learned settings; Restart Learning (Toggle On)

B	Off (Default)	On
1	Disable Compensation (Normal)	Enable Compensation
2	No (Normal)	Yes (Use increased turn-on threshold)
3	Adjust Timer Automatically	Use Manual Setting (No adjustment)
4	Adjust Sensitivity Automatically	Adjust Sensitivity Manually

Timer Test Mode

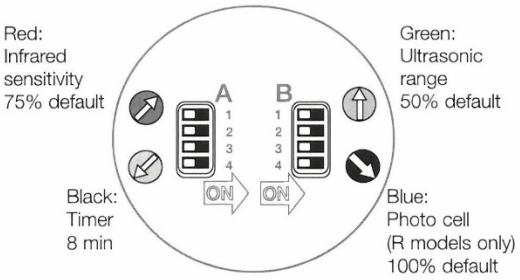
1. Remove the retainer cover.
2. Rotate the black timer adjustment knob to about midway (12 o'clock).
3. Return setting to minimum setting (full CCW).

Factory Settings | 12 o'clock | Full CCW

NOTE: The timer will remain in the 8 second test mode for 1 hour, then automatically reset to 8 minutes.

4. To manually take the timer out of the 8 second test mode, turn the timer adjustment approximately 1/16 in (1.5 mm) clockwise to make the setting slightly above minimum (just above the 8 minute setting).

Factory Settings



Continued on next page...

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Sensor Adjustments *(continued)*

Adjusting the "Lights Not On" Level

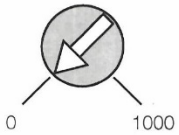
LOS-CDT-500R-WH, LOS-CDT-1000R-WH, and LOS-CDT-2000R-WH only

1. Place timer in Test Mode (see page 8).
2. Set photo cell to maximum. Turn the blue knob full clockwise (lights on no matter how bright the natural light is), then about 30° counterclockwise.
3. Check for Lights-Out. Move from underneath the sensor, and remain still until the lights turn off. Move around normally to turn the light on.
4. Adjust to desired level. If lights remain off, adjust the blue knob another 30° counterclockwise and repeat step 3 until the lights turn on.

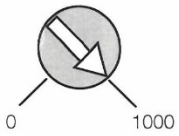
NOTE: Set blue knob to 100% to disable photo cell functionality and leave secondary dry contact closure output functionality intact.

Control Settings (Blue Knob)

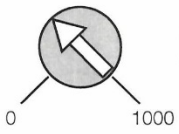
LOS-CDT-500R-WH, LOS-CDT-1000R-WH, and LOS-CDT-2000R-WH only



Minimum (low):
Lights will never come on, even though room is occupied.



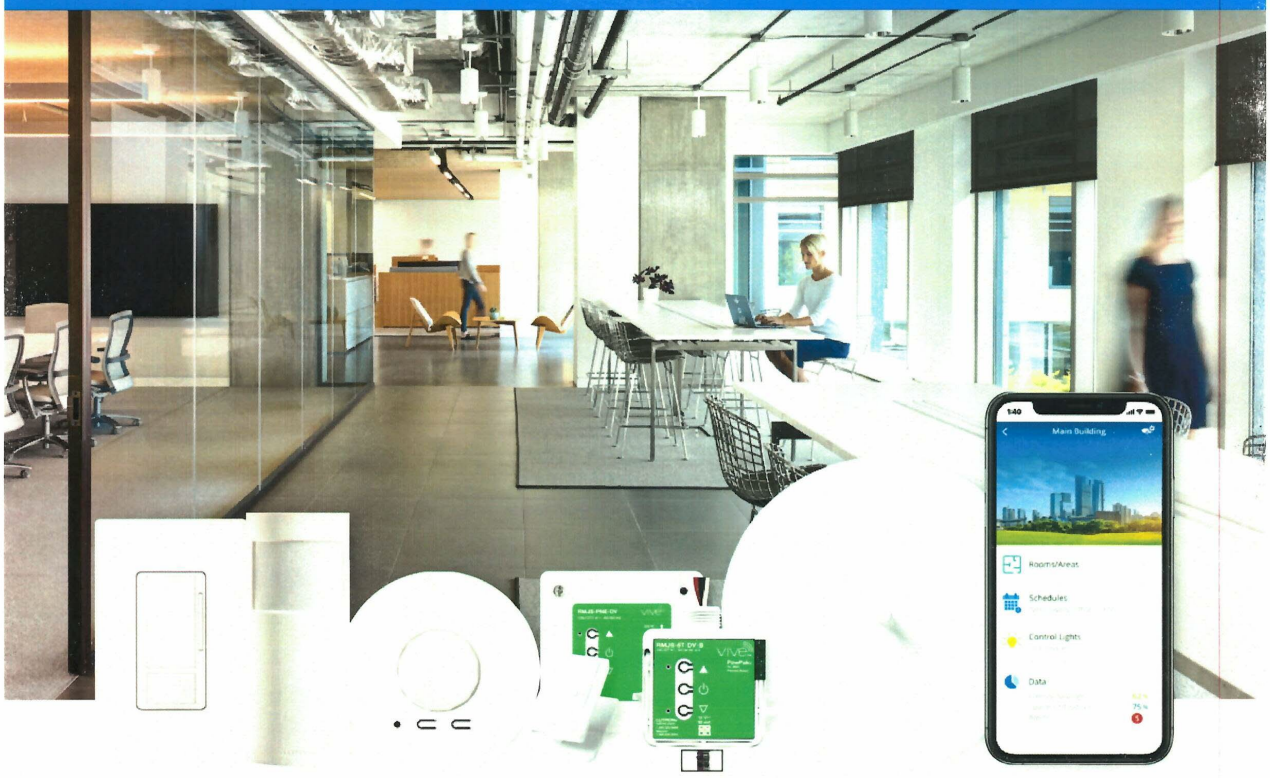
Maximum (high):
Photo cell has no effect on operation (factory setting).



Normal:
200 lx to 600 lx is normal range.

Simple, touchless lighting control for today's world

To help slow the spread of germs, the CDC recommends frequent disinfecting of things you touch, such as light switches.



Let Lutron get the lights.
Your employees will be free to focus on their work.

Lutron has a variety of easily installed and flexible wireless solutions readily available that allow you to **rapidly reconfigure existing spaces to promote social distancing** — while reducing the instances in which you touch lighting controls.

- **Wireless sensors automate lighting control**
- **Automate your scheduling**
- **Program from a distance**
- **Use Pico personal remote controls**

Line 24

LUTRON

Touchless Controls for Common Areas

Solution 1

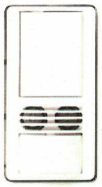
Quick, simple, and cost-effective

Install an in-wall sensor dimmer or sensor switch. Lights automatically come on when an occupant enters the space, and turn off when they exit.

Perfect for small spaces such as private offices, equipment rooms, and more.

Maestro in-wall sensor switch
MS-OPS

Maestro in-wall sensor dimmer
MS-Z101



Maestro in-wall dual-tech sensor
MS-A102

Maestro in-wall sensor switches and dimmers are available in many voltages and amperages.

For more information on these and additional solutions click here.

All controls shown with Claro wallplate CW-1-WH.

LUTRON

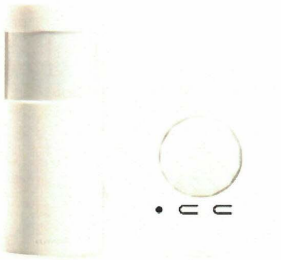
Touchless Controls for Common Areas

Solution 2

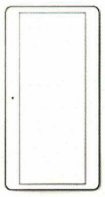
No new wiring, 10-minute installation

Easily pair a wireless sensor to an in-wall switch or PowPak mounted in the ceiling to make your space touchless. Set the sensor to occupancy mode and automatically turn lights on when you enter a space, and turn them off when you leave.

Perfect for restrooms, hallways, cafeterias, and more.



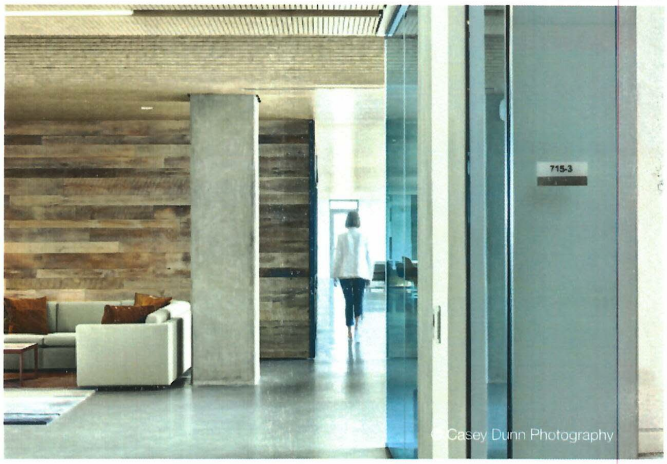
Wall/ceiling mounted sensors
LRF2-OWLB-P-WH; LRF2-OCR2B-P-WH



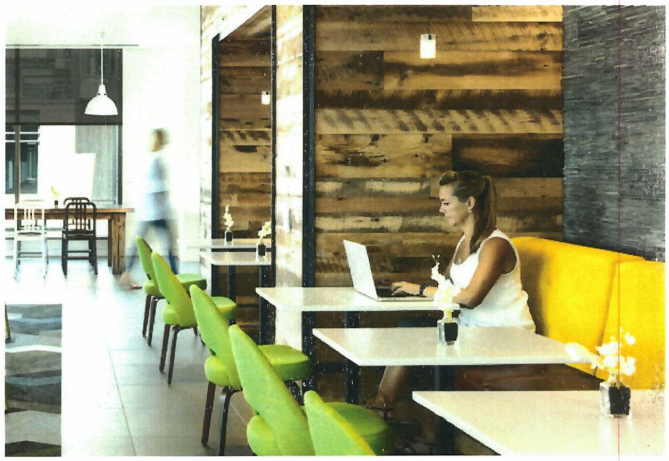
Maestro switch with Claro wallplate
MRF2S-8S-DV-WH & CW-1-WH

Powpak
RMJS-8T-DV-B

For more information on these products and more, visit lutron.com/vive.



© Casey Dunn Photography



LUTRON

Touchless Controls for Common Areas

Solution 3

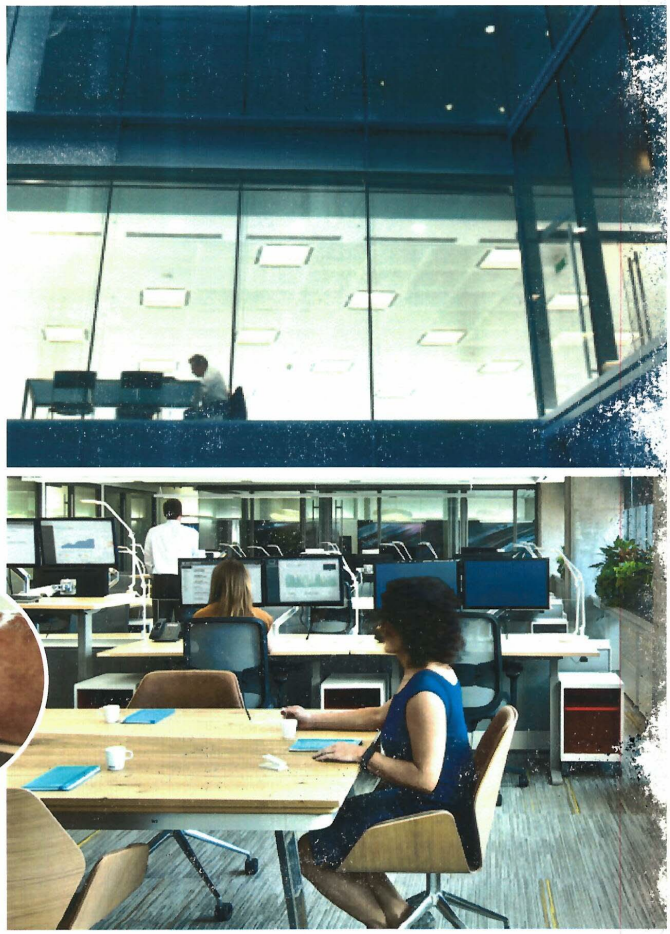
A multi-room or full campus (building) solution

Prepare your workplace for your employees' return. Vive Wireless enhances the ability to maintain social distancing with a variety of products featuring:

- Smartphone programming
- Timeclock functionality
- Pico dedicated personal remotes

Vive installs 70% faster than wired solutions and is simple to design, install, program — and adapt to changes.

Available for a single office, floor, building, or entire campus



Personal Control

Easily add dedicated personal, adaptive control to any space by pairing a Pico wireless remote to a dimmer or switch. Allow individuals to set their own light levels without the need to touch common controls.

For more information watch this video.

In-wall controls | Wireless sensors | Wireless Remote | Wireless load controllers | Integration & App control

LUTRON

Touchless Controls for Common Areas

Resources

Lutron also has the ability to help keep current construction projects on track and on budget.

Your Lutron Rep and Rapid Response teams are ready, willing, and able to provide immediate help. Our inventory levels are strong, all of our manufacturing facilities are operational, and we are shipping product.

Lutron and our Representatives can provide:

- **Quick design and quotes** — bills of material or detailed takeoffs
- **Quick delivery** — our facilities are open and ready to ship
- **Quick installs** — our wireless solutions install up to 70% faster than wired solutions
- **Quick service** — the ability to offer remote services if and when needed

Today, as always, Lutron is here providing simple and reliable lighting control and shading solutions. Committed to taking care of you with superior products and services, we are here to support you!

Name:_____

Email:_____

Phone:_____

CLICK HERE
TO INSERT YOUR LOGO

LUTRON

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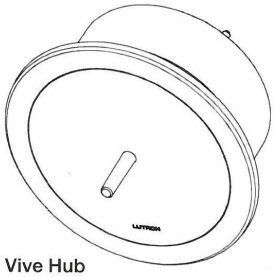
Line 25

Vive Wireless Hub

The Vive hub provides a connection point for Lutron Vive devices such as PowPak wireless dimming and switching modules, PowPak Wireless Fixture Controllers, PowPak 20 A Relay Modules, Maestro Wireless dimmers and switches, Wireless Receptacle controls, Pico remote controls, Radio Powr Savr occupancy sensors, and daylight sensors. For a complete list of compatible devices, see the last page of this document.

For more information on the Vive hub, including training materials, design information and software updates, please visit www.lutron.com/vive



Vive Hub

Vive Hub Dashboard

Features

- Can be easily programmed with any Wi-Fi enabled iOS® or Android® compatible device using the free Lutron Vive app (available for download from the *App Store* or Google Play®) or by using web-based software.
- iOS® and Android® Apps – Helper apps act as an intermediary between Vive systems and the Lutron Cloud without the need of a permanent internet connection. It connects to hubs when on-site and passes data back and forth when the smart device reconnects to the Internet. Visit www.lutron.com/VivePrivacyNotice for more about this data.
  - Registration of jobs/users for extended warranty.
  - Manage multiple jobs with contacts and job info.
  - Invite facility users to have access to hubs/job.
  - Automatically send handoff documentation personalized to your firm to facility management team. Including programming user guide, online "How-to" videos, and support number.
  - Connection to hub browser user interface for setup. Normal web browser still works and the app is not required.
  - Connection to hub browser dashboard for control and monitor. Normal web browser still works and the app is not required.
  - Backup the database to the Lutron Cloud for hub replacement.
  - Download reports that list the inventory of hubs and devices commissioned in your job.
- Communicates with controls on a floor using Lutron wireless Clear Connect technology.
- Distributed system architecture.
  - Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m) through walls, of the associated device.
- Supports timeclock events based on both sunrise and sunset or fixed time-of-day.
- Timeclock events can control individual devices, areas, or groups of areas.
  - Note: This feature is not available once a hub is paired with a Vive Vue server.
- Uses Lutron RF signal strength measurements to find devices nearby for quick association and programming without having to climb ladders.
- Dashboard of current status for control and monitoring of the system. Also shows current energy usage.
- Integrated multi-color LED provides feedback on what mode the hub is in.
- Connects directly to any smartphone, tablet or computer using built in Wi-Fi. 2.4 GHz 802.11b/g. using WPA2 Security.
- Each hub presents a dashboard of devices and areas which it controls.
- If all the hubs on a job are networked using Ethernet, you can easily navigate from one hub to another to view its dashboard.

continued on next page . . .

