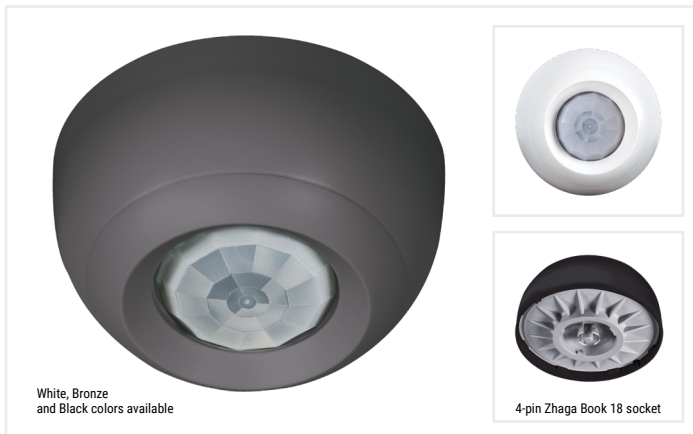


|             |  |           |  |      |  |
|-------------|--|-----------|--|------|--|
| Project     |  | Catalog # |  | Type |  |
| Prepared by |  | Notes     |  | Date |  |



# WaveLinX

## LITE Outdoor Fixture High / Low Mount Sensor (WLS2\* / WLS4-\*)

Motion and closed loop daylighting including field installed shield

### Typical Applications

Outdoor • Parking areas • Parking garages • Pathways

### Interactive Menu

- Order Information [page 2](#)
- Additional Resources [page 3](#)
- Connected Systems [page 6](#)
- 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 outdoor (high and low mounted) sensors are an integral part of the WaveLinX LITE system and offer passive infrared (PIR) occupancy and a photocell for closed loop daylight sensing. WaveLinX outdoor sensors offer installation heights up to 40 feet and have coverage patterns up to 5000 square feet (see sensor specifications - field of view). When part of the WaveLinX LITE system, the sensor operates on a wireless mesh network based on IEEE 802.15.1 (Bluetooth® 4.2 Low Energy) standards.

The sensors offer simple tool-less integration into WaveLinX outdoor light fixtures equipped with the 4-pin Zhaga Book 18 compliant socket. Once installed, 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

- Perfect for parking garage / deck applications
- Models suitable for High (up to 40ft / 45ft major motion) and Low (up to 15ft) applications
- Out of the box functionality (on at dusk, off at dawn, occupied to 100%, unoccupied to 50%)
- Passive Infra-Red (PIR) motion sensor with coverage up to 5000 square feet
- Integrated photocell for closed loop daylight harvesting
- Software configurable networks up to 50 devices with the WaveLinX LITE mobile application
- Simple tool-less twist lock fixture connection via 4-pin Zhaga Book 18 socket
- IP66 rating for outdoor site and indoor environments

## Order Information

WaveLinx LITE Outdoor Fixture Mount Sensors are accessories to the WaveLinx LITE system which may be used with out-of-the-box functionality or commissioned via the WaveLinx LITE mobile application.

WaveLinx LITE Outdoor Fixture Mount Sensors are used to provide occupancy and daylight dimming to spaces from the outdoor light fixture.

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

### Catalog Number

| Catalog #                                                                                         | Description                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WLS2WH                                                                                            | WaveLinx LITE Outdoor Fixture - Low Mount Sensor, White, 7 - 15ft (2.1 - 4.5m)                                                                                                                                                                                                                                                                                            |
| WLS2BZ                                                                                            | WaveLinx LITE Outdoor Fixture - Low Mount Sensor, Bronze, 7 - 15ft (2.1 - 4.5m)                                                                                                                                                                                                                                                                                           |
| WLS2BK                                                                                            | WaveLinx LITE Outdoor Fixture - Low Mount Sensor, Black, 7 - 15ft (2.1 - 4.5m)                                                                                                                                                                                                                                                                                            |
| WLS4WH                                                                                            | WaveLinx LITE Outdoor Fixture - High Mount Sensor, White, 15 - 40ft (4.5 - 12.2m)                                                                                                                                                                                                                                                                                         |
| WLS4BZ                                                                                            | WaveLinx LITE Outdoor Fixture - High Mount Sensor, Bronze, 15 - 40ft (4.5 - 12.2m)                                                                                                                                                                                                                                                                                        |
| WLS4BK                                                                                            | WaveLinx LITE Outdoor Fixture - High Mount Sensor, Black, 15 - 40ft (4.5 - 12.2m)                                                                                                                                                                                                                                                                                         |
| <b>Notes</b>                                                                                      | <b>Notes</b>                                                                                                                                                                                                                                                                                                                                                              |
| For use with outdoor light fixtures equipped with the WaveLinx Zhaga compliant 4-pin socket only. | 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. High mount models accommodate mounting height to 45ft (13.7m) for major motion (vehicles, fork trucks, etc.) - may not detect minor motion of people depending on conditions. |

