WIRELESS DIGITAL PHOTOSENSOR | LMDL-600

- Daylight responsive on/off, bi-level, tri-level or dimming control for up to three lighting zones
- Built-in IPv6 Mesh and Bluetooth® low energy technology antennas provide robust signal strength and reliable communication
- 60 degree spatial response for optimal detection of ambient light level
- Uses IPV6 Mesh to establish secure network communication with all DLM wireless devices
- Quick and easy wireless installation – no Cat 5e connection needed
- 10+ year battery life, with LED indicator for low battery alert; battery level can be viewed with wireless DLM software
- Commissioning using DLM Configuration App

GET IT ON Google Play   Get it on iTunes   IPv6 MESH   Bluetooth®   RoHS

Description

The LMDL-600 is a wireless open loop photo sensor that measures the daylight contribution in order to automatically switch or dim multiple zones of lighting. It is part of the NEW wireless Digital Lighting Management (DLM) system and sends light level signals to control loads connected to DLM on/off or dimming room controllers.

The LMDL-600 can be configured as an open loop, single zone or multi-zone photosensor.

Operation

The LMDL-600 operates on an included CR123A battery providing a 10+ year lifespan. An installer can create a wireless mesh network via Push to Pair, by connecting to other wireless DLM devices in the room via the LMRC-611 wireless dimming room controller, drastically reducing installation time and eliminating wiring errors. The LMDL-600 sends the footcandle level to a room controller where daylighting loads are assigned to the LMDL-600 using any one of three options:

1. **DLM Configuration App available for iOS® or Android®.** Simply walk through the on screen prompts to connect the wireless DLM devices in the room and choose from sequence of Operations profiles. Plug n' Go automatic configuration assigns all loads connected to dimming room controllers to the dimming switch upon system startup.
2. **Push to Pair**, by pushing the "config" button on each wireless device in the room to pair them together.
3. **LMCS for networked projects.** Wattstopper LMCS software provides an easy method for commissioning the entire building and applying desired settings to devices on the network.

Following a quick initial setup, the LMDL-600 monitors the daylight contribution through a window or skylight and wirelessly communicates with the room controller(s) to maintain design light levels in each lighting zone. Wattstopper's exclusive automatic calibration control algorithm uses on/off or dimming setpoints and other control parameters to establish the correct light levels throughout the day regardless of changing daylight contribution.

Simplified Setup and Configuration

The LMDL-600's built-in IPv6 Mesh radio and Bluetooth low energy technology transceivers allow two-way communication for wireless configuration using the DLM Configuration App as well as system operation. Set up occurs by entering the daylight and the workplane illuminance into the DLM Configuration App. Within the app are "sequence of operations profiles" which automates the calibration process, and recommends setpoints for easy completion of the setup process. The configuration app may be used to adjust setpoints and other parameters including hold off functionality. Adjustable switching parameters include on and off setpoints and time delays. The off setpoint can be adjusted to a value of 25, 50 (default), 75, or 100 percent above the on setpoint. Adjustable dimming parameters include a setpoint, ramp up and down rates and a cut-off time delay. Electric lights can be turned off (default) or dimmed to a user-selectable minimum level when daylight contribution is abundant.