LUTRON SPECIFICATION SUBMITTAL

Job Name:	Model Numbers:	
Job Number:		

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Features *(continued)*

- Ethernet 10/100 Mbps connection for:
  - Native BACnet®/IP (see Lutron P/N 369996 at www.lutron.com for PIC Statement) integration into Building Management Systems (HJS-2-XX only). The Vive Hub has been tested by BACnet® Testing Laboratories (BTL) and is certified to comply with all necessary interoperability requirements.
  - Network multiple Vive hubs together as an independent system or as part of an existing building network.
  - Native OpenADR® support, to manage Automatic Demand Response/Load Shed events dictated by a utility company.
  - Each Vive hub hosts a unique virtual BACnet® network. As such, each Vive hub requires a unique BACnet® network number.
- Firmware upgradable for future features and security patches.
- Password protected access.
- Flush-mount or surface-mount options available.
- Supported on most devices that use an HTML5 compliant browser (iOS®, Android®, Windows®, *Mac*).
- Required browsers are Google® Chrome® and *Safari*.
- Supports HTTPS.
- Recommended configurations for smart devices:

Device	OS Version
iPhone 6, *iPhone* 6 plus or newer	iOS® 11.0 or later
Supported on most Android® devices running Android® 6.0 or later.	Android® 6.0 or later

- Daylighting Setpoint Tweaking – If the lights are too bright or too dim while using daylighting, adjust the settings in real time from a smart device to alter the setpoint for the light level that is maintained between natural and electric light. Older devices (released prior to September 2017) can be adjusted but may take a minute to reach desired level because of a of slow fade. New devices will respond immediately.
- Daylighting-to-Low-End or Daylighting-to-Off - The Vive system will allow the user to select either daylighting-to-low-end or daylighting-to-off on an area by area basis.
  - Requires Vive hub software 01.08 or higher.
- Customer Supplied Security Certificates
  - Provides customers the abiltiy to load their own authentication certificates for their specific domain.
  - Provides customers using the Vive hub application to use secure browser communications without receiving any authentication warnings due to the self-signed certificates that are shipped with the hubs.
  - Requires Vive hub software 01.08 or higher.
- Timeclock Occupancy Sensor Settings Changes
  - Requires devices shipped after September 2017. Devices shipped prior to that date will be displayed as "unsupported" in the software UI. Allows timeclock events to change the behavior of occupancy settings based on time of day. For example, change the unoccupied level of corridors/hallways from 25% during the day, and off at night. The following settings can be changed:
  - Occupied Level – The level the lights go to when occupied. Changes are not applied immediately to currently occupied spaces, but will change the next time the space goes occupied to minimize distraction.
  - Unoccupied Level – The level the lights go to when unoccupied. Changes are applied immediately to spaces not currently occupied.
  - Enable/Disable Occupancy – Change whether devices will respond to the occupancy sensor.
  - Timeout of the sensors (requires FC-VSENSOR). LRF2 sensors still require this setting to be set on the sensor.
- 365-day schedulable timeclock with exceptions for holidays.
  - Allows scheduling events 10 years in advance.
  - Set recurring events with exceptions on holidays.
  - Allows scheduling events on specific day of the year.
- Measured energy data for PowPak Wireless Fixture Control accurate to ±2% or 0.5 W, whichever is higher.
- Measured energy data is available for the Vive Integral Fixture Control when paired with a driver that supports measured power. See Lutron specification submittal (P/N 3691039) at www.lutron.com for more information.
- Provides calculated energy data for PowPak modules and Maestro dimmers or switches.
- Create and edit areas.

Features *(continued)*

- Tune area light levels by trimming the high-end and low-end output to save energy.
- Adjust occupancy settings. Create occupancy groups.
- Can extend the RF range of up to 15 Pico remote controls per Vive hub. These remotes can be set up to control any device within the 71 ft (22 m) range of that Vive hub.
- RF range of occupancy sensors can be extended for up to 14 areas per Vive hub. In a range extended area, an occupancy sensor can control any device in that area, regardless of distance between sensor and device. Requires Vive hub software 01.09 or higher.
- Configurable Fade Time
  - Up to 90 minutes for timeclock events and scenes.
    - Limited to 90 seconds for FCJS-ECO, FCJS-ECO-EM, RMJS-ECO32-SZ, DFCSJ-OEM-RF, and DFCSJ-OEM-OCC devices.
    - NOTE: This feature is not available once a hub is paired with a Vive Vue server.
  - Up to 90 seconds for Pico remote control programming.
    - Fade time may differ between buttons on the same Pico remote control.
    - Single fade time applies to all programming for a button.
- Automatic Demand Response/Load Shed
  - Load Shedding will physically dim the lights to a programmable level to help meet the requirements for the California Title 24 Building Energy Efficiency Standards–Automatic Demand Response.
  - OpenADR® 2.0b compliant (requires Vive hub software 01.09 or higher).
  - May be enabled (or disabled) via any of the following methods:
    - The first contact closure input (CCI 1)
    - BACnet® integration
    - OpenADR® integration
  - OpenADR® requires access to utility companies over the Internet, so the hub must be connected via Ethernet to use OpenADR®.
- Alerts
  - View run-time issues which may prevent devices from operating as expected, such as low batteries or missing devices.
- API Integration
  - To integrate with third-party devices, systems, and software, RESTful APIs are available over the Ethernet.
- Scenes
  - Scenes can control individual devices, areas, or groups of areas on demand.
  - May be activated via any of the following methods:
    - The second contact closure input (CCI 2)
    - API integration
    - Manual activation in the app
  - Maximum of 50 scenes are supported.
  - Requires Vive hub software 01.13 or higher.
- Override and lockout support for the emergency devices.
  - Activate override and lockout manually, using LUT-ELI-3PH or with an integration device such as a fire alarm. This will send the emergency lights to the defined levels and lock out the controls (Pico remotes and sensors) in the case of a fire alarm or security incident.
  - May be activated via any of the following methods:
    - The second contact closure input (CCI 2)
    - API integration
    - Manual activation in the app
  - Supports all red-label emergency PowPak devices.
  - Requires Vive hub software 01.13 or higher.

  Note: Vive hub has been evaluated by UL for use in emergency lighting systems in accordance with standard UL 924 when paired with the LUT-ELI-3PH Emergency Lighting Interface. Requires Vive hub software 01.13 or higher.
- Programmable CCI
  - The second contact closure input (CCI 2) can be programmed to activate a scene or override and lockout emergency devices in case of a fire alarm.
  - Scene activation
    - Set a scene to activate using the second contact closure input (CCI 2) on the Vive hub.
  - Override & Lockout support activation (fire alarm, security incident)
    - Provides the ability to command all red-label emergency load controllers to programmable light levels and lockout the controls.
  - Requires Vive hub software 01.13 or higher
- Occupancy Dependency
  - Occupancy sensors in one room/area can control devices in other rooms/areas.
  - Radio Powr Savr occupancy sensors and Maestro Wireless 0–10 V⎓ dimmers and switches with sensor only.
  - Requires Vive hub software 01.14 or higher
- Manually select dimming module phase in the app (supported devices only).

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Specifications

Regulatory Approvals

- cULus Listed
- FCC approved. Complies with the limits for a Class B device, pursuant to Part 15 of the FCC rules.
- IC
- COFETEL
- NOM

Power/Performance

- Input to power supply:
  120 – 277 V~ 50/60 Hz 0.6 A
- Input to Vive hub:
  24 V⎓ 350 mA

System Limits

- HJS-1, HJS-2 support up to 700 Lutron Wireless devices. HJS-0 supports 75 Lutron Wireless devices. Devices must be located within 71 ft (22 m) of the Vive hub.
- Any given load device can be controlled by 10 occupancy sensors, 10 Pico remote controls and 1 daylight sensor (Pico remote controls and sensors must be located within 30 ft [9 m] of the load device they are controlling).

Mounting

- Vive hub units should be mounted in the middle of non-metal ceiling tile or drywall, visible from inside the space.
- Installation near metal, other than a junction box, may reduce RF range. Hub should be at least 12 in (305 mm) away from metal objects.
- Use surface-mount version for mounting to a hard or cement ceiling.
- Power supply mounts to a standard 4 in x 4 in (101 mm x 101 mm) square junction box.
- Power supply must be mounted within 100 ft (31 m) of the Vive hub. Wiring should be 24 AWG to 12 AWG (0.2 mm^2 to 2.5 mm^2).

Environment

- For indoor use only.
- 32 to 104 °F (0 to 40 °C).
- Relative humidity less than 90% non-condensing.

Contact Closure Input Terminals

- First contact closure input (CCI 1) is to be used for initiating load shed only. Load shedding will physically dim the lights to a programmable level to help meet the requirements for The California Title 24 Building Energy Efficiency Standards Automatic Demand Response.
- The second contact closure input (CCI 2) may be programmed to activate an emergency or scene. If activating a scene, a "deactivation" behavior may be set in the scene in order to set two behaviors for the one input.
- Accepts only maintained inputs.
- Off-state leakage current must be less than 100 µA.
- Open circuit voltage: 24 V⎓ maximum.
- Input wiring: 24 AWG to 12 AWG (0.2 mm^2 to 2.5 mm^2).
- Contact Closure Inputs on multiple hubs can be wired in parallel. **DO NOT** wire inputs in parallel with other equipment as it can cause the inputs on either of the devices to falsely trigger.
- Up to 4 hubs in parallel.
- To ensure proper operation of Contact Closure Inputs, a PS-J-20W-UNV power supply may not be used to provide power to more than one hub.
- Inputs must be dry contact closure, solid state, open collector, or active-low (NPN)/active high (PNP) output.
  – Open collector NPN or active-low on-state voltage must be less than 2 V⎓ and sink 3.0 mA.
  – Open collector PNP or active-high on-state voltage must be greater than 12 V⎓ and source 3.0 mA.

Programming

- The Vive hub is meant to be permanently installed. It is **NOT** intended to be used as a programming tool that can be removed from the site after commissioning. Various Vive system features are dependent on the hub for proper functionality. In addition, users and other maintainers will be forced to recommission the entire system in order to make simple changes or additions if the hub is not installed on-site as part of the commissioned system.

Warranty

- 1 year limited warranty. The customer can register the product to increase the warranty period from 1 year to 5 years. Please visit www.lutron.com/TechnicalDocumentLibrary/369-119_Wallbox_Warranty.pdf for warranty details.

Job Name:	Model Numbers:	
Job Number:		

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How to Build a Model Number

Example

HJS – 1 – FM

- HJS: Frequency
- 1: Type
- FM: Mounting

Frequency

J = 431.0 – 437.0 MHz (USA, Canada, Mexico)
433.05 – 434.79 MHz (Israel, Hong Kong)

Type

0 = Starter Vive hub without BACnet® limited to 75 devices (Available as HJS-0-FM only)
1 = Vive hub without BACnet®
2 = Premium Vive hub with BACnet®

Mounting

FM = Flush-Mount (non-metal ceiling tiles or drywall)
SM = Surface-Mount (cement)

Available Vive Hub Model Numbers (includes power supply and mounting adapter)

HJS-0-FM - Starter hub, flush-mount adapter and power supply
HJS-1-FM - Vive hub, flush-mount adapter and power supply
HJS-1-SM - Vive hub, surface-mount adapter and power supply
HJS-2-FM - Premium Vive hub, flush-mount adapter and power supply
HJS-2-SM - Premium Vive hub, surface-mount adapter and power supply
HJS-UPDATE - Software upgrade license to add BACnet to HJS-0 and HJS-1 hubs
HJS-DEVICES - Software upgrade license expands device limit to 700 devices for HJS-0 hubs

Replacement Part Model Numbers

PS-J-20W-UNV	Vive hub external power supply
H-MOUNT-FM	Flush-mount installation adapter
H-MOUNT-SM	Surface-mount installation adapter

Ethernet Switch Model Numbers (sold separately)

All switches are unmanaged 10/100/1000 Mbps. This IT gear is a suggested list. IT provided gear that is equivalent or better is sufficient. Enterprise level gear recommended.

ETH-SWITCH-16	16 port
ETH-SWITCH-24	24 port
ETH-SWITCH-24-1M	24 port, 1 multi-mode fiber
ETH-SWITCH-24-2M	24 port, 2 multi-mode fiber
ETH-SWITCH-24-1S	24 port, 1 single-mode fiber
ETH-SWITCH-24-2S	24 port, 2 single-mode fiber

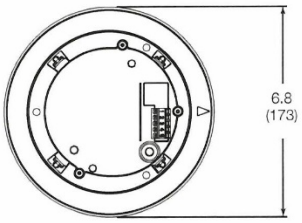
Job Name:	Model Numbers:	
Job Number:		

Dimensions

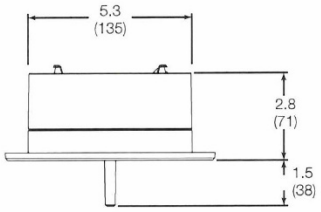
Dimensions are shown as: in (mm)

Vive Hub

Top View

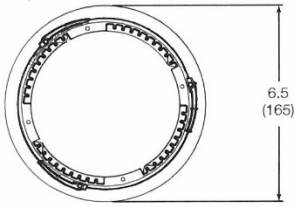


Side View

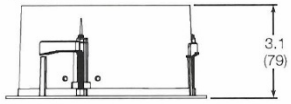


Flush-mount Adapter

Top View



Side View

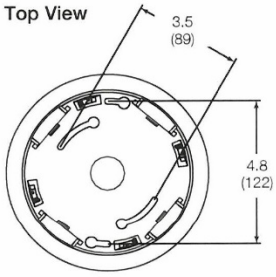


Flush-mount Adapter Details

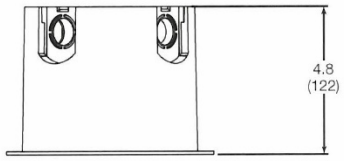
- Requires a 6 in (153 mm) hole to be cut in the ceiling for mounting.

Surface-mount Adapter

Top View



Side View

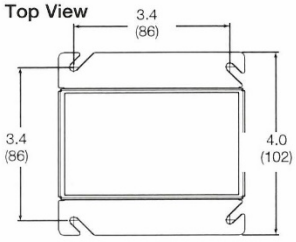


Surface-mount Adapter Details

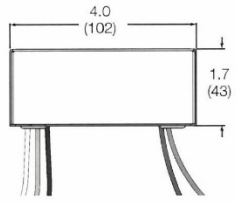
- Knockouts for 1/2 in or 3/4 in (13 mm or 19 mm) conduit.

Power Supply

Top View



Side View



Job Name:	Model Numbers:	
Job Number:		

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Range Diagrams

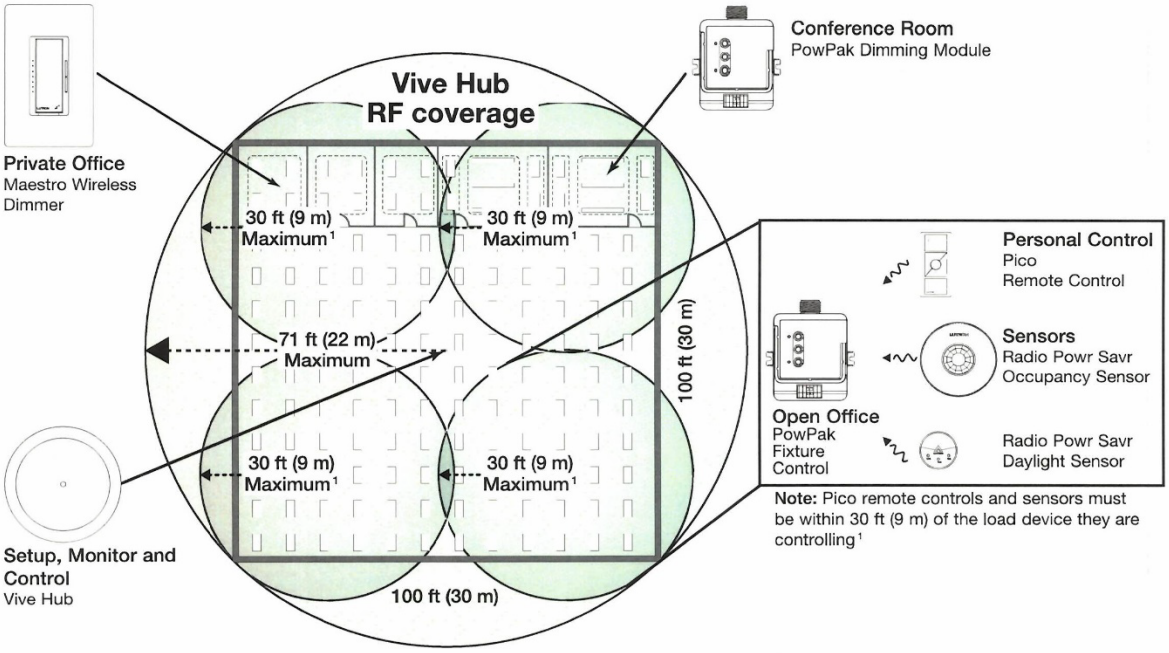
All wireless devices to be associated to the Vive hub must be within 71 ft (22 m) of the Vive hub and must be on the same floor as the Vive hub.

Note: Vive hubs should be mounted greater than 10 ft (3 m) apart on the same floor.

Note: A corporate Wi-Fi network can interfere with the Wi-Fi on the Vive hub. Where a corporate Wi-Fi network exists, it is recommended to do the following:

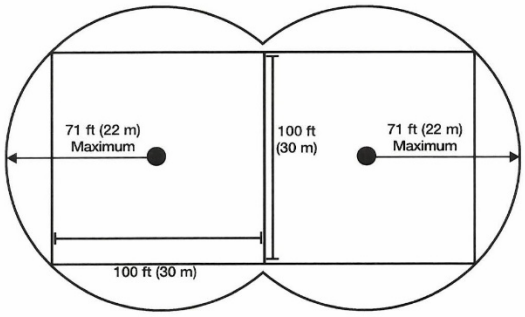
- Connect the Vive hub to the corporate network using the Ethernet connection on the hub and disable Wi-Fi on the hub.

Note: Vive hubs should be mounted greater than 10 ft (3 m) from a Wi-Fi router or access point.



[1] Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls, of the associated device.