## Optional Accessories

If the out-of-the-box behavior of the WaveLinx LITE Outdoor Sensor does not satisfy project requirements, download and register the WaveLinx LITE mobile application from either the Google Play or Apple Store®.

This mobile application can be used to form a local mesh lighting network - creating control zones, occupancy sets, setting occupancy or vacancy modes of operation, configuring daylighting, etc.

## Product Specifications

### Mechanical

**Size:** Base Diameter 3.2" (82mm) Height: 1.6" (41mm)

**Weight:** 0.20 lbs (0.10 kg)

#### Environment:

- **Operating temperature:** -40°F to 131°F (-40°C to 55°C)  
**Note:** Sensor passive infrared (PIR) performance may become exceedingly sensitive below -4°F (-20°C)
- **Storage temperature:** -13°F to 185°F (-25°C to 85°C)
- **Relative humidity operating:** 0% to 95% non-condensing
- Default behavior intended for outdoor use only

**Mounting:** Fixture mount

**Mounting Height:** High bay up to 40ft (12m) and Low bay up to 15ft (5m)

**Color:** White, Bronze and Black colors available

**Housing:** UV stabilized plastic

**Ingress protection:** IP66

**Light Sensor Detector Shields:** Field configured shield included

#### Daylighting Installation:

- Ensure that sensor is not looking directly at artificial light
- Ensure that sensor is not obstructed

### Electrical

**Input Requirements:** Fixture connection via 4-pin Zhaga Book 18 socket

### Software Specifications

- Any number of sensors can be mapped to a zone (up to 16 zones per network)
- Mobile app configuration for Occupancy/Vacancy
- Remote Hold Time settings fully configurable via mobile app
- Mobile app configuration of Occupied and Unoccupied light levels
- High end trim / task tuning adjustable through software
- Daylight calibration through software
- Secure firmware upgrade OTA from mobile application

### Wireless Specifications

**Radio:** 2.4GHz

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

**Transmitter Power:** +14dBm

**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, Subpart B & C
- Meets latest ASHRAE Standard 90.1 requirements
- Meets latest IECC requirements
- Meets latest CEC Title 24 requirements
- NEMA WD-7 and NEMA 4 compliant
- CA Title 20 and Prop 65 compliant
- RoHS

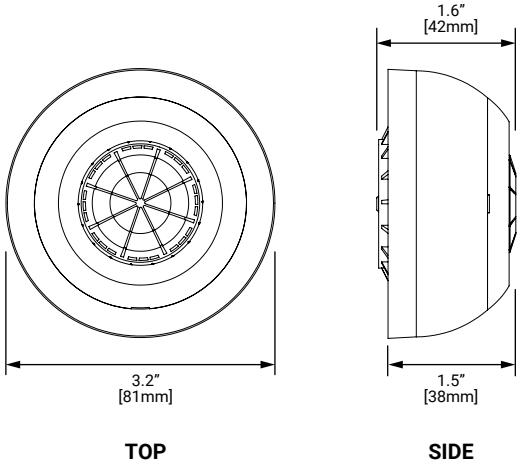
### Warranty

Five year warranty standard

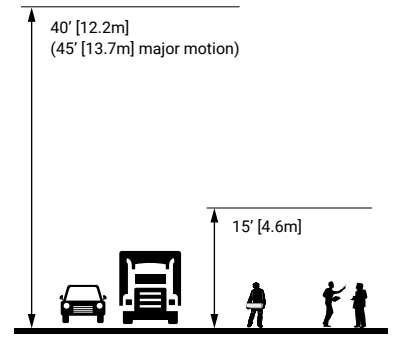


Download the WaveLinx LITE Mobile App from either the Google Play or Apple Store®

