

Project		Catalog #		Type	
Prepared by		Notes		Date	



WaveLinX

LITE Ambient Integrated Sensor (OEM-WAB, OEM-WAB-D)

Motion and Closed Loop Daylighting, IoT-ready

Typical Applications

Office • Education • Healthcare • Retail

Interactive Menu

- Order Information page 2
- Additional Resources page 3
- Connected Systems page 3
- Product Warranty



- Meets latest ASHRAE Standard 90.1 requirements
- Meets latest IECC requirements
- Meets latest CEC Title 24 requirements
- NEMA WD-7 and NEMA 4 compliant

Product Features



Compatibility



Overview

The WaveLinX LITE integrated sensor is an integral part of the WaveLinX LITE System and offers passive infrared (PIR) occupancy and a photocell for closed loop daylighting. WaveLinX ambient integrated sensors offer installation heights 8 to 15 feet and have coverage patterns up to 500 square feet. When part of the WaveLinX LITE system, the sensor operates on a wireless mesh network based on IEEE 802.15.1 standards.

WaveLinX integrated sensors receive power from their co-located light fixture with no batteries to replace. The sensor in combination with the WaveLinX LITE mobile application allows you to gain considerable energy savings from occupancy and daylight sensing lighting control. The WaveLinX LITE mobile application allows you to map the sensor to any area or control zone, select occupancy or vacancy, occupied and unoccupied light levels and set the hold time.

Product Features & Benefits

- Easily enables 0-10V luminaires to become WaveLinX enabled
- Passive InfraRed (PIR) motion sensor with coverage up to 500 sq-ft
- Integrated photocell for closed loop daylight harvesting
- Software configurable settings with WaveLinX application
- Luminaire junction box or driver compartment connections
- Provides wireless bi-directional communications with wireless devices in the WaveLinX LITE network
- Multi-colored LEDs for sensor status and diagnostics
- WaveLinX LITE is DLC Listed for interior applications - meeting the NLC5 Technical Requirements

Order Information

WaveLinx Ambient Integrated Sensors enable ambient luminaire to be a part of the WaveLinx LITE system which may be used with out-of-the-box functionality or commissioned via the WaveLinx LITE mobile application.

WaveLinx Ambient Integrated Sensors are used to provide occupancy and daylight dimming to spaces from the ambient light fixture. For energy code compliance, additional sensors may not be required.

WaveLinx LITE devices are not currently compatible with the WaveLinx Area Controller.

Catalog Number

Catalog #	Description
OEM-WAB	WaveLinx LITE Ambient Integrated Sensor, 8-15ft (2.4-4.6m)
OEM-WAB-D	WaveLinx LITE Ambient Direct Connection Sensor, 8-15ft (2.4-4.6m)**
Notes For use with indoor ambient light fixtures.	Notes When used as a component in the WaveLinx LITE system, design best practices (including the number of devices, installation locations, device to device spacing, etc. must strictly adhered. * OEM-WAB sensor requires OEM-MSP31VMVDC1EP control module and OEM-WLX-CABLE-054 cable for integration into fixtures. **Requires integration using 0-10v driver with dim-to-off and Aux

Required Integration Components

Catalog Number

Catalog Number

Catalog Number	Description
OEM-MSP31VMVDC1EP	WaveLinx Ambient Control Module
OEM-WLX-CABLE-054	OEM WaveLinx Integrated Sensor Cable 54"

Product Specifications

Key Features

The Integrated Sensor system is an integrated control system that provides occupancy and daylight dimming controls. Daylight dimming is implemented as a closed loop control. The system is a low-cost, out-of-the-box solution to lighting code compliance with the added benefit of personal control after commissioning.