Range with multiple Vive hubs



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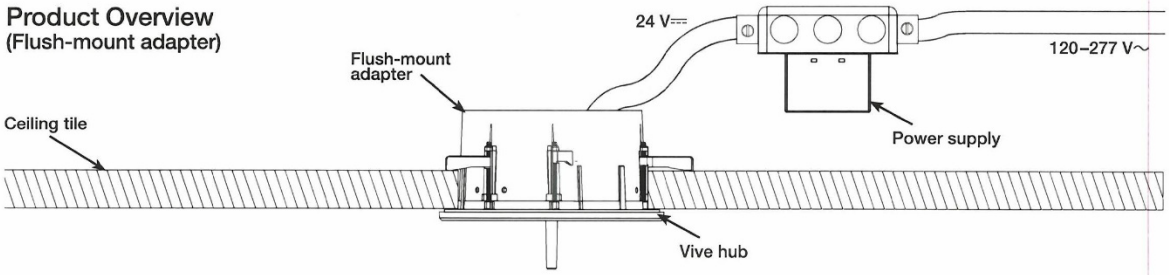
Wiring

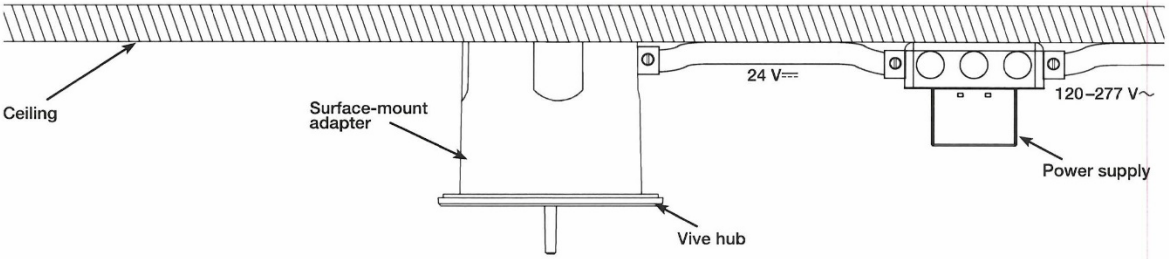
Product Overview
(Flush-mount adapter)



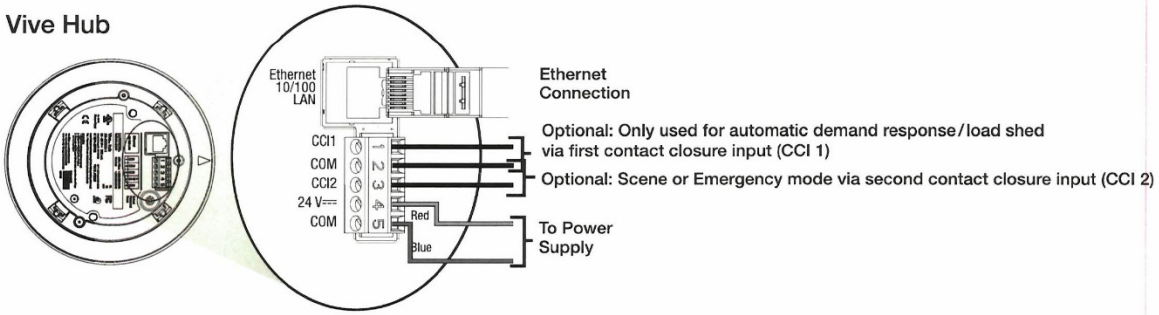
See Lutron Application Note #628 (P/N 048628) at www.lutron.com for information on wiring Emergency Lighting with a Vive System.

Product Overview
(Surface-mount adapter)

Note: For Chicago plenum space applications the power supply has a metal enclosure and can be mounted in the plenum space. The Vive hub cannot be mounted in the plenum space and needs to be mounted outside the plenum space on the surface of the ceiling.



Vive Hub



Vive Security Statement

Lutron takes the security of the Vive Lighting Control System very seriously.

The Vive Lighting Control System has been designed and engineered with attention to security since its inception. Lutron has engaged security experts and independent testing firms throughout the entire development of the Vive Lighting Control System. Lutron is committed to security and continuous improvement throughout the Vive product lifecycle.

The Vive Lighting Control System uses a multi-tiered approach to security and National Institute of Standards and Technology (NIST) recommended techniques for security.

They include:

1. An architecture that isolates the wired Ethernet network from the wireless network, which strictly limits the possibility of the Vive Wi-Fi being used to access the corporate network and gain confidential information
2. A distributed security architecture with each hub having its own unique keys that would limit any potential breach to only a small area of the system
3. Multiple levels of password protection (Wi-Fi network and the hubs themselves), with built-in rules that force the user to enter a strong password
4. NIST-recommended best practices including salting and SCrypt for securely storing usernames and passwords
5. AES 128-bit encryption for network communications
6. HTTPS (TLS 1.2) protocol for securing connections to the hub over the wired network
7. WPA2 technology for securing connections to the hub over the Wi-Fi network
8. Azure provided encryption-at-rest technologies

The Vive hub can be deployed in one of two ways:

- Dedicated Lutron Network
- Connected to the corporate IT network via Ethernet. The Vive hub must be connected via Ethernet to access certain features such as BACnet® for BMS integration or OpenADR® integration. Lutron advises following best practices in this instance, including separating the business information network and the building infrastructure network. Use of a VLAN or physically separated networks is recommended for secure deployment.

Dedicated Lutron Network Deployment

The Vive hub is not connected to the building network. Wi-Fi is used to connect to a smart device such as a phone, tablet, or PC for commissioning and configuration only. The Vive hub serves web pages for setup and maintenance via a password-protected connection. The Wi-Fi SSID can be set to not broadcast. The Vive hub Wi-Fi may be disabled if desired.

Corporate IT Network Deployment

The Vive hub may be deployed with a fixed Ethernet IP address or served over DHCP. Once the IT network is operational, the Vive hub will serve password protected web pages for access and maintenance. The Vive hub Wi-Fi may be disabled if desired. The Vive hub reserves the IP subnet 192.168.3.0/24 for its Wi-Fi, so the hub cannot be assigned an Ethernet IP address in that range.

The Vive hub acts as a Wi-Fi access point purely for the configuration and commissioning of the Vive system. It is not a substitute for your building's normal Wi-Fi access point. The Vive hub does not act as a bridge between wireless and wired networks.

It is strongly recommended that local IT security professionals be involved with the network configuration and set-up to ensure the installation meets their security needs.

Job Name:	Model Numbers:	
Job Number:		

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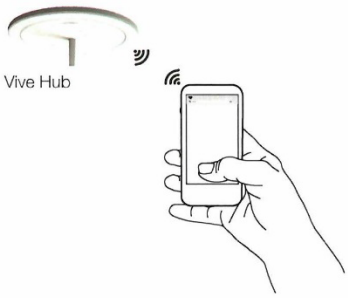
Dedicated Network

Wi-Fi Only

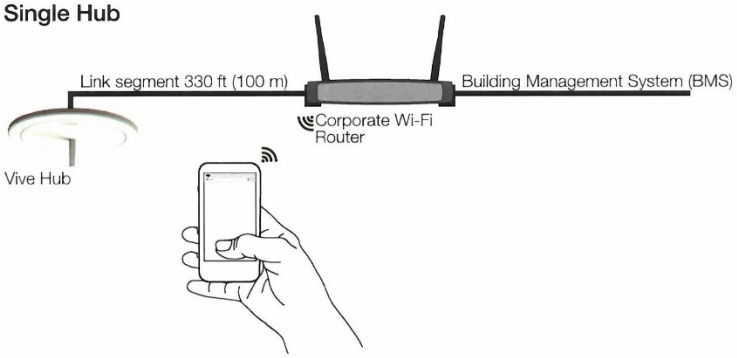


Ports Used

- No IT configuration needed

Corporate Network

Single Hub

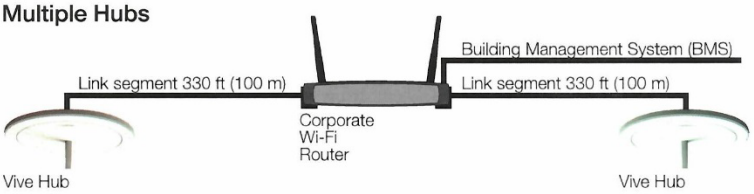


Ports Used

Traffic	Port	Type	Connection	Description
Outbound	47808 (configurable)	UDP	Ethernet	Used for BACnet® integration into Building Management Systems
	80	TCP		Used to discover the Vive hub when mDNS is not available
	5353	UDP	Ethernet	Used to discover the Vive hub via mDNS
	Configurable	TCP	Ethernet	Used for OpenADR®. Specified by utility company
Inbound	443	TCP	Both Ethernet and Wi-Fi	Used to serve user interface to smart device
	80	TCP		Used by other Vive hubs to proxy
	8081	TCP	Ethernet	Used for local LEAP connections to integrations and Vive Vue
	8083	TCP	Ethernet	Used for local LAP connections to integrations and Vive Vue
	8444	TCP	Ethernet	Used to communicate with the Vive Vue server
	47808 (configurable)	UDP	Ethernet	Used for BACnet® integration into Building Management Systems
	5353	UDP	Ethernet	Used to discover the Vive hub via mDNS

Corporate Network *(continued)*

Multiple Hubs



Ports Used

Traffic	Port	Type	Connection	Description
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	8444	TCP	Ethernet	Used to communicate with the Vive Vue server
	47808 (configurable)	UDP	Ethernet	Used for BACnet® integration into Building Management Systems
	5353	UDP	Ethernet	Used to discover the Vive hub via mDNS

Inter-Hub Link Wiring

Notes

- The inter-hub wiring is considered IEC PELV/NEC® Class 2; do not run in the same conduit as line (mains) voltage wiring.
- Wiring distance for any single link segment is 330 ft (100 m) max; use Lutron-provided or third-party Ethernet switches for longer distances (see page 3).
- Up to 64 hubs can be networked together.
- Up to 100 hubs can be networked together when Vive Vue is used.
- Hubs communicate over the inter-hub link using multicast UDP or TCP; a dedicated network is recommended but not required.
- The Wi-Fi access port cannot be used to create an ad hoc network for use as the inter-hub communication link.

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Compatible Devices

- **Maestro Wireless Dimmers and Switches**
  - MRF2S-6CL-XX[1]
  - MRF2S-6ELV120-XX[1]
  - MRF2S-8S-DV-XX[1]
  - UMRF2S-8S-DV-XX[1]
  - MRF2S-8ANS120-XX[1]
  - UMRF2S-8ANS120XX[1]
  - MRF2S-6ANS-XX[1]
  - MRF2S-6ND-120-XX[1]
- **Maestro Wireless Companion Dimmers and Switches**
  - MA-R-XX[1]
  - MSC-AD-XX[1]
  - MA-AS-XX[1]
  - MSC-AS-XX[1]
- **Maestro Wireless 0-10V Dimmers and Switches with Sensor[2]**
  - MRF2S-8SD010-XX
  - MRF2S-8SS-XX
  - MRF2S-8SDV010-XX
  - MRF2S-8SSV-XX
- **PowPak Modules**
  - FCJS-010
  - FCJS-010-EM
  - FCJS-ECO
  - FCJS-ECO-EM
  - RMJS-ECO32-SZ
  - RMJS-8T-DV-B
  - RMJS-8T-DV-B-EM
  - URMJS-8T-DV-B
  - RMJS-16RCCO1DV-B
  - URMJS-16RCCO1DVB
  - RMJS-16R-DV-B
  - RMJS-16R-DV-B-EM
  - URMJS-16R-DV-B
  - RMJS-5RCCO1-DV-B
  - RMJS-5R-DV-B
  - RMJS-20R-DV-B
  - RMJS-20RCCO1DV-B
  - RMJS-CCO1-24-B
  - URMJS-CCO1-24B
- **In-Line Phase Control Dimmers[3,4]**
  - RMQS-250-NE
  - RMQS-250-NE-EM4
- **Dimming Modules**
  - RMJS-5T-347
  - RMJS-5T-347-EM
  - RMJS-PNE-DV[5]
  - RMJS-PNE-DV-EM[5]

1 "XX" denotes color code and "YYY" denotes button marking code.
2 Requires Vive hub software 01.09 or higher.
3 Requires Vive hub software 01.12 or higher.
4 Israel and Hong Kong only.
5 Requires Vive hub software 01.13 or higher.

Job Name:	Model Numbers:	
Job Number:		

Compatible Devices *(continued)*

- **Pico Remote Controls**[1]
  - PJ2-2B-GXX-YYY
  - PJ2-2BRL-GXX-YYY
  - PJ2-3B-GXX-YYY
  - PJ2-3BRL-GXX-YYY
  - PJ2-4B-GXX-EL1[2]
  - PJ2-4B-GXX-EL2[2]
  - PJ2-4B-GXX-L01[2]
  - PJ2-4B-GXX-L21[2]
  - PJ2-4B-GXX-L31[2]
  - PJ2-4B-GXX-PY4[2]
  - PJN-2B-GXX-L01
  - PJN-3BRL-GXX-L01
  - PQ2-2B-TXX-L01[3]
  - PQ2-2BRL-TXX-L01[3]
  - PQ2-3B-TXX-L01[3]
  - PQ2-3BRL-TXX-L01[3]
  - PQ2-4B-TXX-L21P[2,3]
  - PQ2-4B-TXX-L01[2,3]
  - PQ2-4B-TXX-L31[2,3]
  - PQ2-4B-GXX-EL1[2,3]
  - PQ2-4B-GXX-EL2[2,3]
  - PQ2-4B-GXX-PY4[2,3]
- **Wireless Occupancy and Daylight Sensors**
  - LRF2-OCR2B-P-WH
  - LRF2-VCR2B-P-WH
  - LRF2-OHLB-P-WH
  - LRF2-OKLB-P-WH
  - LRF2-OWLB-P-WH
  - LRF2-VHLB-P-WH
  - LRF2-VKLB-P-WH
  - LRF2-VWLB-P-WH
  - LRF2-DCRB-WH
  - LRF7-OCR2B-P-WH[3]
  - LRF7-OHLB-P-WH[3]
  - LRF7-OKLB-P-WH[3]
  - LRF7-OWLB-P-WH[3]
  - LRF7-DCRB-WH[3]
- **Energy Retrofit Kits**
  - MRF2S-1S8A-1OC
  - MRF2S-1S8A-1OH
  - MRF2S-1S8A-1OK
  - MRF2S-1S8A-1OW
  - MRF2S-1S8A-1VC
  - MRF2S-2S8A-1OW
- **Wireless Receptacle Controls**
  - CAR2S-15-STR-XX[1]
  - CAR2S-20-STR-XX[1]
  - CAR2S-15-DTR-XX[1]
  - CAR2S-20-DTR-XX[1]
- **Wireless Fixture Controls**
  - DFCSJ-OEM-RF
  - DFCSJ-OEM-OCC
  - DFC-OEM-DBI

1 "XX" denotes color code and "YYY" denotes button marking code.
2 Button programming is only for all devices paired to the Pico remote control. These Pico remote controls are unable to have their buttons be individually assigned to different rooms.
3 Israel and Hong Kong only.

Job Name:	Model Numbers:	
Job Number:		

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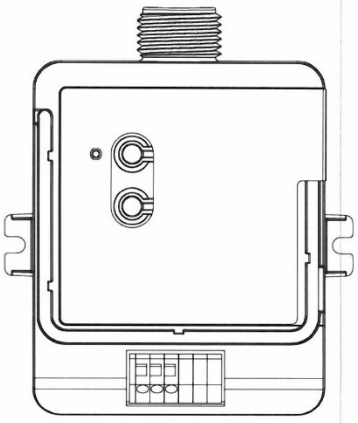
Vive PowPak Relay Module with Softswitch

Line 2b

The PowPak Relay Module with Softswitch is a radio-frequency (RF) device that uses Lutron patented Softswitch technology to control general-purpose loads based on input from Pico remote controls and Radio Powr Savr occupancy and daylight sensors. An optional, low-voltage dry contact closure output (CCO) is available to communicate occupancy status to 3rd-party systems such as HVAC controllers.

Communication with RF input devices, such as Pico remote controls and Radio Powr Savr sensors, is accomplished using Lutron Clear Connect RF Technology.

These products are also compatible with the Vive hub which enables a simple setup process using a standard web browser on any Wi-Fi enabled phone, tablet or computer. It also enables control and monitoring of all Vive devices. The Vive hub can be added at any time. System reprogramming will be required. For a complete list of features supported with the Vive hub, see specification submittal 369902 at www.lutron.com
Note for Replacement: RMJS/URMJS - the "S" model can replace the non-"S" model.



RMJS-16RCCO1DV-B model shown

Features

- Softswitch: Lutron patented technology prevents arcing of relay contacts, extending product lifetime
- Various operating voltages available—refer to model number chart on next page for details on voltage requirements
- Capable of switching general-purpose loads
- Model (RMJS-16R-DV-B-EM) available for use with emergency lighting. See page 4 for operating details. [1]
- Optional low-voltage dry contact closure output provides integration to building management systems, HVAC, VAV, etc.
- Receives wireless inputs from up to 10 Pico remote controls, 10 Radio Powr Savr occupancy/vacancy sensors, and 1 Radio Powr Savr daylight sensor
- Utilizes Lutron Clear Connect RF Technology—refer to model number chart on next page for frequency band data
- Mounts to the exterior of a U.S. style junction box through a standard size knockout

[1] See App Note #628 (P/N 048628) on www.lutron.com for emergency lighting applications.

Job Name:	Model Numbers:
Job Number:	

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Model Numbers

Description	Model Number	Region	Operating Voltage	Frequency Band
PowPak Relay Module with Softswitch	RMJS-16R-DV-B	U.S.A., Canada, Mexico	120/277 V~	433.05–434.79 MHz
		Israel, Hong Kong	220–240 V~	
	RMJS-5R-DV-B	U.S.A., Canada, Mexico	120/277 V~	433.05–434.79 MHz
		Israel, Hong Kong	220–240 V~	
	URMJS-16R-DVB	U.S.A. (BAA Compliant)	120/277 V~	431.0–437.0 MHz
	RMJS-16R-DV-B-EM	U.S.A., Canada, Mexico	120/277 V~	431.0–437.0 MHz
PowPak Relay Module with Softswitch and Occupancy-Status CCO	RMJS-16RCCO1DV-B	U.S.A., Canada, Mexico	120/277 V~	433.05–434.79 MHz
		Israel, Hong Kong	220–240 V~	
	RMJS-5RCCO1-DV-B	U.S.A., Canada, Mexico	120/277 V~	433.05–434.79 MHz
		Israel, Hong Kong	220–240 V~	
	URMJS-16RCCO1DVB	U.S.A. (BAA Compliant)	120/277 V~	431.0–437.0 MHz

NOTE: Contact Lutron for frequency band compatibility for your geographic region if it is not indicated above.