Applications

The LMDL-600 photosensor is recommended for open offices, cafeterias, classrooms, warehouses and any other indoor spaces with daylight contribution. Depending on the mounting orientation, the sensor can detect only daylight or a combination of daylight and electrical light. Each of the control zones can initiate on/off switching, bi-level or tri-level step switching or step dimming, or continuous dimming.
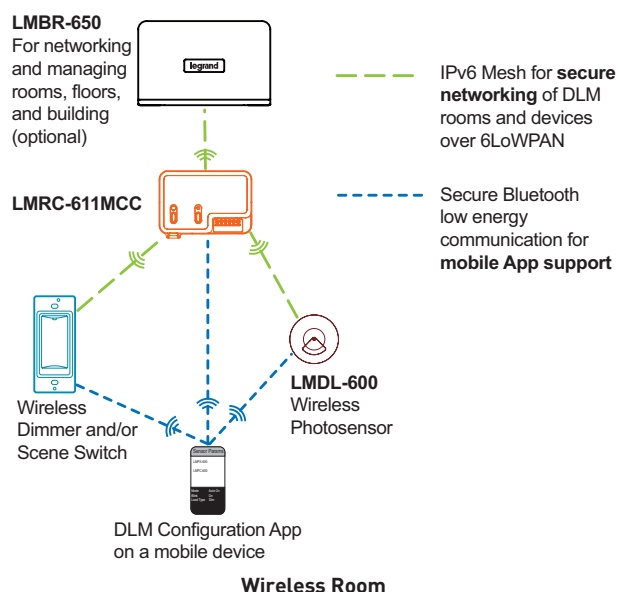
PROJECT		LOCATION/ TYPE	

Features

- Component of the NEW wireless Digital Lighting Management integrated control system
- Compatible with DLM wall switches for manual override, if desired
- Multi-colored LED status indicators
- Mounting options for top lit or side lit applications
- Robust and reliable BACnet over IPv6 Mesh Network based on open standards & protocols formed automatically with other wireless DLM components
- Three options for commissioning: the DLM Configuration App for iOS or Android, Push to Pair, or LMCS for networked projects
- IPv6 Mesh wireless standard delivers reliable, long range, low latency wireless communication that is scalable for a single room or entire buildings with thousands of rooms
- Internal antennas with diversity provide robust signal strength and reliable IPv6 Mesh communication
- Photodiode has an extended range of 1-6,553 footcandles (fc), and photopic correction to mimic the human eye, for precise measurement of visible light.

- Industry leading wireless security, backed by Secure Commission and Secure Control technology
  - Device Validation: Trusted hardware chips prevent any outside devices from being able to connect to the lighting control network.
  - Zero touch provisioning: Preloaded digital identity and security profile makes the system automatically secure.
  - Ongoing AES encryption: Communication between devices is protected by AES128 symmetric key encryption
- Firmware can easily be updated over the air using the DLM Configuration App (which comunicates via Bluetooth low energy technology) or LMCS software.
- A fully networked DLM system, paired with RACCESS remote support, allows updates to be pushed to the entire building from the Wattstopper Remote Operations Center (ROC), avoiding downtime or service calls.
- Complies with California Title 24, Section 110.9 requirements
- The product meets the materials restrictions of RoHS

Specifications

- Power Supply: Battery powered, Lithium Ion, CR123A 3V, 1500 mAh (included)
- Connection to DLM Network: Wireless IPv6 Mesh
- Wireless Standards supported:
  - IPv6 Mesh (6LoWPAN / 802.15.4 / 2.4GHz), range up to 60 ft.
  - Bluetooth low energy (802.15.4 / 2.4GHz), range up to 30 ft.
- Built-in Antennas: IPv6 Mesh and Bluetooth low energy

- Device Security: Secure factory provisioned trusted hardware with Legrand-private certificate chain and signed ECC keypair
- Wireless Encryption: AES 128-bit symmetric key, randomly generated per-PAN, shared via secure DTLS only
- Operating conditions: for indoor use only; 32-104°F (0-40°C); 5-95% RH, non-condensing
- FCC part 15 compliant
- Five year warranty

Connection

LMBR-650
For networking and managing rooms, floors, and building (optional)