- Occupancy detection
- Continuous daylight dimming
- 0-10 V dimming
- Occupancy sensitivity
- Fresnel lens | coverage

Mechanical

Environment:

- **Operating temperature:** 32°F to 131°F (0°C to 55°C)
- **Storage temperature:** 14°F to 158°F (-10°C to 70°C)
- **Relative humidity operating:** 5% to 95% non-condensing
- Default behavior intended for indoor use only

Mounting:

Mounting Height: 8-15 ft (2.4m - 4.5m)

Color: Matte White facing customer with Black enclosure

Sensor Housing: UV stabilized plastic

Electrical

Sensor Input Requirements:

- Range input voltage: 12-15 VDC
- Rated input current: 100mA Max
- Rated input frequency: DC

Control Module Requirements:

- 120/277VAC incoming and switched power
- 10mA 0-10V sink
(refer to driver specifications to calculate quantity supported)
- 3A LED loads

Sensor Hardware Specifications

Processor: EFR32MG12P132F1024GM48

Peripheral Connectivity:UART (2-wire)

Status Indicators:

- Per WaveLinx LITE - see manual

Wireless Specifications

Radio: 2.4GHz

Standard: IEEE 802.15.1 - Bluetooth® 4.2 Low Energy (BLE)

Transmitter Power: + 10dBm

Configuration type: Router, End Point

Range: Device to device; 100ft (30m) LOS (best practice)

System Performance

Maximum number of nodes supported: Up to 50 devices per commissioned network (best practice 40 devices)

Standards/Ratings*

- cULus Listed - Energy Management Equipment (UL916)
- FCC Part 15/ECES-003
- Manufactured in an ISO 9001 certified factory
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2018 requirements
- Meets CEC Title 24 requirements
- Meets latest ISED OR IC requirements
- WaveLinx LITE is DLC Listed for interior applications - meeting the NLC5 Technical Requirements

Product Safety:

- IEC 60950-1
- UL 60950-1
- EN 60950-1
- CAN/CSA-C22.2 No. 60950-1

Environmental Regulations:

- WEEE Directive 2012/19/EU

Warranty

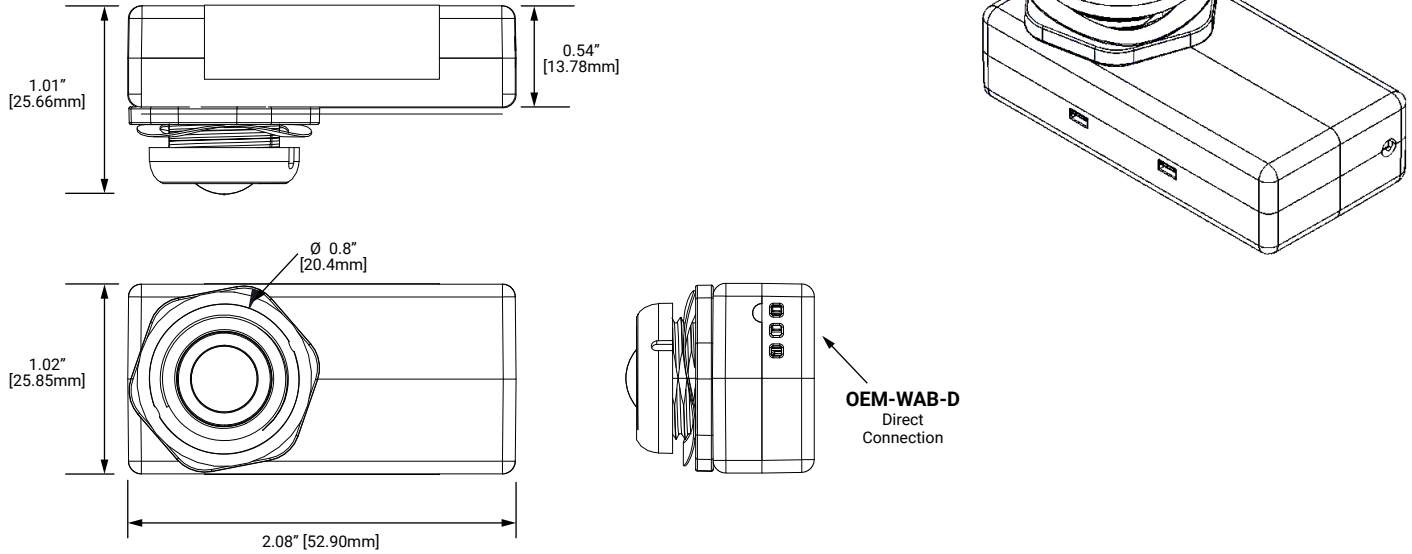
Five year warranty standard



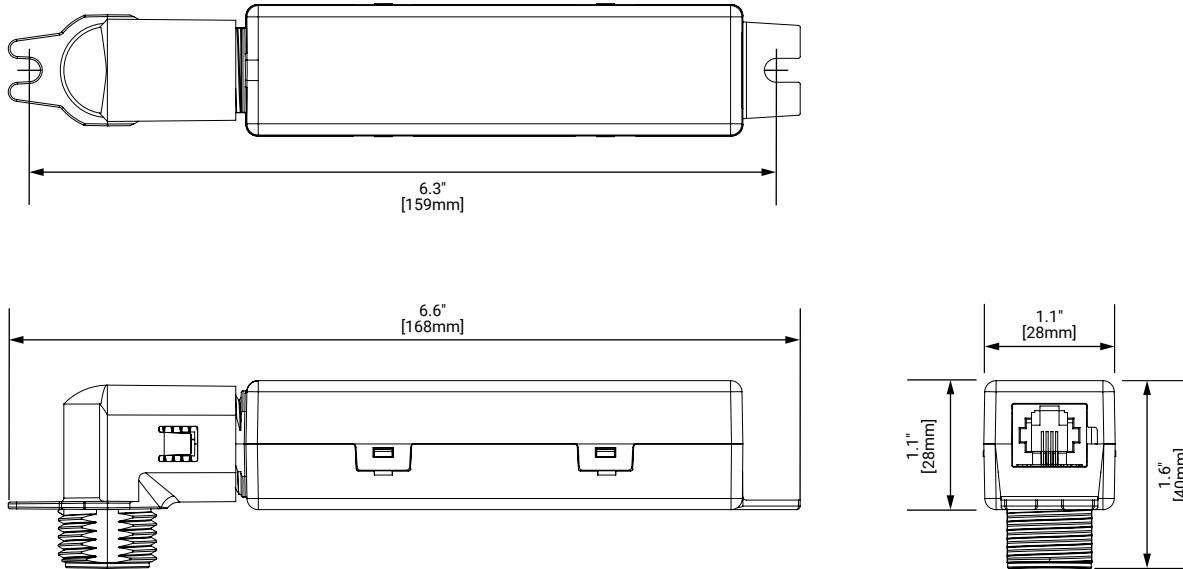
Download the WaveLinx LITE Mobile App from either the Google Play or Apple Store®

