Lumina™ RF Surface Mount Daylight Harvesting Photocell
Cat. No. LURPC-01W

LEVITON®

WARNINGS AND CAUTIONS

- **TO AVOID DEATH, PERSONAL INJURY OR PROPERTY DAMAGE, DO NOT RECHARGE, DISASSEMBLE OR INCINERATE BATTERY, NOR HEAT IT ABOVE 100˚C (212˚F).** Dispose of used battery promptly. DO NOT dispose of battery in normal household waste. Keep away from children. Please contact your local waste provider or recycling facility for proper disposal of used battery.
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult an electrician.
- For indoor applications only.
- SAVE THESE INSTRUCTIONS.

DI-001-LURPC-05A

OVERVIEW

The Leviton Lumina™ RF Daylight Harvesting Photocell is designed to monitor and measure natural or electric light levels as a key component in a daylight harvesting solution.

The wireless, battery-powered photocell uses a Fresnel lens to intelligently measure light levels to determine optimal daylight design levels for closed loop applications. The Photocell can be used to trigger other devices in a Lumina RF network for additional daylight harvesting and automation capabilities.

Lumina RF wireless technology eliminates the need for traditional hard-wired devices opening up a world of control possibilities for restaurants, retail stores, offices and other small commercial properties. It also ensures energy savings in new construction and retrofits.

Designed for effortless automation and intuitive control, Lumina RF products simplify the end user experience.

PLACEMENT

Place the Photocell so that it views the daylight and the electric light available in the controlled area.

In areas with pendant fixtures providing uplighting, place the Photocell at least 4 feet (1.2m) away from the nearest uplighting fixture.

In areas where the primary light source is through a window, place the Photocell between 6 feet and 15 feet (1.8m to 4.5m) from the window.
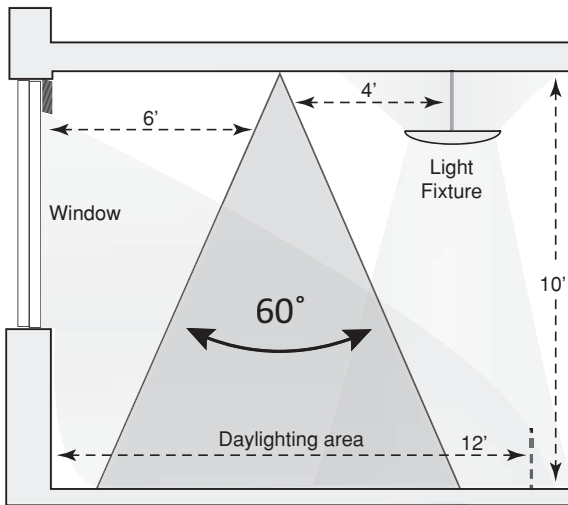
SPECIFICATIONS

- Fully IEEE 802.15.4 compliant
- Utilizes 2.4GHz ISM band; up to 16 channels
- Power supply: 2 x 3V CR2450 button cell batteries.
- Operating consumption: ≤ Tx ≤ 43mA; Rx ≤ 28mA
- Standby consumption: ≤ 1uA
- Up to 220 meters wireless transmission range in unobstructed space

DIMENSIONS
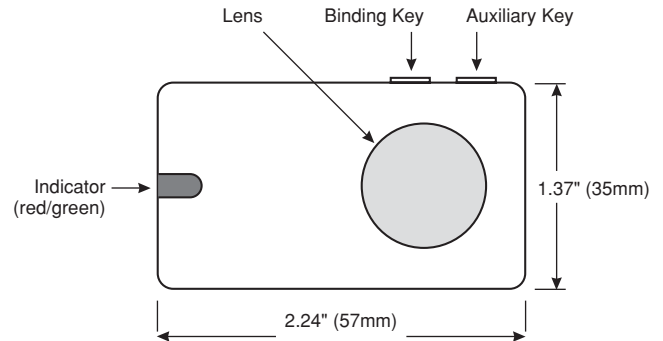
INSTALLATION

1. Determine the mounting location for the photocell based on daylight availability and task area. *See Placement for details*.
2. Remove backing to expose adhesive strip and affix photocell to desired location.

Turn ON/OFF

- **Turn ON:** Press the Binding Key once. The indicator will flash red once, and the device is ready to be used.
- **Turn OFF:** When device is on, press the Binding Key. The indicator will flash 10 times within 5 seconds. Press the Binding Key again within the 10 flashes to turn the device off.

NOTE: If the photocell cannot successfully connect to a network the first time it is used, or after resetting, it will turn off.