LUTRON SPECIFICATION SUBMITTAL Page

Job Name:	Model Numbers:
Job Number:	

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Specifications

Regulatory Approvals

RMJS-/URMJS- Models

- UL® Listed (U.S.A.)
- cUL CSA 22.2 No. 141-15 Listed (RMJS-16R-DV-B-EM only)
- FCC approved. Complies with the limits for a Class B device, pursuant to Part 15 of the FCC rules. (U.S.A.)
- Complies with requirements for use in other spaces used for environmental air (plenums) per NEC® 2014 300.22(C)(3)
- Classified in accordance with CAN/ULC-S142 as discrete product certified for installation in an air-handling space.
- CSA or cUL and IC (Canada) (RMJS- only)
- COFETEL (Mexico) (RMJS- only)
- NOM (Mexico) (RMJS- only)

Power

- Operating voltage: 120/277 V~ 50/60 Hz
- Standby Power Consumption (all models): < 1.0 W

System Communication

- Operates using Clear Connect RF Technology for reliable wireless communication; refer to model number chart on page 2 for band frequency details
- RF range is 30 ft (9 m)
- Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls, of the associated control module. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.
- Contact Lutron first for applications using foil-backed or metallic ceiling tiles.

Environment

- Ambient operating temperature: 32 °F to 131 °F (0 °C to 55 °C)
- 0% to 90% humidity, non-condensing
- For indoor use only
- All drivers and ballasts used with Vive wireless controls must comply with the limits for a Class A device pursuant to Part 15 of the FCC Rules

Key Design Features

- LED status indicator shows current load status and provides programming feedback
- Power failure memory: If power is interrupted, connected loads will return to the previous level prior to interruption

Mounting

- This device can be installed on a junction box or marshalling box using the conduit nut or with mounting screws. The device must NOT be mounted inside a metallic enclosure – only on the exterior of a junction box, or marshalling box. Improper installation can result in degraded wireless communications and intermittent or sustained communications failures and will not be covered under warranty. For applications (in U.S.A.) where code requires the PowPak control to be installed inside an additional junction box, please see Lutron Application Note #423 (P/N 048423) at www.lutron.com for how to perform this installation. For all other installations, refer to the installation instructions and consult local and national electric codes for proper installation. The PowPak control needs to be accessible for some programming steps. Record where it is mounted of that it can be easily located later.

Load

- **-16R models:** 16 A; **-5R models:** 5 A; **RMJS-16R models:** No minimum load requirements.
- Load types include (but are not limited to): Incandescent, MLV, ELV, Resistive, Inductive, Magnetic fluorescent, Electronic fluorescent
- Motor rating:
  RMJS-16R- and URMJS-16R- models: 1/2 HP (120 V~), 1½ HP (277 V~)
  RMJS-5R- and URMJS-5R- models: 1/6 HP (120 V~), 1/3 HP (277 V~)

Softswitch

- Patented Softswitch circuit eliminates relay arcing at mechanical contacts
- Extends relay life to an average of 1 million cycles
- Output is non-latching

(continued on next page . . .)

LUTRON SPECIFICATION SUBMITTAL Page

Job Name:	Model Numbers:
Job Number:	

Specifications *(continued)*

Emergency Model Sequence of Operation

With a Vive hub:

- **Normal mode:** The RMJS-16R-DV-B-EM can switch loads as normal and respond to local button presses, Pico wireless controls, and occupancy/daylight sensors.
- **Emergency mode:** Emergency override mode can be entered on the emergency PowPak either by receiving an override signal* from the Vive hub or by losing power for greater than 3 seconds then being powered on again. When in emergency override mode the PowPak will go to full output / relay closed. It will not respond to any local button presses, Pico wireless controls, occupancy sensors, daylight sensors, timeclock events, or preset scene calls. The emergency light level of the emergency PowPak can be configured using the Vive hub.
- **Return from emergency mode to normal mode:** When normal power is restored to the Vive hub or the override signal* from the Vive hub is cleared, and power is restored to the emergency PowPak, the emergency PowPak will return to the previous light level in most cases within 3 minutes, but guaranteed within 10 minutes of normal power being restored. It will again respond to local button presses, Pico wireless controls, occupancy sensors, daylight sensors, timeclock events, and preset scene calls.

Without a Vive hub:

- **Normal mode:** The RMJS-16R-DV-B-EM can switch loads as normal and respond to local button presses, Pico wireless controls, and occupancy/daylight sensors.
- **Emergency mode:** If the emergency PowPak loses power for greater than 3 seconds, it will automatically go into emergency mode (full output, relay closed) for 90 minutes, when emergency power is restored to the PowPak. The RMJS-16R-DV-B-EM will not respond to all local button presses, Pico wireless controls, occupancy and daylight sensors for 90 minutes.
- **Return from emergency mode to normal mode:** When normal power is restored, the emergency PowPak will remain in emergency mode for 90 minutes (full output, relay closed). It will then return to the previous light level and accept local button control, inputs from Pico wireless controls, and occupancy/daylight sensors.

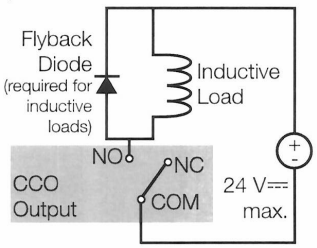
Note: See App Note #628 (P/N 048628) on www.lutron.com for emergency lighting applications.

Contact Closure Output (CCO version only)

- Provides occupancy status to 3rd-party equipment such as building management systems, HVAC, and VAV controllers
- Provides both normally open (NO) and normally closed (NC) dry contacts
- Maintained output type
- CCO terminals accept 20 AWG to 16 AWG (0.5 mm^2 to 1.5 mm^2) solid or stranded wire

Switching Voltage	Resistive Load
0-24 V⎓	1.0 A
0-24 V~	0.5 A

- Output is latching
- Not for voltages greater than 24 V⎓
- The CCO is not rated to control unclamped, inductive loads. Inductive loads include, but are not limited to: relays, solenoids, and motors. To control these types of equipment, a flyback diode must be used (DC voltages only). See diagram below. For more information, please see Application Note #434 (P/N 048434 at www.lutron.com).



Warranty

- 1 year limited warranty. The customer can register the product to increase the warranty period from 1 year to 5 years. Please visit www.lutron.com/TechnicalDocumentLibrary/369-119_Wallbox_Warranty.pdf for warranty details.

* Override signal triggered from the contact closure #2 on the Vive hub from one of the following inputs:
– Fire alarm control panel
– Security system
– LUT-ELI-3PH
For more information on the functionality of contact closure #2 on the Vive hub, see the Vive hub spec sheet (P/N 369902) at www.lutron.com.

LUTRON SPECIFICATION SUBMITTAL Page

Job Name:	Model Numbers:
Job Number:	

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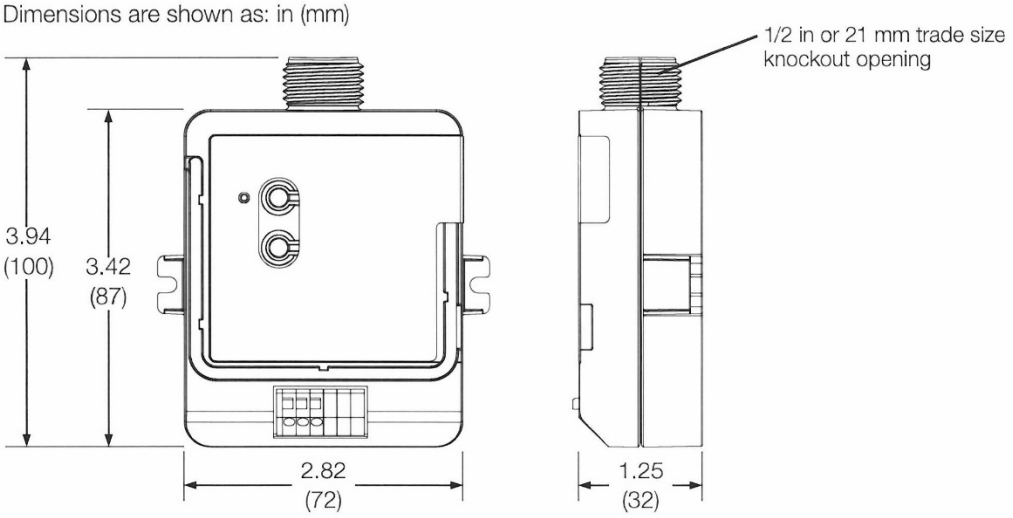
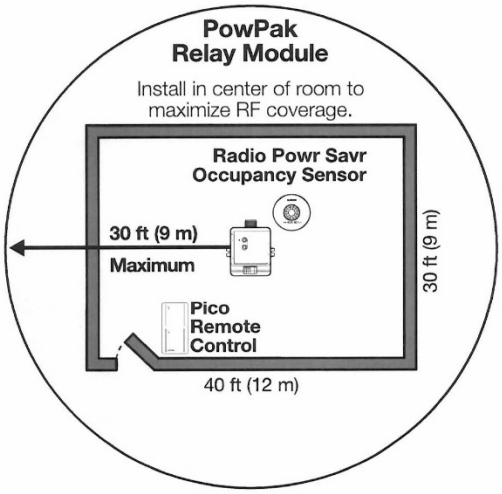
Dimensions

Dimensions are shown as: in (mm)



Range Diagrams



- Contact Lutron first for applications using foil-backed or metallic ceiling tiles.

NOTE: Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls, of the associated control module. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.

LUTRON SPECIFICATION SUBMITTAL Page

Job Name:	Model Numbers:
Job Number:	

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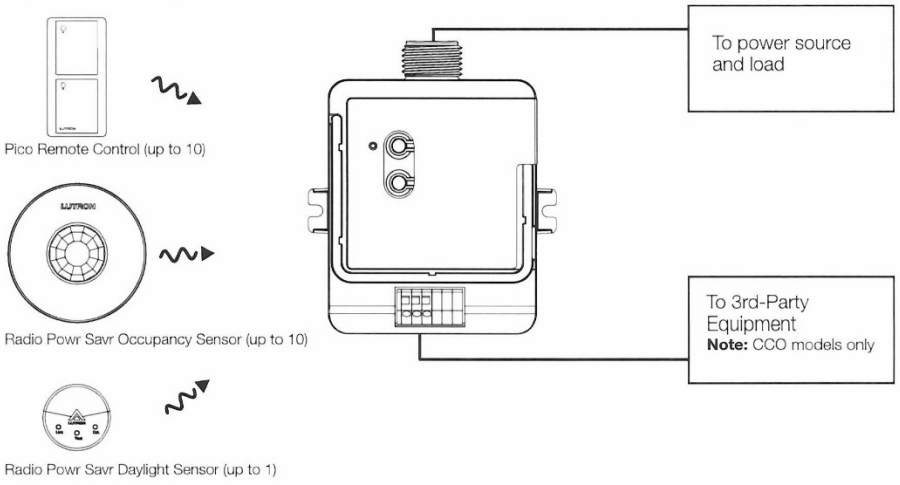
System Diagram



Default Operation

Transmitting Device	Transmitted Command	Softswitch Relay Default Action	CCO Default Action[1]
Pico Remote Control	On	Close	No Action
	Off	Open	No Action
	Raise	Close	No Action
	Lower	No Action	No Action
	Preset	Close	No Action
Radio Powr Savr Occupancy Sensor	Occupied	Close	NO = Close, NC = Open
	Unoccupied	Open	NO = Open, NC = Close
Radio Powr Savr Vacancy Sensor	Occupied	No Action	NO = Close, NC = Open
	Unoccupied	Open	NO = Open, NC = Close
Radio Powr Savr Daylight Sensor	Ambient Light Below Target Level	Close	No Action
	Ambient Light Above Target Level	Open	No Action

NOTES:

[1] CCO models only.

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Job Name:	Model Numbers:
Job Number:	

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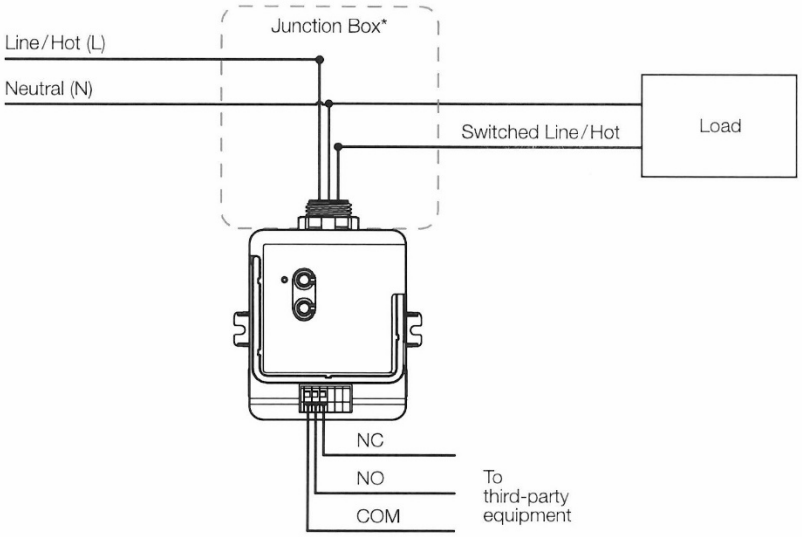
Wiring Diagram (RMJS- and URMJS- models)



* **NOTE:** The control module mounts to the exterior of a U.S.-style junction box.

Job Name:	Model Numbers:
Job Number:	

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Line 27 & 28

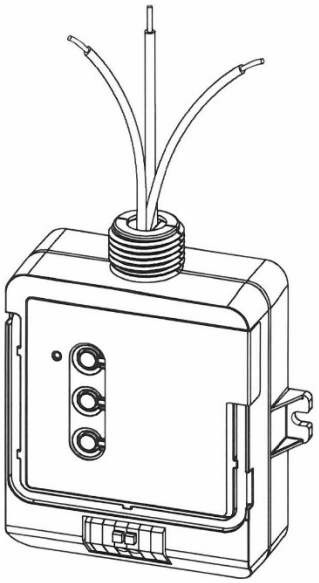
Vive PowPak Dimming Module with 0–10 V⎓ Control

The PowPak Dimming Module with 0–10 V⎓ Control is a radio frequency (RF) control that operates 0–10 V⎓ controlled fluorescent ballasts or LED drivers based on input from Pico remote controls and Radio Powr Savr sensors. The Dimming Module with 0–10 V⎓ Control is ideal for small areas (e.g., classrooms, conference rooms, private offices).

Communication with RF input devices (e.g., Pico remote controls, Radio Powr Savr sensors) is accomplished by using Lutron Clear Connect RF Technology.

These products are also compatible with the Vive hub which enables a simple setup process using a standard web browser on any Wi-Fi enabled phone, tablet or computer. It also enables control and monitoring of all Vive devices. The Vive hub can be added at any time. System reprogramming will be required. For a complete list of features supported with the Vive hub, see specification submittal 369902 at www.lutron.com

Note for Replacement:
RMJS/URMJS - the "S" model can replace the non-"S" model.



RMJS-8T-DV-B (shown)

Features

- Controls up to 60 mA of 0–10 V⎓ controlled fixtures together
- Model (RMJS-8T-DV-B-EM) available for use with emergency lighting. See page 4 for operating details.[1]
- Switches up to 8 A total
- 0–10 V⎓ control link automatically sources or sinks to the third party fixtures
- Configurable high- and low-end trim
- Various operating voltages available; refer to model number chart on the next page for details on voltage requirements
- Receives wireless inputs from up to 10 Pico remote controls, 10 Radio Powr Savr occupancy/vacancy sensors, and 1 Radio Powr Savr daylight sensor
- Utilizes Lutron Clear Connect RF Technology; refer to model number chart on the next page for frequency band data
- Mounts to the exterior of a US-style junction box through a standard-size knockout

[1] See App Note #628 (P/N 048628) on www.lutron.com for emergency lighting applications.

Job Name:	Model Numbers:
Job Number:	

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Models

Model Number	Region	Operating Voltage	Frequency Band
RMJS-8T-DV-B	U.S.A., Canada, Mexico	120/277 V~	433.05–434.79 MHz
	Israel, Hong Kong	220–240 V~	
URMJS-8T-DV-B	U.S.A. (BAA Compliant)	120/277 V~	431.0–437.0 MHz
RMJS-8TN-DV-B	U.S.A., Canada, Mexico	120/277 V~	433.05–434.79 MHz
	Israel, Hong Kong	220–240 V~	
RMJS-8T-DV-B-EM	U.S.A., Canada, Mexico	120/277 V~	431.0–437.0 MHz

NOTE: Contact Lutron for frequency band compatibility for your geographic region if it is not indicated above.

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Specifications

Regulatory Approvals

- UL® Listed
- cUL CSA 22.2 No. 141-15 Listed (RMJS-8T-DV-B-EM only)
- FCC approved. Complies with the limits for a Class B device, pursuant to Parwt 15 of the FCC rules
- Complies with requirements for use in other spaces used for environmental air (plenums) per NEC® 2014 300.22(C)(3)
- Classified in accordance with CAN/ULC-S142 as discrete product certified for installation in an air-handling space.
- cUL and IC (Canada) (RMJS- only)
- COFETEL (Mexico) (RMJS- only)
- NOM (Mexico) (RMJS- only)

Power

- Operating voltage 120/277 V~ 50/60 Hz

Output Ratings

- Switch rating of 8 A. Rated for resistive or capacitive loads as defined by IEC/EN 60669-2-1
- 0–10 V⎓ control link for 60 mA maximum output, source or sink automatically configures

Other Power Specifications

- Standby power:
  - 240–277 V~ 610 mW
  - 120 V~ 550 mW
- BTU/hour when fully loaded: 9
- Works with all ballasts and drivers that provide a current source that is compliant to IEC 60629 Annex E.2, and whose inrush current does not exceed NEMA410 standards for electronic ballast/driver

Mounting

- This device can be installed on a junction box or marshalling box using the conduit nut or with mounting screws. The device must NOT be mounted inside a metallic enclosure – only on the exterior of a junction box, or marshalling box. Improper installation can result in degraded wireless communications and intermittent or sustained communications failures and will not be covered under warranty. For applications (in U.S.A.) where code requires the PowPak control to be installed inside an additional junction box, please see Lutron Application Note #423 (P/N 048423) at www.lutron.com for how to perform this installation. For all other installations, refer to the installation instructions and consult local and national electric codes for proper installation. The PowPak control needs to be accessible for some programming steps. Record where it is mounted of that it can be easily located later.