## Dimensional Details

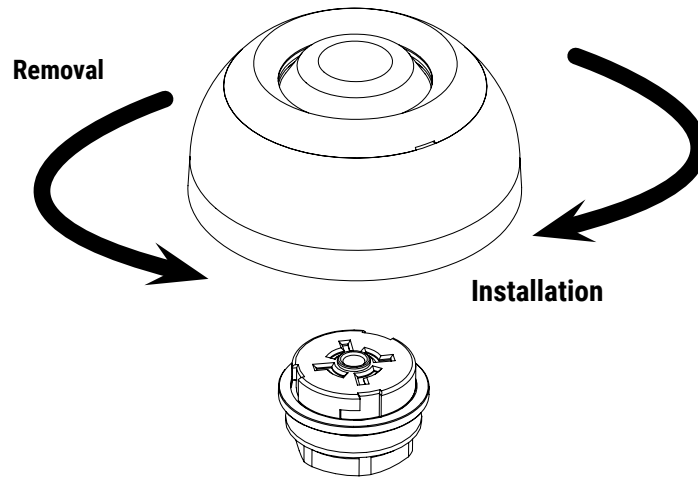


## Mounting Height



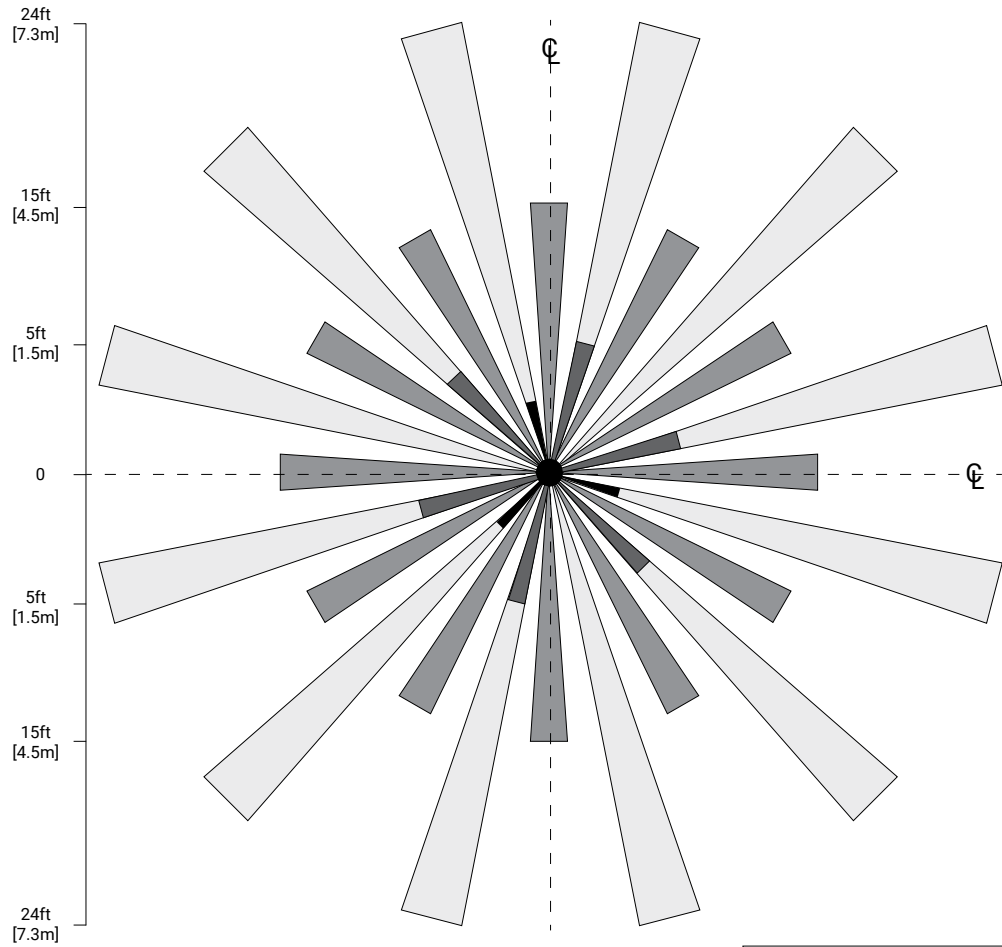
## Installation

Both the WLS2 and WLS4 easily install into WaveLinx-ready LED fixtures equipped with Zhaga Book 18 4-pin sockets. Sensor connection is enabled via the simply twist-lock connection and provides immediate out-of-the-box functionality.