IPv6 Mesh for **secure networking** of DLM rooms and devices over 6LoWPAN

LMRC-611MCC

Secure Bluetooth low energy communication for **mobile App support**

Wireless Dimmer and/or Scene Switch

LMDL-600 Wireless Photosensor

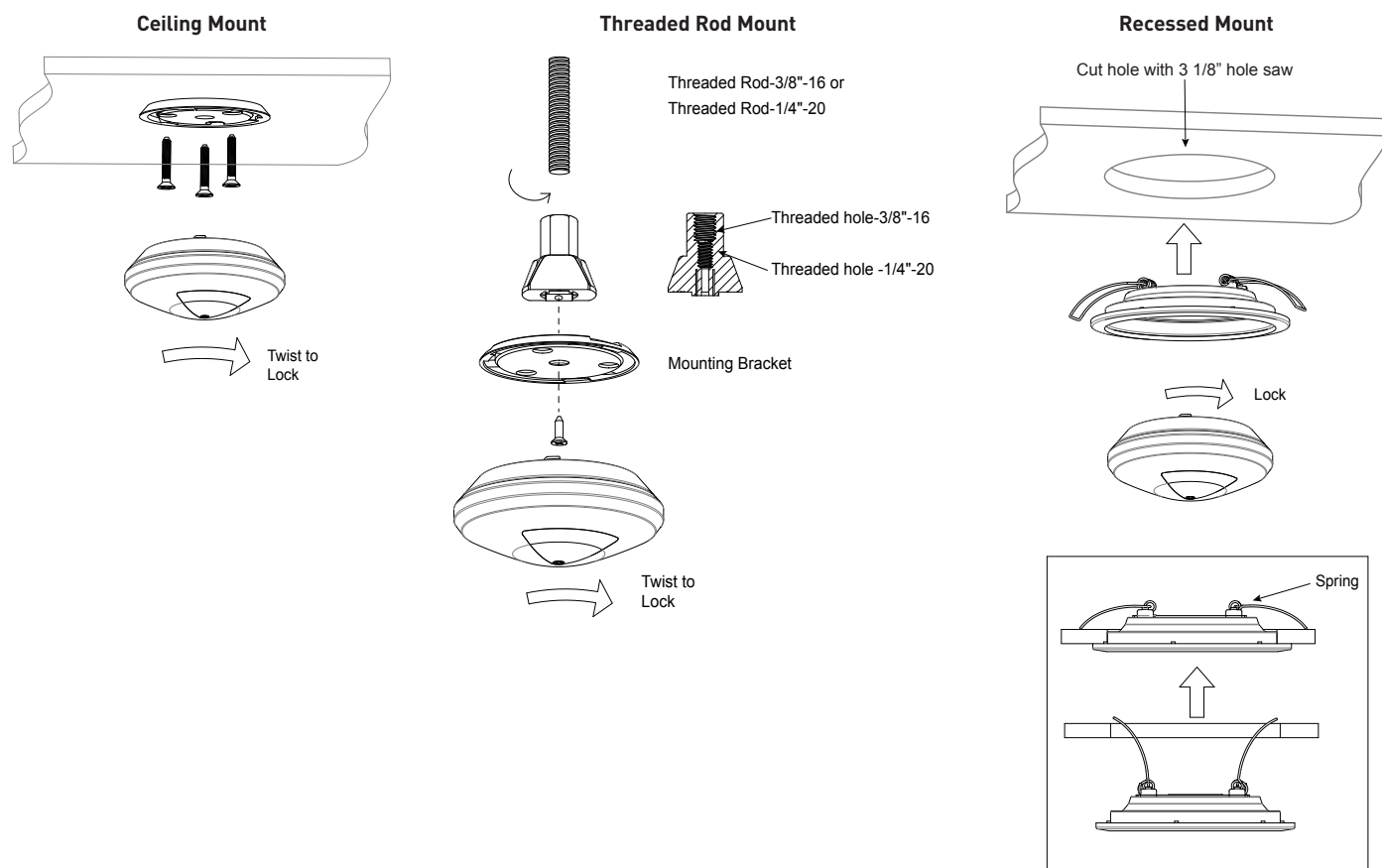DLM Configuration App on a mobile device

Wireless Room

Note: LMDL-600 must be connected with an LMRC-611MCC room controller. It cannot communicate with the LMBC-650 wireless bridge.
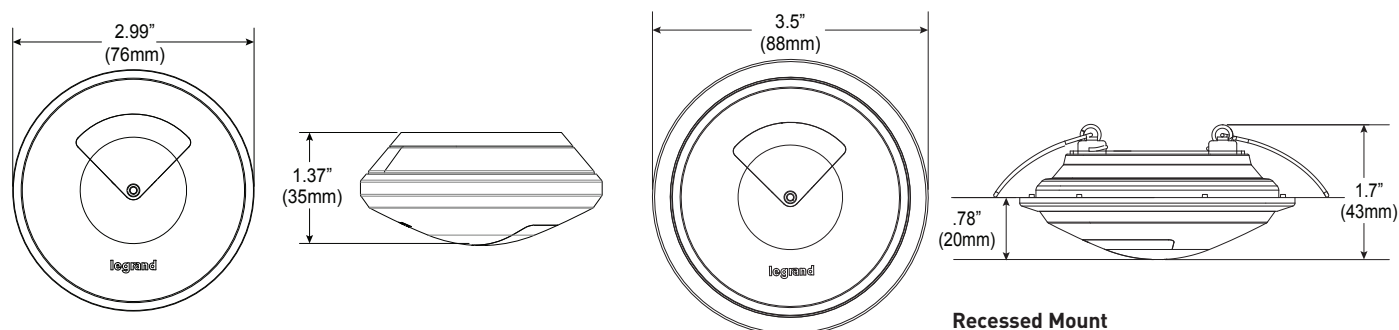
Mounting and Installation

The LMDL-DL600 can be mounted using one of thee possible methods:

- Mounted to the ceiling using the included mounting plate
- Mounted to a hanging threaded rod, for open ceiling environments, using the included threaded rod adapter
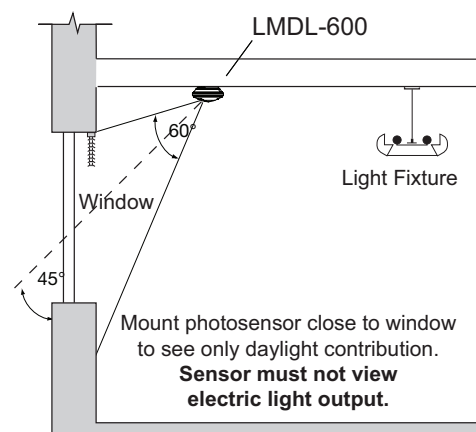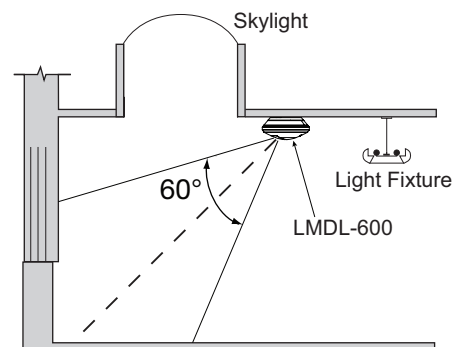- Recessed mounting, using the optional LMDL-600-RPM Recessed Plenum Mounting Kit

Ceiling Mount

Twist to Lock

Threaded Rod Mount

Threaded Rod-3/8"-16 or
Threaded Rod-1/4"-20

Threaded hole-3/8"-16
Threaded hole -1/4"-20

Mounting Bracket

Twist to Lock

Recessed Mount

Cut hole with 3 1/8" hole saw

Lock

Spring

Dimensions and Placement

2.99"
(76mm)

1.37"
(35mm)

3.5"
(88mm)

.78"
(20mm)

1.7"
(43mm)

Recessed Mount

Placement

Sidelight Applications

LMDL-600

60°

45°

Window

Light Fixture

Mount photosensor close to window
to see only daylight contribution.
**Sensor must not view
electric light output.**

Skylight Applications

Skylight

60°

Light Fixture

LMDL-600

Ordering Information

Catalog #	Description
☐ LMDL-600	Wireless Open Loop Photosensor, Single or Multi-Zone
☐ LMDL-600-RPM	Recessed Plenum Mounting Kit for LMDL-600