System Communication

- Operates using Clear Connect RF Technology for reliable wireless communication; refer to model number chart on page 1 for frequency band details
- RF range is 30 ft (9 m)
- Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls, of the associated control module. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.

Environment

- Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C)
- 0% to 90% humidity, non-condensing
- For indoor use only
- All drivers and ballasts used with Vive wireless controls must comply with the limits for a Class A device pursuant to Part 15 of the FCC Rules

(continued on next page . . .)

LUTRON SPECIFICATION SUBMITTAL Page

Job Name:	Model Numbers:
Job Number:	

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Specifications *(continued)*

0–10 V⎓ Control Link

- Communicates with up to 60 mA of fixtures
- Control link is IEC SELV/NEC® Class 2
- 0–10 V⎓ control can be installed using NEC® Class 1 or Class 2 wiring methods. Alternately, it can be wired to basic or double-insulated devices
- Always consult local wiring codes
- Compatible with ANSI E1.3 2001 (R2006), IEC 60929 Annex E

Emergency Model Sequence of Operation

With a Vive hub:

- **Normal mode:** The RMJS-8T-DV-B-EM can dim loads as normal and respond to local button presses, Pico wireless controls, and occupancy/daylight sensors.
- **Emergency mode:** Emergency override mode can be entered on the emergency PowPak either by receiving an override signal* from the Vive hub or by temporarily losing power**. When in emergency override mode the PowPak will go to full output / relay closed. It will not respond to any local button presses, Pico wireless controls, occupancy sensors, daylight sensors, timeclock events, or preset scene calls. The emergency light level of the emergency PowPak can be configured using the Vive hub.
- **Return from emergency mode to normal mode:** When normal power is restored to the Vive hub or the override signal* from the Vive hub is cleared, and power is restored to the emergency PowPak, the emergency PowPak will return to the previous light level in most cases within 3 minutes, but guaranteed within 10 minutes of normal power being restored. It will again rwespond to local button presses, Pico wireless controls, occupancy sensors, daylight sensors, timeclock events, and preset scene calls.

Note: See App Note #628 (P/N 048628) on www.lutron.com for emergency lighting applications.

* Override signal triggered from the contact closure #2 on the Vive hub from one of the following inputs:
– Fire alarm control panel
– Security system
– LUT-ELI-3PH
For more information on the functionality of contact closure #2 on the Vive hub, see the Vive hub spec sheet (P/N 369902).

** Power must be interrupted for more than 3 seconds at 120 V~, or more than 6 seconds at higher operating voltages, to activate emergency mode.

Without a Vive hub:

- **Normal mode:** The RMJS-8T-DV-B-EM can dim loads as normal and respond to local button presses, Pico wireless controls, and occupancy/daylight sensors.
- **Emergency mode:** If the emergency PowPak loses power**, it will automatically go into emergency mode (full output, relay closed) for 90 minutes, when emergency power is restored to the PowPak. The RMJS-8T-DV-B-EM will not respond to all local button presses, Pico wireless controls, occupancy and daylight sensors for 90 minutes.
- **Return from emergency mode to normal mode:** When normal power is restored, the emergency PowPak will remain in emergency mode for 90 minutes (full output, relay closed). It will then return to the previous light level and accept local button control, inputs from Pico wireless controls, and occupancy/daylight sensors.

Default Operation

- Associated wireless input devices control all connected fixtures together
- Occupancy Sensors:
  – Occupied: 100%; Unoccupied: 0% (OFF)
- Pico Remote Controls:
  – On: 100%; Favorite Level: 50%; Off: 0% (OFF)
- Daylight Sensor: Decreases electric light in response to additional available daylight

Key Design Features

- LED status indicator shows load status and provides programming feedback
- Configurable high-end and low-end trim
- Power failure memory: If power is interrupted, connected loads will return to the previous level prior to interruption
- 0–10 V⎓ control mis-wire protection up to 30 V⎓

Warranty

- 1 year limited warranty. The customer can register the product to increase the warranty period from 1 year to 5 years. Please visit www.lutron.com/TechnicalDocumentLibrary/369-119_Wallbox_Warranty.pdf for warranty details.

LUTRON SPECIFICATION SUBMITTAL Page

Job Name:	Model Numbers:
Job Number:	

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Advanced Configurations

Pico Remote Controls

- Up to 10 Pico remote controls
- Favorite levels can be set for each Pico remote control

Radio Powr Savr Daylight Sensor

- The Radio Powr Savr daylight sensor will affect all connected ballast and LED drivers equally
- For multple rows of daylighting, a separate PowPak Dimming Module with 0–10 V⎓ must be used for each daylighting row

Minimum Light Level Setting (optional)

- Certain applications, such as hallways, may require that the lights never turn off. For these areas, select the minimum light level option and the load will lower to programed low-end level. Default operation lowers to OFF.

High- and Low-End Trim

- High-end and low-end trim affect all connected fixtures equally, and can be configured from the PowPak Dimming Module.
- Adjustable low-end trim (0%–45%). Trimmable low-end can ensure a stable light level. Some fixtures will flicker or drop out if trimmed too low.
- The maximum light output of connected fixtures can be decreased down to 55% for energy savings in over-lit spaces.

Note: The perceived light output of low-end trim may vary between fixture manufacturers and model numbers. For best results, do not mix different ballasts or drivers on the same 0–10 V⎓ circuit.

Radio Powr Savr Occupancy Sensors

- Radio Powr Savr occupancy and vacancy sensors control all connected ballasts or drivers.
- Pico remote controls can be used to adjust the Occupied levels of fixtures that they control from 1% to 100% (of output signal) or can make them unaffected by Occupancy events.
- Vacancy events (area becomes unoccupied) turn all ballasts and driver models off or to minimum light level.

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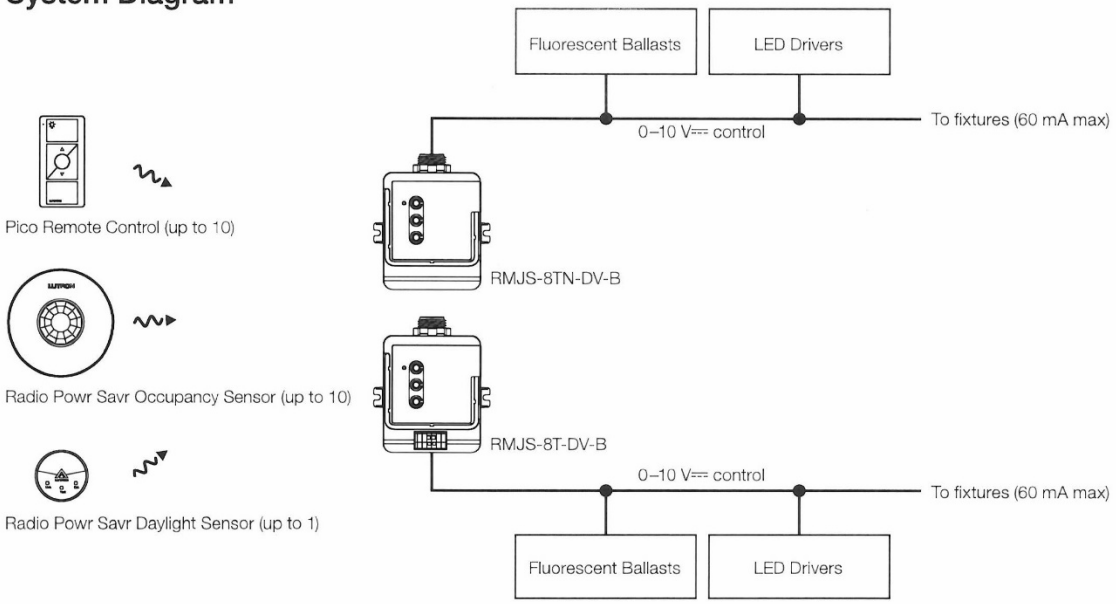
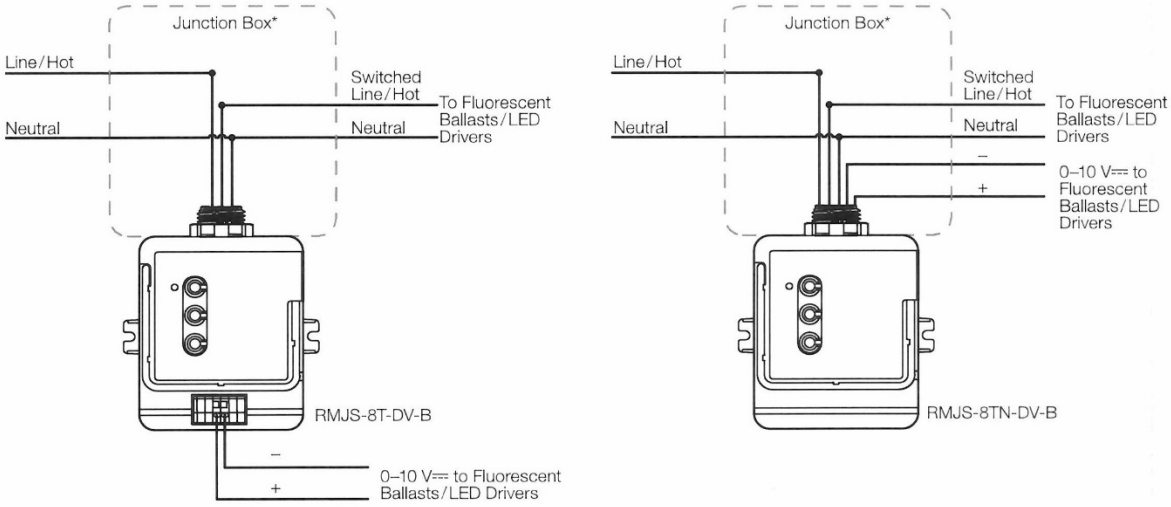
System Diagram



Wiring Schematic



* **NOTE:** The control module mounts to the exterior of a U.S.-style junction box.

LUTRON SPECIFICATION SUBMITTAL Page

Job Name:	Model Numbers:
Job Number:	

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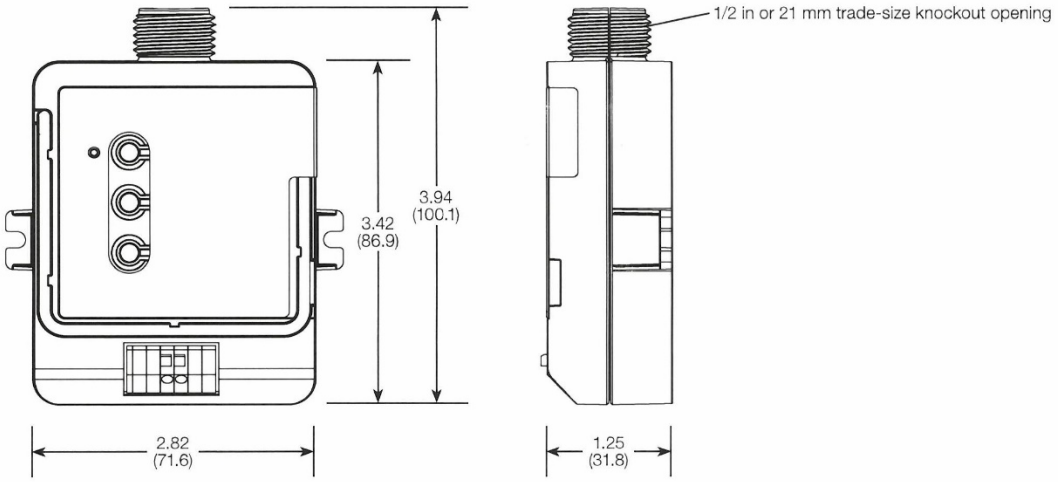
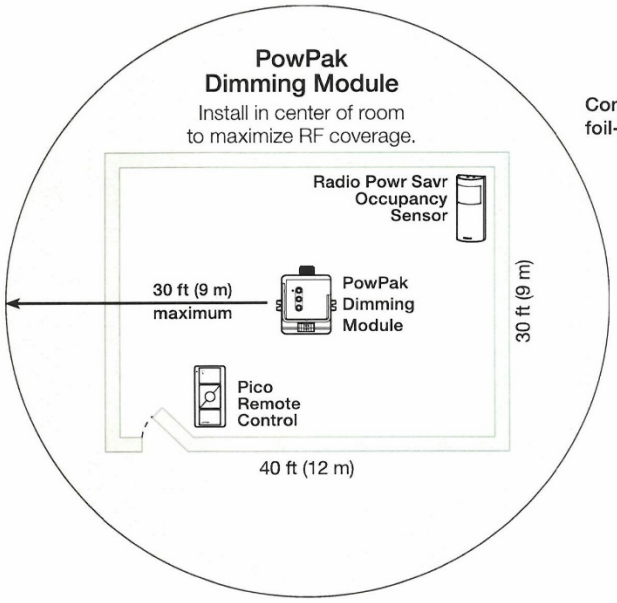
Dimensions

Dimensions are shown as: in (mm)



Range Diagram



Contact Lutron first for applications using foil-backed or metallic ceiling tiles.

NOTE: Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls, of the associated control module. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.

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Job Name:	Model Numbers:
Job Number:	

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Line 29

PP and UPP Series Power Packs

PP and UPP[1] Series Power Packs provide both the 24 V⎓ power supply to operate Lutron wired occupancy sensors, as well as the 16 A line-voltage relay to control the load, in one compact housing. The unit can be mounted inside a ballast enclosure or inside/outside a junction box.

The manual-ON Power Pack (-DV-M) is used to provide a vacancy-only solution (not configurable for occupancy behavior) when paired with Lutron wired occupancy sensors. A low-voltage momentary switch should be used to manually turn ON the load while the sensor automatically shuts the load OFF when unoccupied. Pressing the momentary switch can also turn the load OFF.

The auxiliary Power Pack (-SH) must be used in conjunction with at least one line-voltage Power Pack and one Lutron wired occupancy sensor to switch additional loads.

(-DV)
(-DV-M [vacancy ONLY])
(-347H)

(-SH)

Features

- High-impact UL94 flammability-rated plastic case construction
- Relay: Class B 266 °F (130 °C) insulating material; silver alloy contacts
- Power Pack units (PP-DV/UPP-DV, PP-347H, PP-DV-M/UPP-DV-M) power up to 3 total devices. PP-SH/UPP-SH counts as 1 device, each occupancy sensor counts as 1 device.
- For indoor use only, 32 °F to 104 °F (0 °C to 40 °C), 0% to 90% humidity, non-condensing

Model	Power Input	Relay Contact Rating	Control Input	IEC PELV/ NEC® Class 2 Output
PP-DV **UPP-DV** **PP-DV-M (vacancy ONLY)** **UPP-DV-M (vacancy ONLY)**	120-277 V~ 50/60 Hz 6.5 W	• 120-277 V~ 16 A; All lighting loads[2] • 120-277 V~ 1 HP Motor Load	24 V⎓ 5 mA	24 V⎓ 150 mA up to 3 Devices[3]
PP-347H	347 V~ 60 Hz 6.5 W	• 347 V~ 15 A Ballast	24 V⎓ 5 mA	24 V⎓ 100 mA up to 3 Devices[3]
PP-SH **UPP-SH**	24 V⎓ (At least one line-voltage Power Pack must be used)	• 120-277 V~ 16 A; All lighting loads[2] • 120-277 V~ 1 HP Motor Load • 347 V~ 15 A Ballast	24 V⎓ 5 mA	N/A

[1] "U" denotes BAA compliance
[2] Lighting loads include (but are not limited to): Incandescent, MLV, ELV, Resistive, Inductive
[3] PP-SH/UPP-SH counts as 1 device and each occupancy sensor counts as 1 device

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Job Name:	Model Numbers:	
Job Number:		

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Specifications

Regulatory Approvals

- UL® and cUL® Listed
- Complies with requirements for use in other spaces used for environmental air (plenums) per NEC® 2014 300.22(C)(3)

Power / Performance

- PP-DV, UPP-DV, PP-DV-M, UPP-DV-M: 120-277 V~ 50/60 Hz
- PP-347H: 347 V~ 60 Hz only

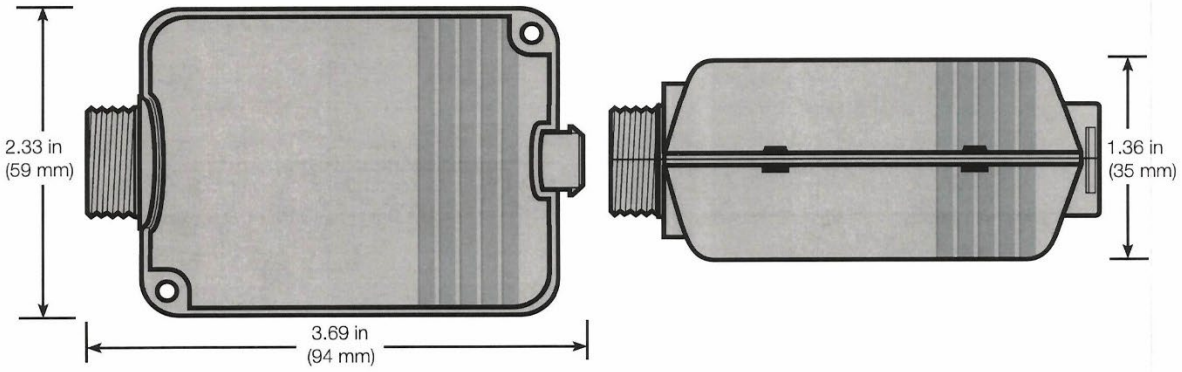
Wiring

- 7 in (178 mm) wire leads, 18 AWG (0.75 mm^2) input; 7 in (178 mm) leads, 16 AWG (1.5 mm^2) contacts.