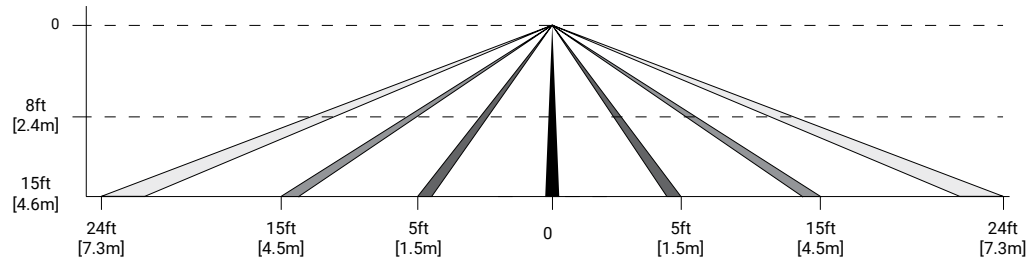
## Field of View - Low Mount

### TOP VIEW:



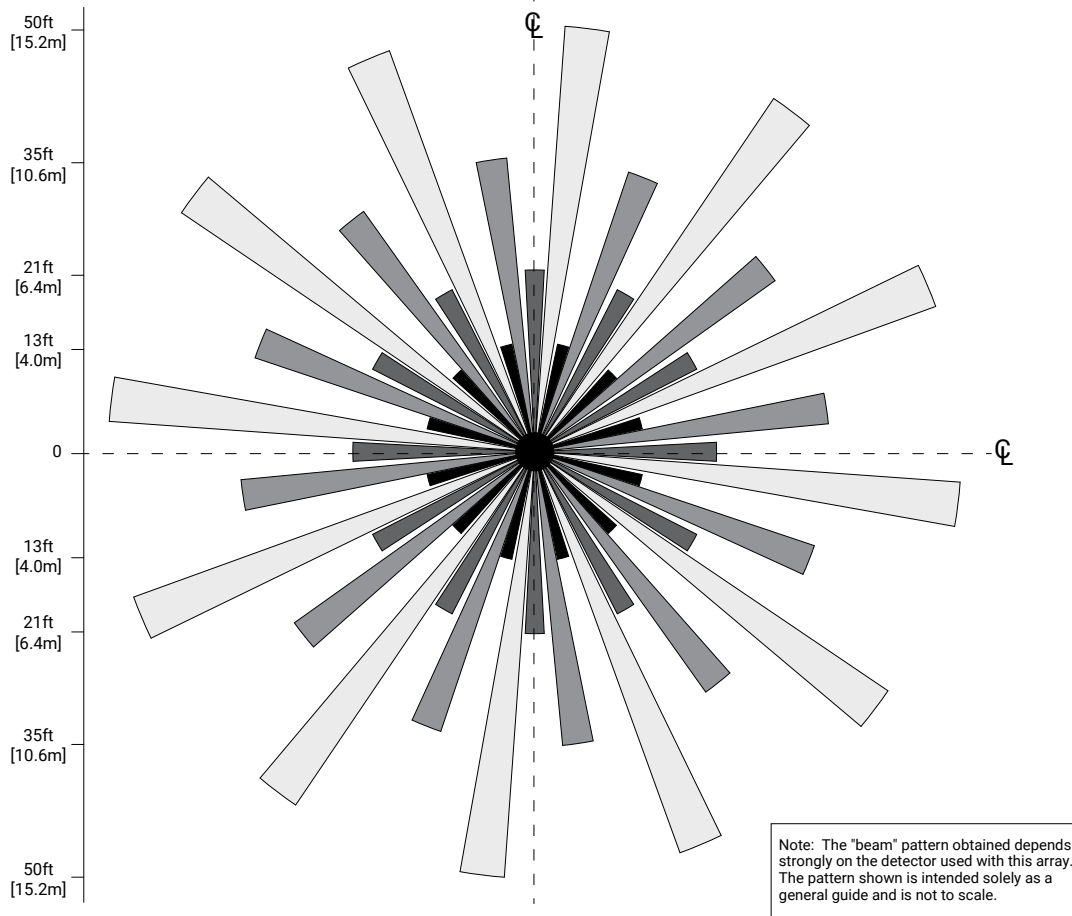
Note: The "beam" pattern obtained depends strongly on the detector used with this array. The pattern shown is intended solely as a general guide and is not to scale.