Dimensional Details

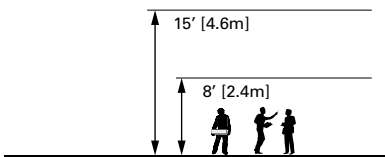
OEM-WAB and OEM-WAB-D



OEM-MSP3IVMVDC1EP



Mounting Height

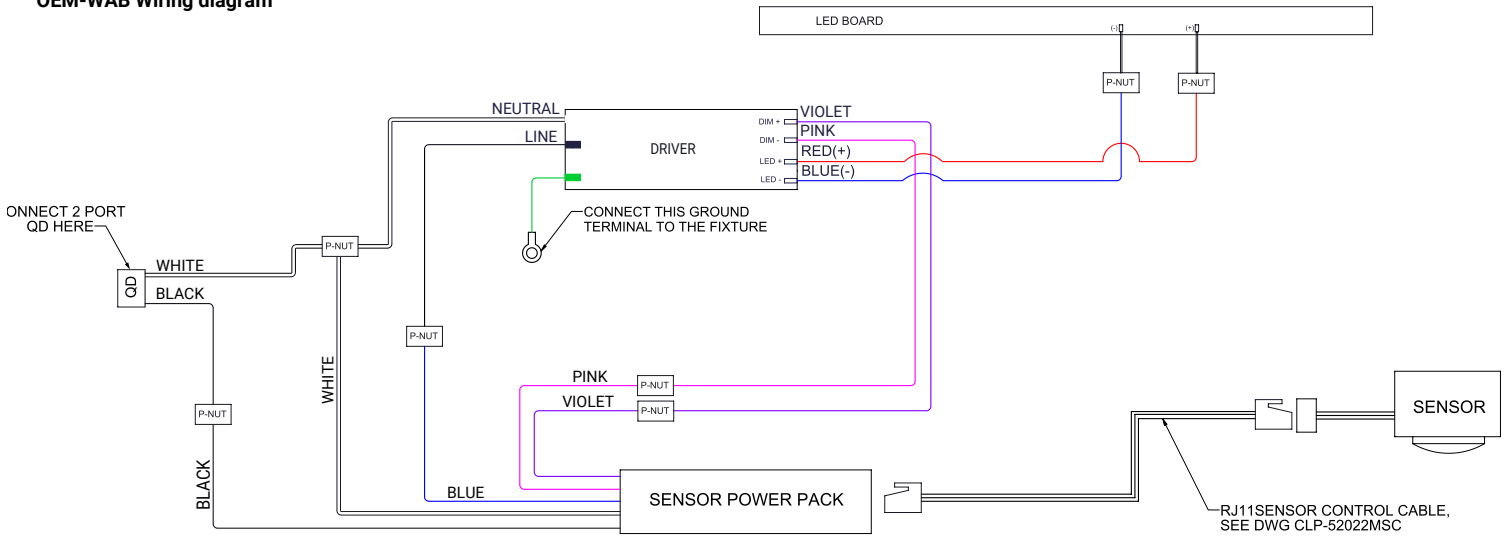


For wiring / installation details:

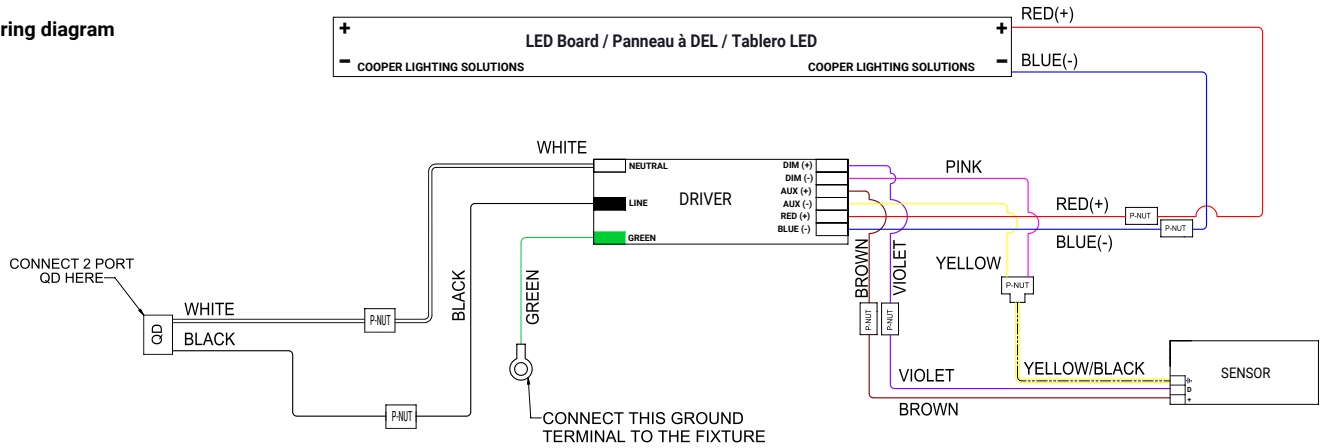


Wiring Diagram

OEM-WAB Wiring diagram

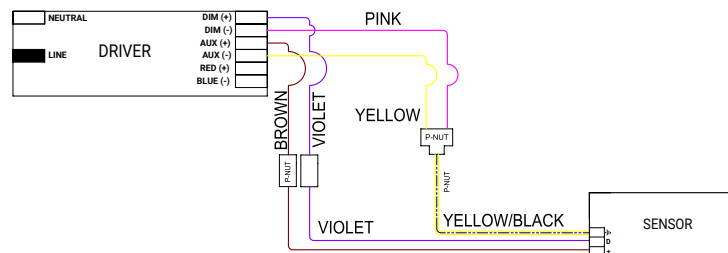


OEM-WAB-D Wiring diagram



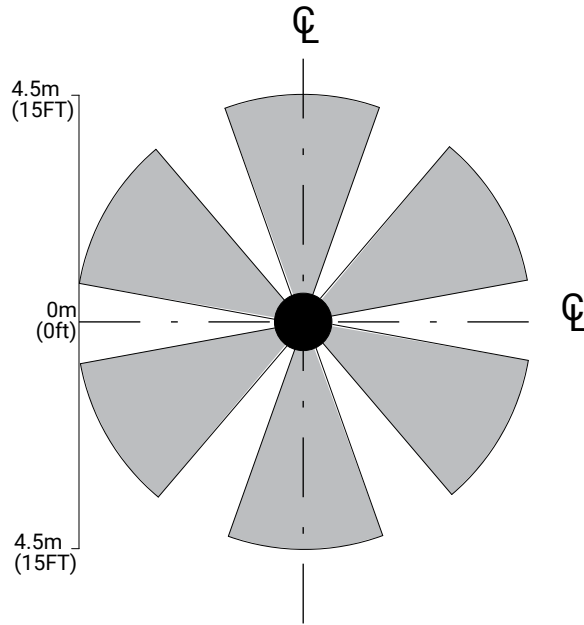
DRIVER TO SENSOR WIRE CONNECTION

DRIVER	SENSOR	WIRE COLOR
DIM +	D	VIOLET
DIM -	GROUND	PINK
AUX -		YELLOW
AUX +	+	BROWN



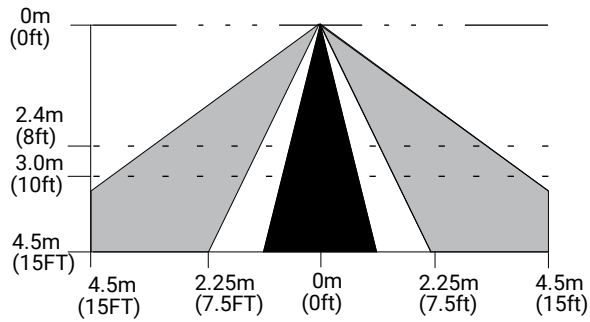
Field of View

TOP VIEW:



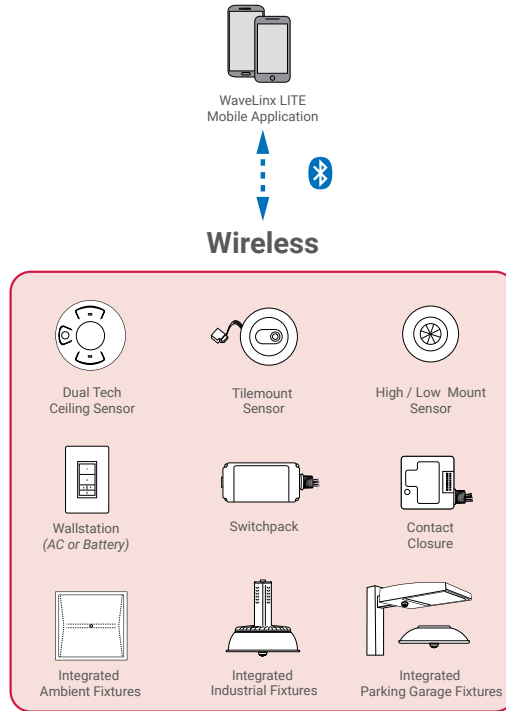
Note: The "beam" pattern obtained depends strongly on the detector used with this array. The pattern shown is intended solely as a general guide and is not to scale.


SIDE VIEW:



System Diagram:

This diagram shows the main components and topology of the WaveLinx system with LITE devices. The WaveLinx LITE devices use standardized IEEE 802.15.1 (Bluetooth® 4.2 Low Energy) mesh technology for device to device communications without the requirement of a gateway. The WaveLinx LITE enabled luminaires provide out-of-the-box functionality for independent operation when energized. With the use of the WaveLinx LITE mobile application with MyApps secure cloud portal access, groups of independent luminaires may be created and maintained with areas, control zones, and occupancy sets. WaveLinx LITE devices are not currently compatible with the WaveLinx Area Controller.



 **Control Systems**
• WaveLinx