Mounting

- Fits inside standard 4 in x 4 in (102 mm x 102 mm) junction box or standard fluorescent fixture ballast cavity
- Mount with 6/32 in (5 mm) x 1¼ in (32 mm) pan head screws
- Mounts inside junction box through knockout, with 1/2 in (13 mm) Electrical Metallic Tubing (EMT) threaded nipple. Recommended volume is 30 in^3 (762 mm^3).

Dimensions



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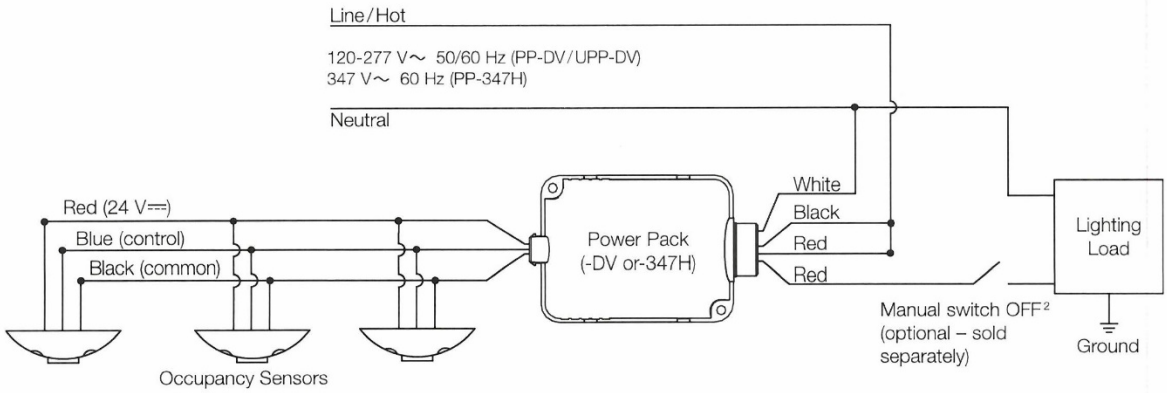
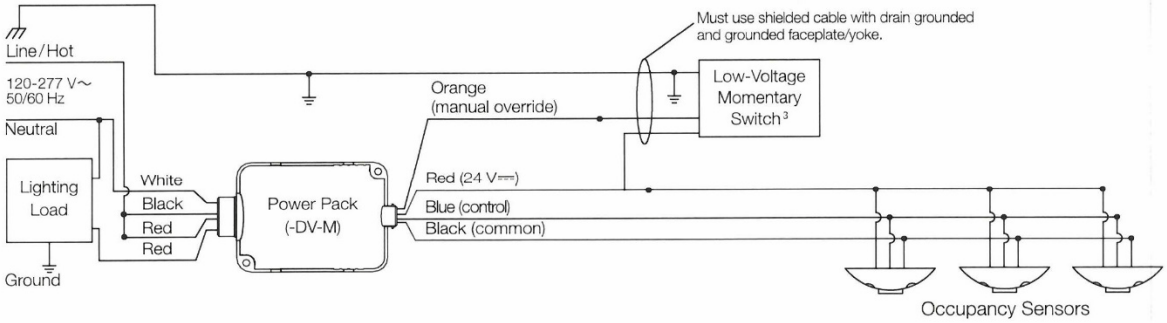
Wiring

3 Sensors with Power Pack (PP-DV, UPP-DV or PP-347H)[1]



[1] Maximum 3 occupancy sensors can be used with PP-DV/UPP-DV or PP-347H.
[2] When lights are manually turned off, switch must be returned back to the on position for occupancy sensors to function as set.

3 Sensors with Power Pack - Vacancy-Only Solution (PP-DV-M, UPP-DV-M)[1,2]



[1] Maximum 3 devices (excluding low-voltage momentary switches) can be used with PP-DV-M/UPP-DV-M. Each PP-SH/UPP-SH counts as one device, each occupancy sensor counts as one device.
[2] The PP-DV-M cannot be used for occupancy functionality. It is a vacancy ONLY solution. For occupancy functionality, use the PP-DV.
[3] NTRCS-1 (Nova T☆ momentary switch) or any low voltage momentary switch rated for at least 24 V⎓, 100 mA.

continued on next page...

Job Name:	Model Numbers:	
Job Number:		

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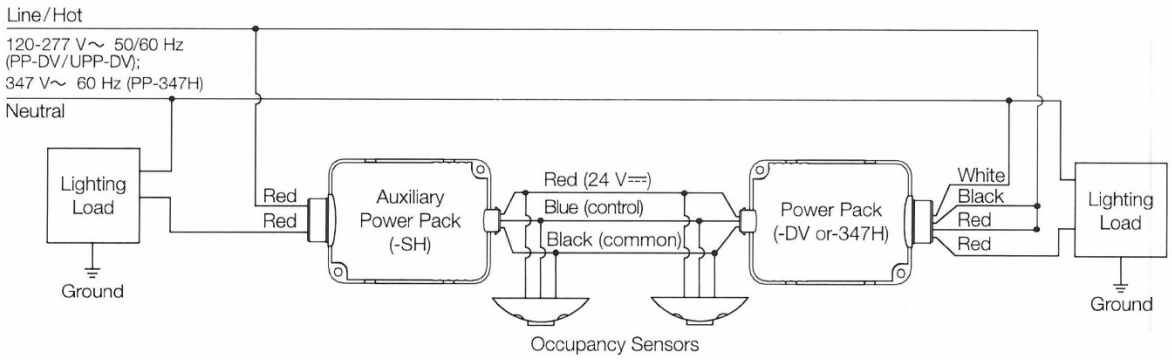
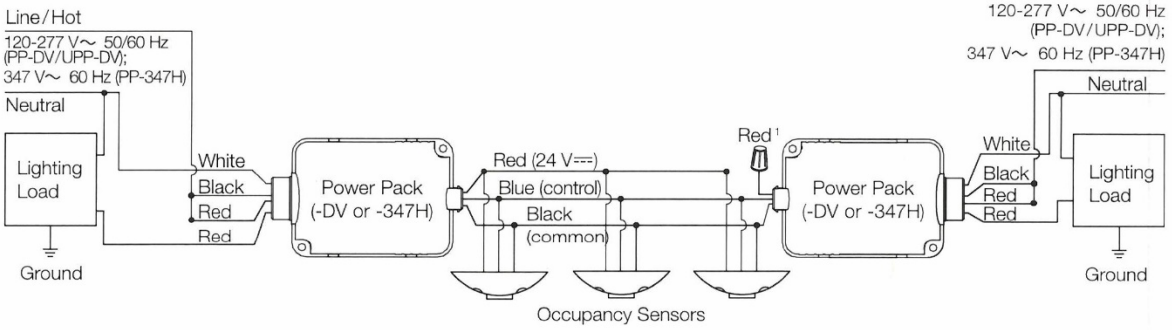
Wiring *(continued)*

Switching Multiple Loads with 1 Power Pack and 1 Auxiliary Power Pack[1]



[1] Maximum of 3 devices can be used with PP-DV, UPP-DV, or PP-347H. Each PP-SH/UPP-SH counts as one device, each occupancy sensor counts as one device.

Switching Multiple Loads with 2 Power Packs (PP-DV/UPP-DV)



[1] Only 1 Power Pack (PP-DV/UPP-DV) should power the occupancy senors. This 24 V⎓ output is left disconnected.

Job Name:	Model Numbers:	
Job Number:		

LUTRON

Stand-Alone Controls Designer Style

Lines 30, 31 & 32

Where to Buy

Designer Style Wallplates & Accessories

Designer Style

Wallplates Accessories Colors & Finishes

Claro & Satin Colors Wallplates

For multi-gang installations, read our Ganging & Derating instructions.

1-gang wallplate (Gloss / Stainless Steel)
CW-1-

2-gang wallplate (Gloss / Stainless Steel)
CW-2-

3-gang wallplate (Gloss / Stainless Steel)
CW-3-

4-gang wallplate (Gloss / Stainless Steel)
CW-4-

5-gang wallplate (Gloss / Stainless Steel)
CW-5-

6-gang wallplate (Gloss / Stainless Steel)
CW-6-

1-gang wallplate (Satin)
SC-1-

2-gang wallplate (Satin)
SC-2-

3-gang wallplate (Satin)
SC-3-

4-gang wallplate (Satin)
SC-4-

5-gang wallplate (Satin)
SC-5-

6-gang wallplate (Satin)
SC-6-

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20 A half dimmable tamper resistant receptacle for Canada (Satin)
SCR-20-HDTR-C

15 A tamper resistant (Gloss)
CARS-15-TR-

15A dual USB tamper resistant receptacle (Gloss)
CAR-15-UBTR-WH

15A dual USB tamper resistant receptacle (Satin)
SCR-15-UBTR-SW

Back to top

Colors & Finishes

To order a product in a specific color, add the appropriate color suffix listed below to a wallplate or accessory model number.

Satin **Gloss** **Metal**

Biscuit **BI**	Brilliant White **BW**	Cobblestone **CS**	Clay **CY**	Deep Sea **DE**	Espresso **EP**	Glacier White **GL**
Lunar Gray **LG**	Mist **MI**	Midnight **MN**	Pebble **PB**	Pumice **PM**	Architectural White **RW**	Sage **SA**
Sand **SD**	Slate **SL**	Signal Red **SR**	Snow White **SW**	Truffle **TF**	Taupe **TP**	

Request a color sample here.

Note: Some of the colors mentioned above may not be available for sampling.

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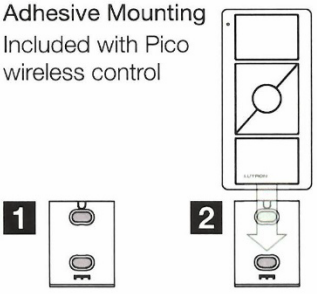
Mounting Options

Line 33

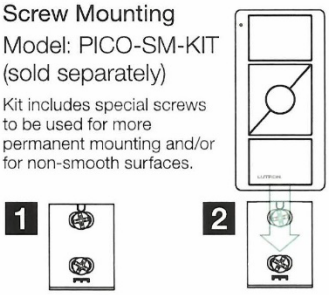
Standalone Mounting

Adhesive Mounting
Included with Pico wireless control



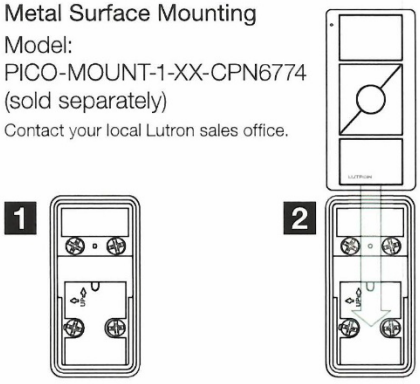
Screw Mounting
Model: PICO-SM-KIT
(sold separately)

Kit includes special screws to be used for more permanent mounting and/or for non-smooth surfaces.



Metal Surface Mounting
Model:
PICO-MOUNT-1-XX-CPN6774
(sold separately)

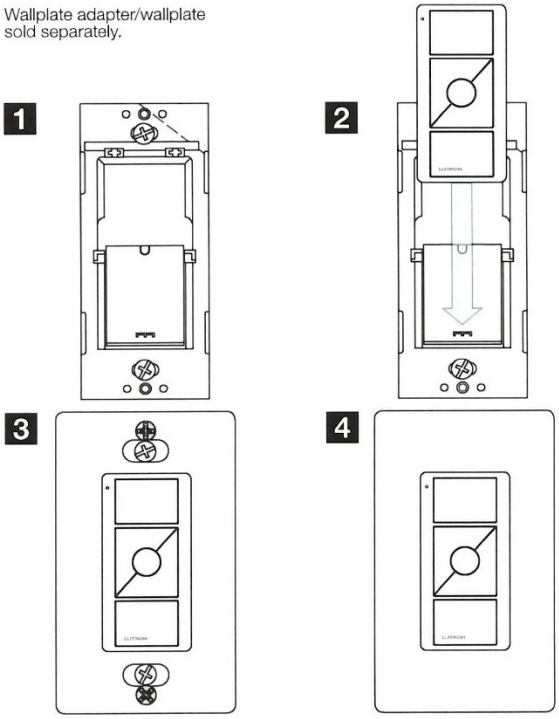
Contact your local Lutron sales office.



Wallbox Mounting

Wallbox Adapter
Model: PICO-WBX-ADAPT
(sold separately)

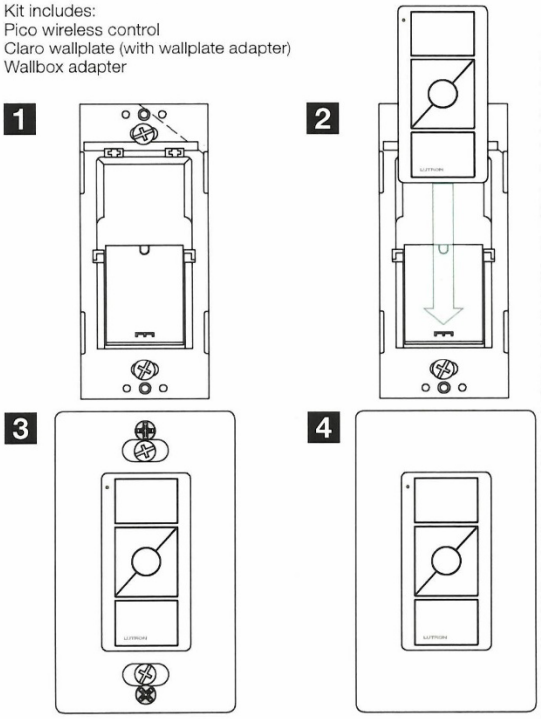
Wallplate adapter/wallplate sold separately.



Surface Mounting Kits

Wall-Mounting Kit
Model: PJ2-WALL-WH-L01; PJ2-WALL-WH-L01C*
(sold separately)

Kit includes:
- Pico wireless control
- Claro wallplate (with wallplate adapter)
- Wallbox adapter



* Canadian packaged product.

Job Name:	Model Numbers:	
Job Number:		

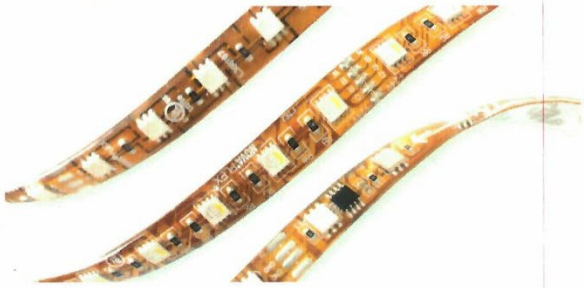
DYNAMIC RGB / RGBW

Lines 34 & 35
42 & 43

NOVA FLEX

This Color-Changing Series can be used to create a branded look or unique, fun environment.

- Install in recessed, surface, or suspended fixture
- Great for coves, under bars or cabinets
- Commercial, hospitality, entertainment
- Indoor or Outdoor Rated
- Ships customized ready to install



Physical

Operating Temp	-15° to 140°F (-25° to 60°C)
Environment	IP65 (Dust/splash proof) IP68 (Water/chemical resistant)
Mounting	3M Adhesive | Clips | Channels
Cut Length	3.91"

Quality Assurance

Lumen Maintenance	50,000 Hrs
Warranty	2 years
CCT Binning	3-step MacAdam
Certifications	UL

Electrical

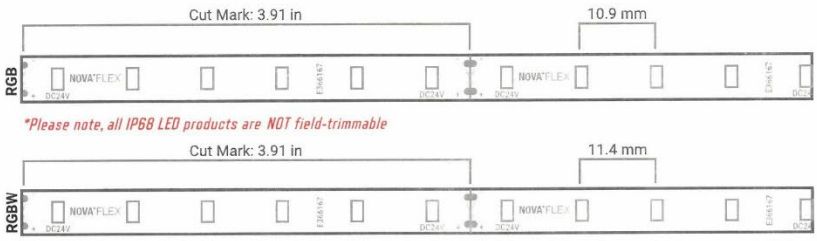
Voltage	24V
Wire Size	20 AWG. 4 Wire - RGB 20 AWG. 5 Wire - RGBW
Power	4.9 w/ft
Lead	Default: 120 Inch IP65: 2 Inch Minimum IP68: 3 Inch Minimum Quick Connect: 3 - 120 Inch
Jumper	3 Inch Minimum
Dimming	MLV | 0-10V | S3i Control Series

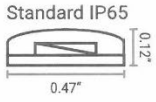
Options (IP65)	Lumens/ ft	Efficacy (lm/w)	Max Run
NF-RGB-O-60-24V	116	24	16.4 ft
NF-RGBW-O-60-24V-2700K	189	39	15.4 ft
NF-RGBW-O-60-24V-3000K			
NF-RGBW-O-60-24V-3225K			
NF/SP-RGBW-O-60-24V-4100K*			
NF/SP-RGBW-O-60-24V-5000K*			
NF-RGBW-O-60-24V-6500K			

Lumens have a tolerance of +/- 10%.

