

# CONNECTED LIGHT MODULE

EN-ZBHA-CLM-DIM

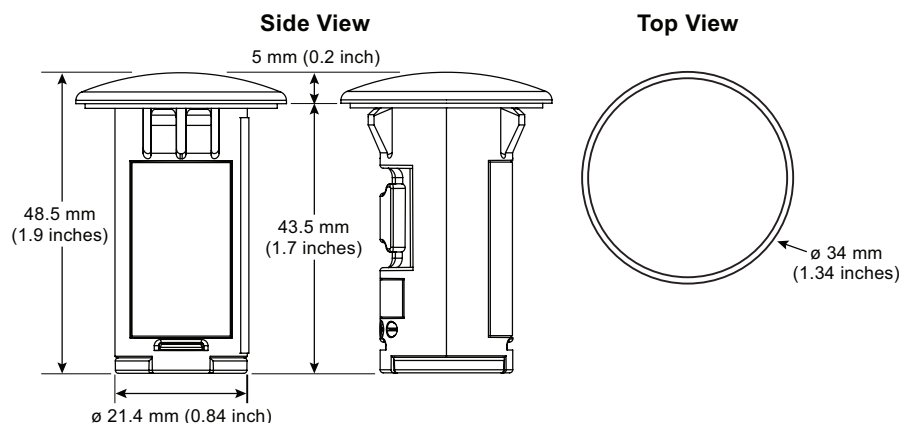


## PRODUCT OVERVIEW

The EN-ZBHA-CLM-DIM (CLM) is a wireless fixture controller that enables luminaires to be connected wirelessly to the Wattstopper PLUS system. The CLM offers both 0-10V dimming and DALI control options, with support of tunable white drivers via compatible DALI Type 8 LED drivers. The CLM mounts into industry-standard half-inch PG7 knockouts on any luminaire.

The CLM allows for creation of a highly flexible, luminaire-level control solution on the Wattstopper PLUS platform. It is a seamless addition to any luminaire due to its small size and premium appearance.

## SensiLUM Dimensions



## SPECIFICATIONS & FEATURES

### Input Voltage:

For 0-10V Driver with AUX power connection:  
12-24VDC  
For DALI Driver with Self-Powered DALI LINK:  
18-24VDC

Operating Power: Less than 0.3W for all applications

Wiring: 18-22AWG

### Terminal connections:

For 0-10V: DIM+, DIM-, VAUX-, VAUX+  
For DALI: DALI-, DALI+

Adjustable Time Delay: 5 minute minimum, no maximum.

DALI Drivers: White only, tunable white (via DALI Type 8 Driver)

Wireless Communication: 100 ft (30m) line of sight

Operating Temperature: -40-140°F (-40-60°C)  
Relative Humidity: 0 to 95% (non-condensing)

### Indoor Use Only

UL and cUL listed  
UL2043 Plenum Approved – Suitable for Use in Air Handling Spaces  
FCC part 15 Class A

## MATERIALS

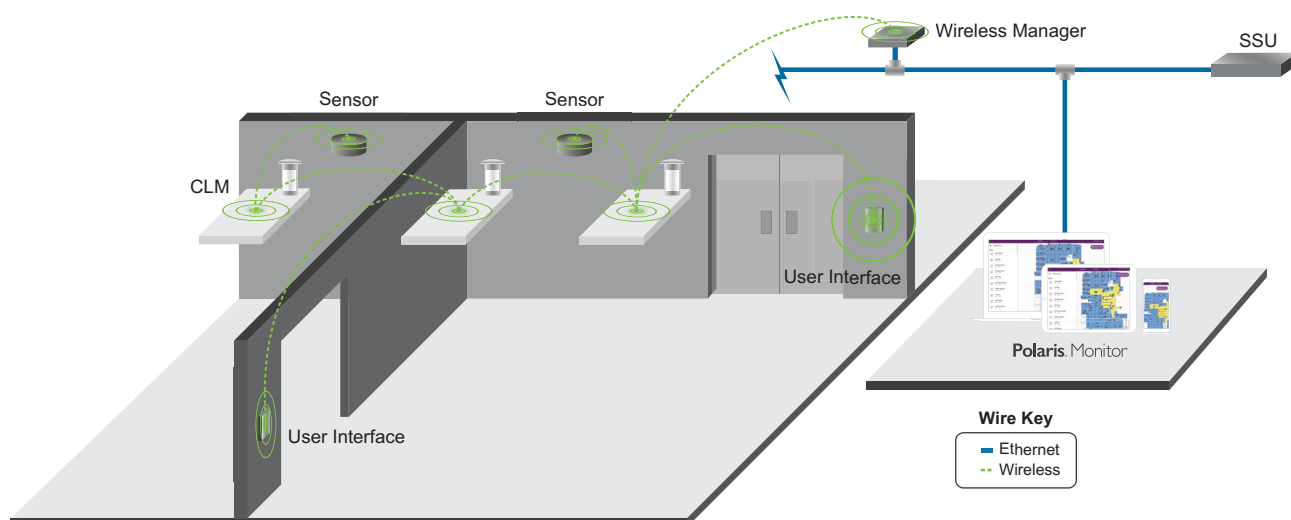
Meets materials restrictions of RoHS

## FACTORY DEFAULTS

Performs End-of-line test cycle upon boot for first 10 boots. (See section on last page for details)