Joining the Lumina RF Network

After the photocell is turned on, it will search for an existing Lumina RF network and send a request to join the network automatically. While the photocell is linked under a router whose permit-join feature is enabled, the photocell will be permitted to join the network.

1. Enable the permit-join function (valid for 60 seconds) of a router (please refer to the user manual of the gateway/router to enable the permit-join feature).
2. Turn on the photocell. It will search for and join the network.
3. The indicator will flash green once, when it finds out a network to join.
4. The indicator will flash green 5 times after it is joined successfully. Otherwise, the indicator will not flash.

Sleep Mode

The photocell is designed to go into sleep mode for power saving in some situations:

A. While the device is connected to the network, the sleep period is 5 minutes. It will wake up every 5 minutes to report online.
B. When it is not connected to a network, the photocell will go into sleep mode. It will wake up every 15 minutes to search for a network to join.
C. Once the photocell is joined to a network, and for any reason, it loses its connection to the network, the photocell will wake up every 15 minutes to find and reconnect to the network it was last connected to.

When disconnected from a network, it never remains in sleep mode, but continues to search for a network every 15 minutes. This condition consumes up to 30 times more power compared to normal-operation. To prevent this unwanted power consumption, remove the batteries to power off the device.

WEB VERSION

Wake up Device

To setup or acquire data from a device which is in sleep mode, wake up the device using the following steps:

1. Press and hold both Binding Key and Auxiliary Key.
2. When the indicator flashes red twice, release both buttons.
3. The indicator will flash 5 times while broadcasting.

Battery

When the operating voltage is lower than 2.1V, the indicator will flash red once per hour. The photocell will also send a low-power report to the Lumina RF network.

Restore to Factory Setting

To restore it to factory setting, please follow the steps:

1. Press and hold both the Binding Key and Auxiliary Key for 5 seconds.
2. After the indicator shows fast red flashes, release the buttons.
3. The indicator will flash red 20 times, and the restore is completed.

Lumina RF Cluster Attributes

A cluster is a set of related attributes and commands which are grouped together to provide a specific function. A simple example of a cluster would be the On/Off cluster which defines how an on/off switch behaves. This table lists the clusters which are supported by the photocell.

1. End Point(s): 0x01
2. Device ID: Light Sensor 0x0106
3. End Point Cluster ID

Cluster ID for Photocell

- End Point: 0x01
- Device ID: Light Sensor 0x0106
- Basic: (0x0000) None
- Identify: (0x0003)
- Commissioning: (0x0015)
- Luminance Measurement: (0x0400)
- Power Configure: (0x0001)
- Diagnostics Information: (0x0B05)
- Poll Control: (0x0020)

Identifier	Name	Type	Range	Access	Default	Mandatory or Optional
0x0000	ZCLVersion	Unsigned 8-bit integer	0x00 - 0xff	Read only	0x03	M
0x0001	ApplicationVersion	Unsigned 8-bit integer	0x00 - 0xff	Read only	20	O
0x0002	StackVersion	Unsigned 8-bit integer	0x00 - 0xff	Read only	51	O
0x0003	HWVersion	Unsigned 8-bit integer	0x00 - 0xff	Read only	0x0B	O
0x0004	ManufacturerName	Character string	0 - 32 bytes	Read only	Leviton	O
0x0005	ModelIdentifier	Character string	0 - 32 bytes	Read only	LURPC-01W	O
0x0006	DateCode	Character string	0 - 16 bytes	Read only	20131227	O
0x0007	PowerSource	8-bit Enumeration	0x00 - 0xff	Read only	0x03	M
0x0010	LocationDescription	Character string	0 - 16 bytes	Read/write		O
0x0011	PhysicalEnvironment	8-bit Enumeration	0x00 - 0xff	Read/write	0x00	O
0x0012	DeviceEnab	Boolean	0x00 - 0x01	Read/write	0x01	M
0x0100	CELCertification	Signed 32-bit		Read only	0XD9F87A0F	M
0x011C	ManufacturerCode				011C	M

Important Maintenance Instructions

- Please keep the device in a dry place. Precipitation, humidity, and all types of liquids or moisture can contain minerals that corrode electronic circuits. In cases of accidental liquid spills to a device, please leave the device dry properly before storing or using.
- Do not use or store the device in dusty or dirty areas.
- Do not use or store the device in extremely hot temperatures. High temperatures may damage the device or battery.
- Do not use or store the device in extremely cold temperatures. When the device warms to its normal temperature, moisture can form inside the device and damage the device or battery.
- Do not drop, knock, or shake the device. Rough handling could break it.
- Do not use strong chemicals to clean the device.
- Do not paint the device. Paint could cause improper operation.

Handle your device, battery, and accessories with care. The suggestions above help you keep your device operational.