Options (IP68)	Lumens/ ft	Efficacy (lm/w)	Max Run
NF-RGB-W-60-24V	116	24	16.4 ft
NF/SP-RGBW-W-60-24V-2700K*	189	39	15.4 ft
NF/SP-RGBW-W-60-24V-3000K*			
NF/SP-RGBW-W-60-24V-3225K*			
NF/SP-RGBW-W-60-24V-4100K*			
NF/SP-RGBW-W-60-24V-5000K*			
NF/SP-RGBW-W-60-24V-6500K*			

Lumens have a tolerance of +/- 10%.





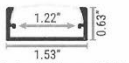
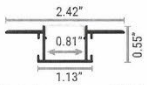
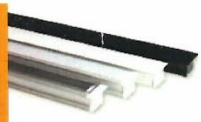
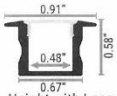
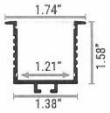
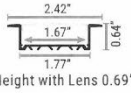
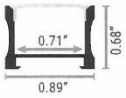
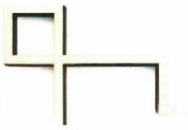
INSTALL GUIDE

PHOTOMETRICS

*Special Order requires lead-time of 7 - 9 weeks. MOQ LED strip 328 feet | MOQ Channel 150 pcs (2M/pc)

RGB/W SERIES CHANNEL OPTIONS

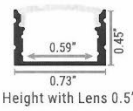
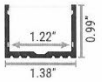
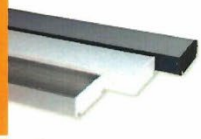
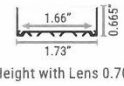
NOVA FLEX

	Product Image	Product Code	Color	Lens Options	Dimensions	Downloads
Angled		**Angled 1919U** NF-CH-1919U-2M	Silver White* Black*	CL SF BK*		SPEC SHEET
		**Angled 3030 - CR** NF-CH-3030-C/CLEAR/CR-2M NF-CH-3030-C/SOFT/CR-2M	Silver White* Black*	CL SF BK*		SPEC SHEET
		**Angled 3030 - SQ** NF-CH-3030-C/CLEAR/SQ-2M NF-CH-3030-C/SOFT/SQ-2M	Silver White* Black*	CL SF BK*		SPEC SHEET
Bendable		**Bendable 3916** NF-CH-3916-2M	Silver White* Black*	CL SF BK*	 Height with Lens 0.69"	SPEC SHEET
Mud-In		**Mud-In 6214** NF-CH-6214-2M	Silver White* Black*	CL SF BK*	 Height with Lens 0.58"	SPEC SHEET
Recessed		**Recessed 2515** NF-CH-2515-2M	Silver White* Black*	CL SF BK*	 Height with Lens	SPEC SHEET
		**Recessed 4540** NF-CH-4540-2M	Silver White* Black*	SF BK*		SPEC SHEET
		**Recessed 6017** NF-CH-6017-2M	Silver White* Black*	CL SF BK*	 Height with Lens 0.69"	SPEC SHEET
Universal		**Universal 2217** Magnetic/Suspended/Surface NF-CH-2217-2M	Silver White* Black*	CL SF BK*		SPEC SHEET
		**Universal 3560** Recessed/Suspended/Surface Connectors: T/X/L/L-in/L-out NF-CH-3560-2M	Black White Silver*	SF SL BK*		SPEC SHEET

*Special Order requires lead-time of 7 - 9 weeks. MOQ LED strip 328 feet | MOQ Channel 150 pcs (2M/pc)

RGB/W SERIES CHANNEL OPTIONS

NOVA FLEX

Suspended		**Suspended 3030 RN** NF-CH-3030-RN-2M	Silver White* Black*	SF		SPEC SHEET
Surface		**Surface 1813** NF-CH-1813-2M	Silver White* Black	CL SF BK*		SPEC SHEET
		**Surface 3525** NF-CH-3525-2M	Silver White* Black*	CL SF BK*		SPEC SHEET
		**Surface 4517** NF-CH-4517-2M	Silver White* Black*	CL SF BK*		SPEC SHEET
Lens Only		**Channel-less 2913** NF-CH-2913-C/SOFT-2M	N/A	SF		SPEC SHEET

DOTTING with soft lens		RGB(W)-O-60	RGB(W)-W-60
Angled	1919U	2	x
	3030 SQ/CR	1	1
Bendable	3916	2	2
Mud-In	6214	2	2
Recessed	2515	1	x
	4540	0	0
	6017	2	2
Universal	2217	1	2
Suspended	3030 RN	0	1
Surface			
	1813	2	x
	3525	0	0
	4517	2	2
Channel-less	2913	1	x

*** 1707 not compatible with RGBW*

*Special Order requires lead-time of 7 - 9 weeks. MOQ LED strip 328 feet | MOQ Channel 150 pcs (2M/pc)

RGB/W SERIES DRIVER OPTIONS

NOVA FLEX

Universal Dim / Non-Dim

Product Image	Product Code	Wattage	Current/Voltage	Safety	Downloads
	NF-PS-UNV-30W-24V Dim 0-10V, MLV, ELV TRIAC View spec sheet for all options	30W	Output Current: 1.25A Input Voltage: 100-277 VAC	UL8750 Class 2 Type HL FCC	SPEC SHEET
	NF-PS-UNV-60W-24V Dim 0-10V, MLV, ELV TRIAC View spec sheet for all options	60W	Output Current: 2.5A Input Voltage: 100-277 VAC	UL8750 Class 2 Type HL FCC	SPEC SHEET
	NF-PS-UNV-80W-24V Dim 0-10V, MLV, ELV TRIAC View spec sheet for all options	80W	Output Current: 3.33A Input Voltage: 100-277 VAC	UL8750 Class 2 Type HL FCC	SPEC SHEET
	NF-PS-UNV-96W-24V Dim 0-10V, MLV, ELV TRIAC View spec sheet for all options	96W	Output Current: 4A Input Voltage: 100-277 VAC	UL8750 Class 2 Type HL FCC	SPEC SHEET
	NF-PS-UNV-288W-24V Dim 0-10V, MLV, ELV TRIAC View spec sheet for all options	288W	Output Current: 3x4A Input Voltage: 100-277 VAC	UL8750 Class 2 Type HL FCC	SPEC SHEET
	NF-PS-UNV-384W-24V Dim 0-10V, MLV, ELV TRIAC View spec sheet for all options	384W	Output Current: 4x4A Input Voltage: 100-277 VAC	UL8750 Class 2 Type HL FCC	SPEC SHEET

*Special Order requires lead-time of 7 - 9 weeks. MOQ LED strip 328 feet | MOQ Channel 150 pcs (2M/pc)

RGB/W SERIES CONTROL OPTIONS

NOVA FLEX

	Product Image	Product Code	Details	Downloads
S3i Series		**S3i Glass Touch-Panel** NF-S3i-TP-RGBW	Required to Pair: S3i-WR-1009 Zones: 1 Power Consumption: 200ma Dimming Function: 0 - 100%	SPEC SHEET
		**S3i Glass Touch-Panel** NF-S3i-TP-RGB	Required to Pair: S3i-WR-1009 Zones: 4 Power Consumption: 200ma Dimming Function: 0 - 100%	SPEC SHEET
		**S3i Hand-Held Remote** NF-S3i-WC-RGB/W	Required to Pair: S3i-WR-1009 Zones: 6 Dimming Function: 0 - 100% Battery Operated: 3 AAA	SPEC SHEET
		**S3i Push Button Wall Mount** NF-S3i-PB-RGB/W	Required to Pair: S3i-WR-1009 Zones: 1 Dimming Function: 0 - 100% Battery Operated: 3V (CR2025)	SPEC SHEET
		**S3i Wireless Receiver** All controls above require this product NF-S3i-WR-1009	Output Power: 240 - 720w Output Current: 4 CH. 5A/CH Input: 12 - 36V DC Dimming: 0 - 100% Can pair with NF-A-UNV	SPEC SHEET
Other		**Universal Amplifier** NF-A-UNV	Input Voltage: 12 - 36V DC Input Signal: PWM Max Load Current: 20A (5A/4CH) Max Output Power: 240 - 720W	SPEC SHEET
		**LED DMX Decoder** NF-DMX-5A-4CH	Input Voltage: 12 - 24V DC Max Output Power: 480W Max Load Current: 20A (5A/4CH) Short Circuit / Over Load Recover Auto Control Method: DMX512 RJ45	SPEC SHEET

*Special Order requires lead-time of 7 - 9 weeks. MOQ LED strip 328 feet | MOQ Channel 150 pcs (2M/pc)

RGB/W SERIES ACCESSORY OPTIONS

NOVA FLEX

Product Image	Product Code	Dimensions
	**Hardwire to Female Quick Connect Adapter** NF-C-F	Available Lengths: 6in, 1ft, 2ft, 3ft, 4ft, 5ft, 6ft, & 10ft
	**Hardwire to Male Quick Connect Adapter** NF-C-M	Available Lengths: 6in, 1ft, 2ft, 3ft, 4ft, 5ft, 6ft, 8ft & 10ft
	**Male to Female Quick Connect Adapter** NF-C-MF	Available Lengths: 3ft, 6ft &10ft
	**Y Cable 2 Male, 1 Female** NF-C-Y	Total Length: 20.00 in
	**Y Cable 4 Male, 1 Female** NF-C-Y-4Y	Total Length: 20.00 in
	**Y Cable 8 Male, 1 Female** NF-C-Y-8Y	Total Length: 17.25 in
	**Female Quick Connect to Hardwire Adapter** NF-C-F/HW	1.5 x 0.5 x 0.5 in
	**Male Quick Connect to Hardwire Adapter** NF-C-M/HW	1.5 x 0.5 x 0.5 in
	**Hard Clips 20 per pack** NF-CLIPS-H	1.125 x 0.25 in Clips add 0.125" to height of lights
	**Soft Clips 20 per pack** NF-CLIPS-S	1.125 x 0.25 in Clips add 0.125" to height of lights
	**Universal Adjustable Clip** NF-CH-UNV-CLIPS/ADJ	1.13 x 1.00 in

FOR MORE INFORMATION CLICK HERE

RESOURCES | WHY NOVA FLEX | ADDITIONAL PRODUCT OPTIONS

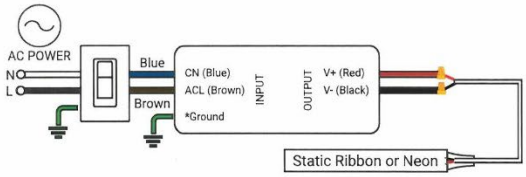
*Special Order requires lead-time of 7 - 9 weeks. MOQ LED strip 328 feet | MOQ Channel 150 pcs (2M/pc)

Line 36 & 44

100W NON-DIMMABLE DRIVER

NOVA FLEX

Product Code: NF-PS-HLG100W24V-HW



Input

Voltage Range	127 ~ 431 VAC
Frequency	47 ~ 63 Hz
Current	0.55A / 230 VAC
Inrush Current	60A
Efficiency	93%
Power Factor	0.95/230 VAC
THD	< 20%

Protection

Over Current	95 ~ 106%
Over Voltage	28 ~ 34 V
Over Temperature	Yes
Short Circuit	Yes
Warranty	2 - 5 years (based on warranty of ribbon/neon purchased)

Output

Voltage	24VDC
Current	2.5 ~ 4A
Ripple	150 mVp-p
Line Regulation	0.5%
Load Regulation	0.5%
Turn on Delay Time	1200ms, 50 ms / VAC
Optimal Load	Up to 95%

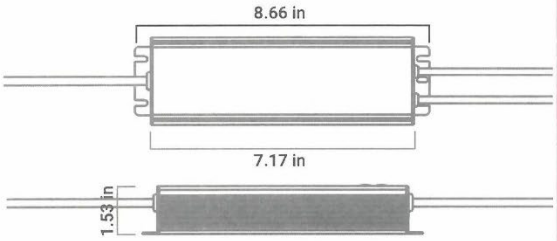
Environment

Protection Rating	IP65
Operating Temp	-22° to 158° F (-30° to 70° C)
Max Case Temp	176° F (80° C)
Storage Temp	-40 ~ 176° F (-40 ~ 80° C) 10 ~ 95% HC
Expected Life	62,000 Hrs

To meet local / national codes, this driver may require mounting in approved UL Enclosure.

Physical

Weight	37.6 oz



FOR MORE INFORMATION CLICK HERE

PROJECT SUPPORT | INSTALLATION GUIDES | WHY NOVA FLEX | RESOURCES

Specifications are subject to change without notice.

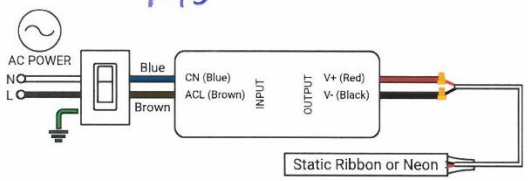
800.595.6302 novaflexled.com

35W NON-DIMMABLE DRIVER

Product Code: NF-PS-35W-24V-HW

Line 37
+45

NOVA FLEX



Input

Voltage Range	90 ~ 264 VAC
Frequency	47 ~ 63 Hz
Current	1.1 A / 114 VAC
Inrush Current	30 A / 115 VAC
Efficiency	85%

Protection

Over Current	110 ~ 150; Hiccup mode
Over Voltage	27.6 ~ 32.4 V
Warranty	2 - 5 years (based on warranty of ribbon/neon purchased)

Output

Voltage	24VDC
Current	1.5 A
Ripple	150 mVp-p
Line Regulation	1%
Load Regulation	2%
Turn on Delay Time	50 ms/230 VAC
Optimal Load	Up to 95%

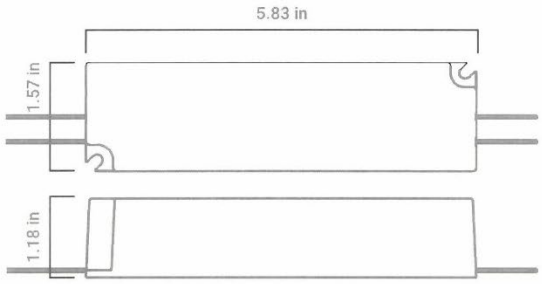
Environment

Protection Rating	UL 1310, Class 2, IP67
Operating Temp	-4° to 113° F (-20° to 45° C)
Storage Temp	-40 ~ 176° F (-40 ~ 80° C) 10 ~ 95% HC

To meet local / national codes, this driver may require mounting in approved UL Enclosure.

Physical

Weight	11.2 oz



FOR MORE INFORMATION CLICK HERE

PROJECT SUPPORT | INSTALLATION GUIDES | WHY NOVA FLEX | RESOURCES

Specifications are subject to change without notice.

800.595.6302 novaflexled.com

S3i WIRELESS RECEIVER

Line 38 +46

NOVA FLEX

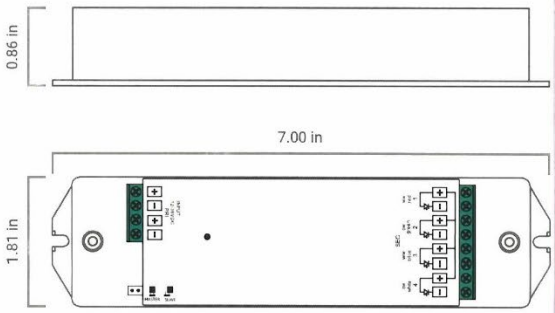
Product Code: NF-S3i-WR-1009

Use one receiver per zone, up to 6 zones depending on the controller selected. Pair with NF-A-UNV for large projects.

Data

Input Voltage	12 - 36 VDC
Output Current	4 x 5 A
Output Power	240 - 720W

Dimensions

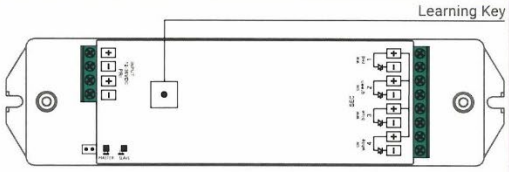


Pairing

Pair - Click the "Learning Key" button on top of the device once. Then follow the pairing instructions for your controller.

Unpair ALL Remotes Option 1
Hold the "Learning Key" button on top of the device for about 4 seconds (lights should flash)

Unpair ALL Remotes Option 2
(Lights ON) Unplug and Plug In receiver (5) times in a row (make sure when you plug in for those (5) times, the light comes on first before you unplug again)



Operation

Primary / Secondary - Color Changing Synchronization throughout multiple NF-S3i-WC-1009 Receivers (ONLY "Play/Pause" Scenes can achieve)

Locate small BLACK CAP located on 2 pins sticking upward on the Power Side of the NF-S3i-WC-1009. This piece will set the PRIMARY. Relocate the CAP so that it covers BOTH Pins and Slide the CAP to the bottom. For the SECONDARY Receivers, Remove the CAP completely. Once the PRIMARY (ONLY ONE) and Secondary (as many ZONES as the Remote allows) are set, Power OFF and ON again the PRIMARY Receiver. This will set the Primary Function.

Once the PRIMARY and SECONDARY(s) are set, Select DIFFERENT ZONES for each Receiver to be Paired. Once ZONES are Paired, Select ZONE(s) and FIRST TURN OFF WHITE! Once WHITE is OFF, Select a Color Changing Scene and Set the preferred SPEED.

To test Synchronization, Power OFF (1) SECONDARY Run. After a few seconds, Power ON the SECONDARY Run. Wait 15 seconds for the signal to transfer.