### SIDE VIEW:

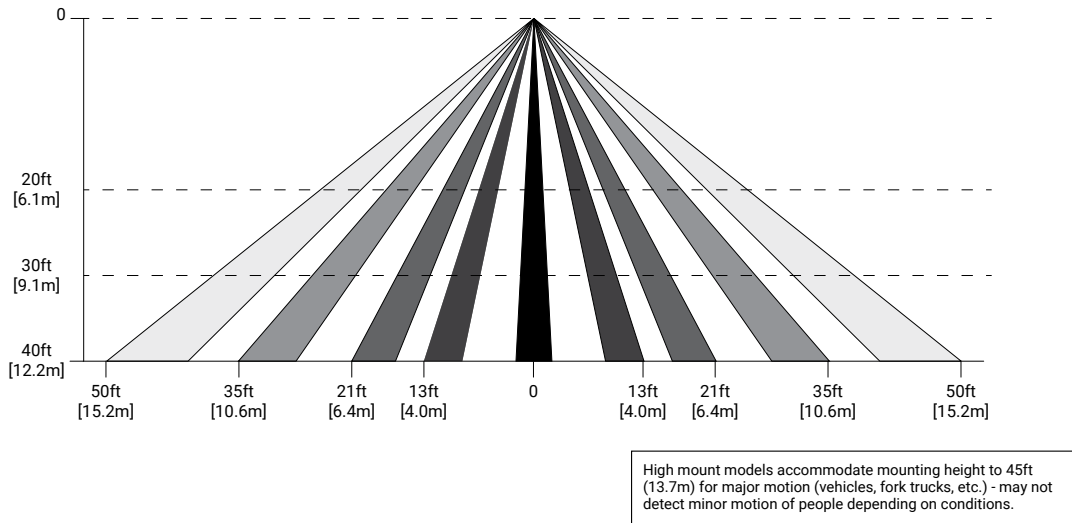


Field of View - High Mount

TOP VIEW:



SIDE VIEW:

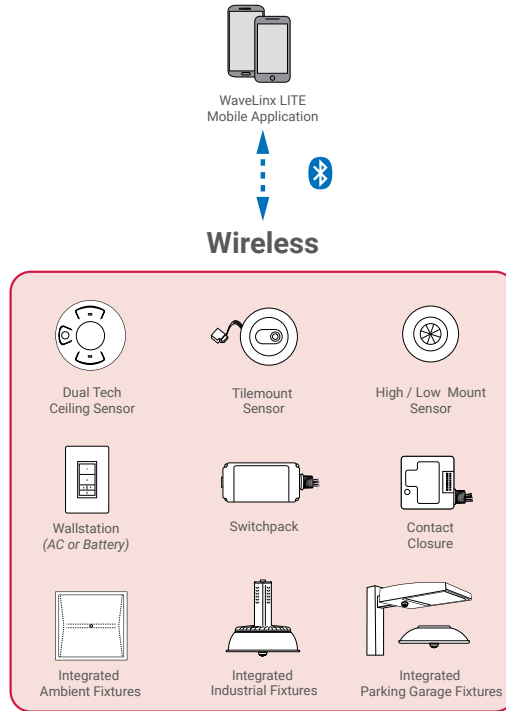



**Note:** False motion detection can occur when objects of contrasting temperature with the surrounding environment move within the sensor field of view. Wind blowing leaves, branches, or other objects can trigger the motion sensor. It is recommended that the sensor be mounted away from these objects.

**Note:** Air movement at temperature contrasting with the environment may cause false motion detection. For that reason, it is recommended that the sensor be mounted 3-4ft away from air vents, when possible.

## 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.



 **Control Systems**  
• WaveLinx