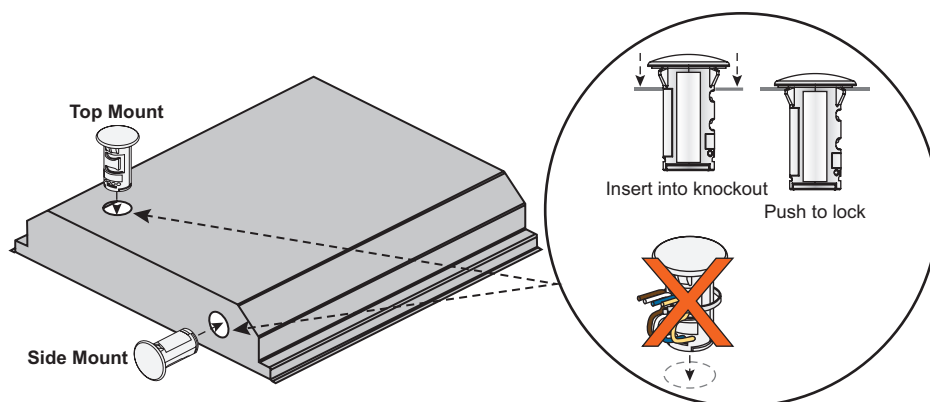
Until programmed via Polaris, the device can be interacted with using the Wiring Test Tool (EN-WTT-ZB) to toggle and step dim.

## SYSTEM OVERVIEW



## MOUNTING

The CLM mounts into industry-standard half-inch PG7 knockouts on any luminaire. It is inserted through a knockout and secured by its built-in mounting clips. The CLM should be wired **after** mounting. See installation instructions for more details.

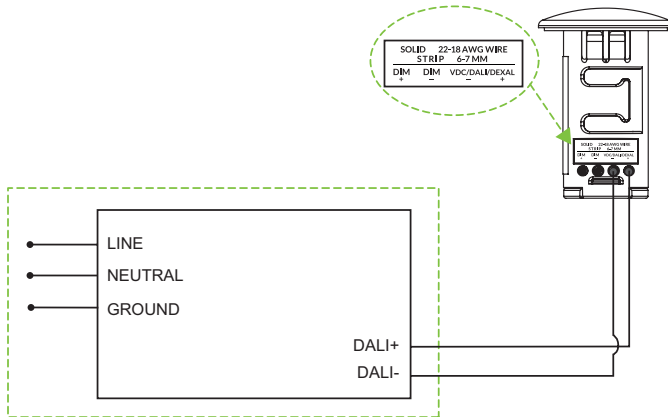


## WIRING

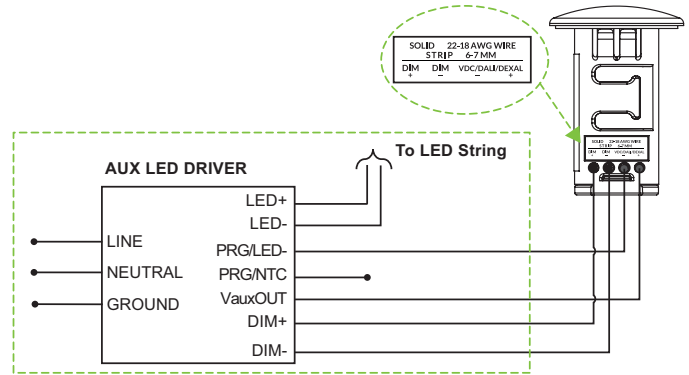
For additional information, including usage in applications with multiple drivers, see the CLM installation instructions.

**IMPORTANT:** The LED driver must possess Dim-to-Off capability, and it must be enabled when used with CLM DIM.

### Single DALI/Tunable White Driver



### Single 0-10V LED Driver



## END OF LINE TESTING

To facilitate OEMs conducting operation tests at the end of the manufacturing line with control modules installed, an end-of-line testing routine is pre-programmed into the device that confirms wiring and wireless communications. When the luminaire is powered, the fixture turns ON and reaches its full output. The CLM then cycles through the entire dimming range starting from 100% output to OFF\* two times. This confirms that the module is receiving power and is able to communicate with the driver. If connected to a tunable white driver, an additional cycle of color temperature will occur, cycling the fixture from maximum cool (e.g. 6500K) to maximum warm (e.g. 2700K).

This end-of-line testing routine repeats whenever power is removed and reapplied to the device, for the first 10 times the device is powered. Afterwards, the luminaire simply powers on. If additional wiring testing is needed, the Wiring Test Tool (EN-WTT-ZB) can be used to execute the end-of-line test sequence (available until the device is commissioned into a Wattstopper PLUS system), and also confirms wireless communications. See the Wiring Test Tool user guide for more information.

\*Applies only when dim-to-off feature is enabled via the OT Programmer for OPTOTRONIC LED Power Supply. If the feature set is not enabled, the luminaire will go to the minimum dimming level.

## ORDERING INFORMATION

Catalog #	Master Pack Details				
	Master Pack Quantity	Case dimensions (inches)			Weight (pounds)
		Length	Width	Height	
ZBHA-CLM-DIM	150	11.61	9.25	10.36	7.92

Inner Pack Details				
Inner Pack Quantity	Case dimensions (inches)			Weight (pounds)
	Length	Width	Height	
30	10.75	8.74	1.97	1.39

Catalog #	Description	Communication Network
■ ZBHA-CLM-DIM	Connected Light Module	Wireless