Line 39+47

S3i CONTROLLER RGBW TOUCH PANEL

NOVA FLEX

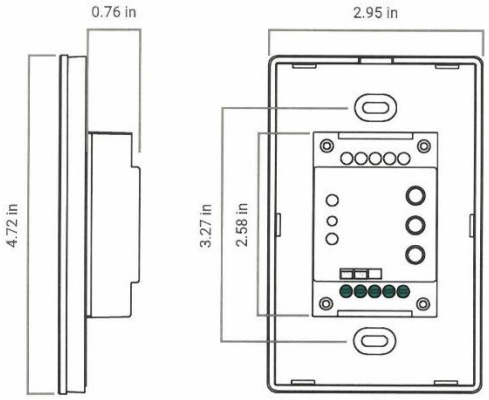
Product Code: NF-S3i-TP-RGBW

Features

- Controls 3 zones
- 65,000 color options
- 10 built in presets modes
- Touch sensitive glass surface
- 5 year warranty
- Fits in standard US switch box
- Smart, simple, seamless integration
- Easily select 3 shades of white

Data	DC	AC
Output Signal	RF Signal	RF Signal
Power Supply	12 - 24VDC	100 - 240VAC
Power Consumption	20 mA	20 mA
Operating Temperature	32° - 104° F	32° - 104° F
Relative Humidity	8 - 80%	8 - 80%
Wireless Range	50 ft	50 ft

Dimensions



S3i WIRELESS RECEIVER

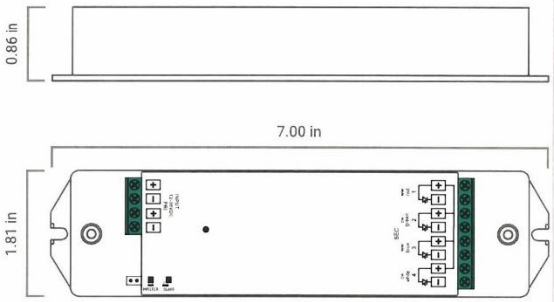
Product Code: NF-S3i-WR-1009

Use one receiver per zone, up to 6 zones depending on the controller selected. Pair with NF-A-UNV for large projects.

Data

Input Voltage	12 - 36 VDC
Output Current	4 x 5 A
Output Power	240 - 720W

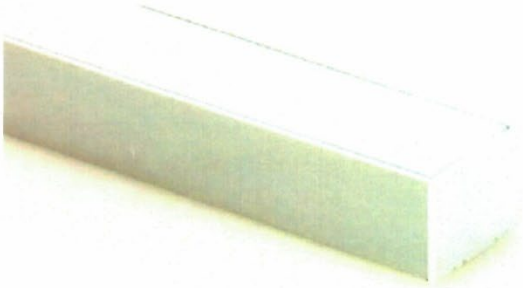
Dimensions

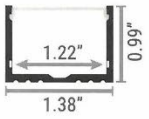


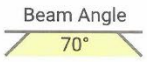
Lines 40 & 41
48 & 49

SURFACE 3525 CHANNEL

NOVA FLEX







Physical

Material	Anodized Aluminum
Length	2M**
Channel Options [Light Loss]	Silver [10%] Black [20%] White [0%]
Lens Options [Light Transmission]	Clear [92%] Soft [78%] Black [25%]

Lenses are suitable for outdoor use with respect to exposure to ultraviolet light and water exposure in accordance with UL 746C.

Product Codes for Ordering

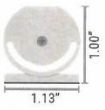
Channel	Silver: NF-CH-3525-2M Black: NF/SP-CH-3525-2M-BK* White: NF/SP-CH-3525-2M-WT*
Lens	Clear: NF-CH-3525-C/CLEAR-2M Soft: NF-CH-3525-C/SOFT-2M Black: NF/SP-CH-3525-C/BLACK-2M*

Mounting Options

Direct Mount

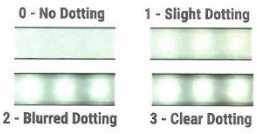
Side Mount

Adjustable Clip
Angles: 0°/15°/30°/45°/60°/75°/90°
NF-CH-UNV-CLIP/ADJ



Dotting & Compatibility

LEDs	DS64	DS128	DS160	DS240	H2128	PRO60	PRO120	PRO240	ADJ160	RGB60	RGBW60	DRGB48
IP65	0	0	0	0	0	0	0	0	0	0	0	1
IP68	0	0	0	0	0	0	0	0	0	0	0	0



*Special Order Product Notes:
Lead-time 7-9 weeks
MOQ 150 pcs (2M/pc)

FOR MORE INFORMATION CLICK HERE

PROJECT SUPPORT | INSTALL GUIDE | WHY NOVA FLEX

**Custom length available, additional fee may apply.

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Vive™ System Onsite Full-Scope Startup (LSC-OS-SU-VIVE) Line 51

Service Description

An onsite visit by a Lutron Field Service Representative to program the Vive™ System per a customer-approved sequence of operations. Programming of all Vive™ components purchased with this startup visit is included – wireless remotes, wireless lighting controllers, wireless occupancy/vacancy sensors, wireless daylight sensors, wireless plug-load controllers and the configuration of all applicable software features. An introductory system training intended for system operators is also included.

Service Inclusions

- During the startup visit a predetermined scope-of-work will be performed. Unless otherwise noted, that scope of work will be to program the system components associated with this startup visit to completion as specified by a customer-approved sequence of operations.
- A factory-certified technician or technicians (Lutron Field Service Representative) will travel to the job site to perform the startup visit.
- Prior to programming, an audit of the system installation will be performed to ensure that the system is installed per Lutron specifications.
- All system remotes and wallstations will be associated to lighting and plug-load controllers per the customer-approved sequence of operations.
- Occupancy/vacancy sensors and daylight sensors will be associated to lighting and plug-load controllers and will be roughly calibrated per the customer-approved sequence of operations.
  - Timeouts for occupancy/vacancy sensors will be configured
  - If applicable, occupancy/vacancy sensor coverage range will be adjusted based on built environment
  - Daylight sensor setpoints will be configured
  - Final calibration is dependent on the final built environment (e.g., furniture placement, HVAC operations, space usage) which may not be complete at the time of calibration; any additional sensor fine-tuning required after the startup visit is completed is not included. Lutron will return for fine-tuning for an additional fee
  - See the **Additional Services Available** section for the Sensor Layout & Tuning Service excluded from the scope of this startup visit
- Timeclock schedules will be programmed per the customer-approved sequence of operations.
- Load shed parameters will be configured per the customer-approved sequence of operations.
- All applicable system components will be tested after they are programmed to confirm proper operations.
- An introductory training on overall system operations and maintenance will be delivered during the visit. Recording of the training is encouraged but not provided. A typical training agenda is included in this document.
- A summary of completed work will be furnished at the completion of the visit.
- One onsite visit occurring between the hours of 7:00am and 5:00pm, Monday through Friday. Additional fees may be applied for any work completed outside of these hours.
- A startup visit may span multiple days depending on the size of the system. Lutron Services Scheduling may provide an estimated duration of the startup visits. Any number of days provided are for estimating purposes only; any deviation from that estimate for the original agreed upon scope of work does not impact the price. Refunds will not apply for any estimated days unused.
- A Lutron Field Service Representative will be eligible to provide up to eight (8) contiguous hours of work per day during this visit. Please consult your Lutron Sales Representative if more than eight (8) contiguous hours are required in a working day; additional fees may apply.
- Upon completion of the startup visit, a Commercial Systems 2-Year Limited Warranty is included and the warranty period begins.

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Job Name:	Model Numbers:	
Job Number:		

Service Exclusions

- Lutron may be unavailable to deliver service on some holidays. Please consult Lutron Services Scheduling with any questions regarding these holidays.
- The included system training may be delivered outside of this startup visit for an additional fee.
- Construction phasing, which may require multiple visits, is not included in a standard Vive™ Startup. Discuss any phasing with your Lutron Sales Representative, Lutron Project Manager or Lutron Services Scheduling. Additional fees may apply.
- The Lutron Field Service Representative may assist, or make recommendations to the customer representative if troubleshooting of installation issues is required. If additional time is required for Lutron to perform the agreed upon scope-of-work because system components are not installed per Lutron specifications, additional fees may apply.
- Lutron will not perform work on non-Lutron equipment or on any Lutron equipment not included in the scope-of-work associated with this startup visit.
- Any programming required to integrate the Vive™ system with any third-party equipment is not included (e.g., BMS/EMS, HVAC, I.T., audio and video, energy dashboards, analytical packages).
  - See the **Additional Services Available** section for the System & Network Integration Consultation service excluded from the scope of this startup visit
- Any programming or system changes that deviate from the customer-approved sequence of operations must be approved in writing through the proper channels and may require additional fees.
- Replacement of system components due to miswires, incorrect installation or any other related issue is not covered under the Lutron warranty and replacements are the responsibility of the installer.
- Lutron Field Service Representatives will not perform any installation labor – including relocating equipment.

Service Requirements

- Confirmed access to the required areas must be acquired by the customer representative prior to the visit. If rescheduling is required, additional fees may apply.
- Lutron Services Scheduling requires at least ten (10) business days' notice to schedule this visit. See the **Contact Information** section of this document.
- Rescheduling and/or cancelling a visit could result in additional fees and project timeline requirements may not be met. If rescheduling is required, provide at least four (4) business days' notice to Lutron Services Scheduling to avoid fees.
- At the time of scheduling, notify Lutron Services Scheduling of any job site access requirements (e.g., drug testing, background check, safety training, or PPE requirements).
- Prior to the visit, all Vive™ equipment to be started up must be installed, wired and/or powered up per Lutron specifications.
- Prior to the visit, all controlled fixtures must be wired, powered, lamped, and tested.
- A customer representative who is familiar with the installation must be present and available during the visit for typical job-specific coordination and access considerations.
- A customer-approved sequence of operations will be provided to Lutron prior to, or at the initiation of this onsite visit. The sequence of operations must clarify to the Lutron Field Service Representative how the system is intended to be programmed in each space, including expected associations between devices (i.e., it must clarify which occupancy/vacancy sensors, daylight sensors, remotes, and lighting controllers should be associated to which load controllers). In the event that a customer-approved sequence of operations is unavailable by the initiation of this visit, the Lutron Field Service Representative will program the system per the default sequence of operations included within. A complete sequence of operations will include:
  - Groupings of controlled fixtures & any associated controllers, remotes, and sensors
  - Areas of controlled fixtures & any associated controllers, remotes, and sensors
  - Occupancy/vacancy behavior

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Job Number:		

Service Requirements (continued)

- Daylighting setpoints
- Light levels controlled by remotes and/or wallstations with buttons capable of custom programming
- Timeclock schedule operations
• A customer representative will sign off on all completed work at the completion of the visit.
• Any changes to the customer approved sequence of operations must be made through the proper channels; additional fees may apply.

Default Sequence of Operations

• In the event that a customer-approved sequence of operations is not available prior to, or at the initiation of this startup visit, the Lutron Field Service Representative will program the system using the framework below.
• For any changes to the default sequence of operations after startup has begun additional fees may apply.
• Fixture Groupings, Areas and Naming:
- Spaces with individual fixture controllers:
  · In installations where there are less remotes and/or wallstations than there are fixture controllers, the remotes and wallstations will be distributed to control an even number of grouped fixtures, as best as the lighting controllers installed will allow.
- Spaces without individual fixture controls:
  · In small and medium sized spaces (e.g., conference rooms, bathrooms, offices, classrooms): all controllers will be grouped and controlled as one area.
  · In large sized spaces (e.g., open offices, lecture halls, ballrooms): all controllers in the space will be grouped as one area and the controls (e.g., remotes, wallstations, sensors) will be distributed to control an even number of fixture groupings based on proximity of the controllers to the controls.
  · The term "Space," as used above, is defined as an architecturally defined space – which may or may not be defined by walls – with a clearly distinct use. Lutron Field Service Representatives will employ their professional judgment in determining what constitutes a space in cases where spaces are not defined by a customer-approved sequence of operations.
- Naming Conventions:
  · During startup a Lutron Field Service Representative will name all applicable devices and areas in the software using an agreed upon or logical naming convention.
• Wireless remotes and wallstations:
- One button: Toggle lights on and off.
- Two button: Top button will turn lights on and bottom button will turn lights off.
- Three button: Top button will turn lights on, middle button will be set to a 50% light level, and bottom button will turn the lights off.
- Four button: Top button will set lights to a 100% light level, 2nd button down will set lights to a 65% light level, 3rd button down will set lights to a 35% light level, and bottom button will turn lights off.
- Five button (3 button with raise/lower): Top button will turn lights on, middle button will be set to a 50% light level, and bottom button will turn the lights off.
• Occupancy/vacancy sensor timeout:
- In spaces with remotes and/or wall controls, sensors will be set up as vacancy sensors (only automatically turning off the lights) with a 15-minute (+/- 1-minute) timeout
- In spaces without remotes and/or wall controls, sensors will set up as occupancy sensors (automatically turning the lights on and off) with a 15-minute (+/- 1-minute) timeout
• Daylight sensor:
- Sensors without auto-calibration will be calibrated to achieve 40 foot-candles (+/- 5 foot-candles) from roughly three (3) feet (91 cm) off the floor at a distinct point in the room – typically the center of a room. Note that the consistency of light distribution throughout the space is highly dependent upon fixture design and placement
- In small or medium sized spaces, the daylight sensor will affect the entire area (see Fixture Groupings, Areas and Naming section at the left)

Default Sequence of Operations (continued)

- In large sized spaces, the daylight sensor(s) will affect fixture groupings closest to the glazing based logically at the Lutron Field Service Representative's discretion on the number of sensors, the number of fixture groupings, the amount of glazing, the size of the room and other applicable architectural factors
- Timeclock schedules
- In the event that no approved sequence of operations is available, no timeclock events will be programmed
- Load shed
- All areas will be configured to be affected by a load shed event
- All dimmers affected by a load shed event will decrease light levels by 10%
- All switches affected by a load shed event will remain unaffected

Service Recommendations

- Coordinate the calendars of all parties to be involved in the included system training within the expected duration of the startup visit.
- Lutron offers a portfolio of elective services that support the startup process; these services are offered a-la-carte and are not included as part of the scope of startup. See the **Additional Services Available** section below for information.

Additional Services Available

- Contact your Lutron Sales Representative to confirm whether these services have been purchased for this system, or to learn more about and purchase these services.
- Pre-wire Visit (LSC-PREWIRE): An onsite visit to review logistical construction considerations.
- System & Network Integration Consultation (LSC-INT-VISIT): A consultative visit with third-party integrators/technicians to review integration planning.
- Sensor Layout & Tuning (LSC-SENS-LT): Lutron takes responsibility for the final location and calibration of occupancy/vacancy and daylight sensors.
- Onsite System Programming Visit (LSC-OS-PROG8-SP, LSC-OS-PROG4-SP): Onsite programming support available in four (4) and eight (8) hour blocks of time.
- Remote System Programming (LSC-RMT-PROG4-SP): Remote programming support available in four (4) hour blocks of time.
- After Hours Startup (LSC-AH-SU)
- Onsite Scene and Level Tuning Visit (LSC-AF-VISIT): A system fine-tuning visit during or after startup to assist a specifier in achieving their vision.
- System Performance-Verification Documentation (LSC-SPV-DOC): System verification documentation that describes pre-functional and functional tests and captures test results.
- Title 24 Acceptance Test Visit (LSC-SPV-DOC-T24): Includes the testing and documentation of test results required by Title 24 for the interior lighting control system.
- Onsite Performance-Verification Walkthrough (LSC-WALK): Demonstration of system performance and/or assistance in testing provided to a customer representative.
- Warranty Audit Visit (LSC-WNTY-AUD): A warranty prerequisite and an onsite visit to audit and test a system programmed by others.
- Customer-Site Solution Training (LSC-TRAINING-SP): Onsite system training.
- System Optimization (LSC-SYSOPT-SP): An onsite visit to identify and implement system optimizing lighting control adjustments.
- Silver Enhanced Warranty (LSC-E8S): An 8-year, pro-rated enhanced warranty.
- Gold & Platinum Enhanced Warranties (LSC-E8G, LSC-E8P): Upgraded 8-year, pro-rated enhanced warranties including expedited response time and an annually scheduled Preventive Maintenance Visit.
- Silver Technology Support Plan (LSC-SILV-IW): A multi-year service agreement that includes 100% parts and diagnostic labor for the life of the agreement.

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Additional Services Available (continued)

- Gold & Platinum Technology Support Plans (LSC-GOLD-IW, LSC-PLAT-IW): Multi-year service agreements that include 100% parts, diagnostic labor, expedited response time and an annually schedule preventive maintenance visit for the life of the agreement.
- Additional Annual Scheduled Maintenance Visits (LSC-SCH-MAINT): Additional visits associated with Enhanced Warranties and/or Technology Support plans.

Typical Training Agenda

- This agenda may change depending on system capability.
- System Overview
- Controls
- Components
- Functionality walk-through
- System Software
- Navigation
- System features
- Administration
- Programming adjustments
- Preventive Maintenance
- Warranty Information
- Additional Lutron Service & Support
  Dial 800.523.9466 and follow the prompts for Field Service, then Scheduling.
- Technical support
- Remote services
- Onsite services
- Additional training opportunities
- Questions/Discussion

Contact Information

Technical Support (Toll-free, 24/7)
1.800.523.9466

Lutron Services Scheduling
Phone: 1.844.LUTRON1 (588.7661)
E-mail: LSCscheduling@lutron.com

To schedule this startup visit
- Visit www.lutron.com/scheduling, or
- E-mail or call Lutron Services Scheduling

Please contact your Lutron Sales Representative for further questions on services offered by Lutron.

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Commercial Systems 2-Year Limited Warranty (LSC-B2)

This Commercial Systems 2-year Limited Warranty offers 2 years of parts coverage, a first available on-site/remote response time for system issues, and 24/7 Technical Support.

Benefits

- Coverage provides 100% parts and (for systems purchased with start-up) diagnostic labor coverage for most system issues for 2 years.
- Refer to the Lutron Electronics Co., Inc. Commercial Systems Limited Warranty for full coverage details and important exclusions.
- Coverage can be upgraded at any time with the purchase of a Technology Support Plan.
- For more information check out www.lutron.com/services

Contact Information

- **Phone:** 1.888.LUTRON1 (588.7661)
- **Email:** lscscheduling@lutron.com
- **Website:** lutron.com/services

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END OF BID DOCUMENTS