Micro Sensor

SPECIFICATION

The Enlighted Micro Sensor is our fifth-generation sensor, delivering maximum features in a minimally sized package. Integrated sensors provide occupancy, ambient light, temperature, and digital motion data, which is processed locally to enable a rich set of intelligent features. Communication over the Enlighted Network and Bluetooth® Low Energy are both supported. An innovative carrier-based mounting design makes for easy installation and replacement.

OVERVIEW

The Enlighted's Micro Sensor's small form factor and onboard intelligence is unparalleled in the industry. Capable of sensing occupancy, ambient light, temperature, and digital motion while processing information locally, the Micro Sensor enables autonomous fixture-level control, bringing advanced lighting automation to a whole new level.

FEATURES AND BENEFITS

Localized Control: Light-level schedules, preferences, and behavior profiles for each fixture are wirelessly communicated during system setup and locally stored. Profiles can be modified and updated wirelessly, but the sensor works autonomously to ensure continuous operation, eliminating any single point system failure.

Field Replaceable: A separate carrier allows toolless replacement of the sensor without disturbing the light fixture or ceiling tile.

Smart Sensing: Local processing capability supports advanced sensing and detection algorithms, enabling optimization of existing features and new future applications.

Bluetooth Low Energy: An embedded BLE radio enables receive and transmit beacons in addition to Bluetooth data communication.

Occupancy/Thermal Sensing: Digital Passive Infrared (PIR) detection with separate ambient light and temperature sensors support precise motion sensing while minimizing false detection events.

Tunable White: Configurable lighting transitions based on the time of day are supported.

Daylight Harvesting: Captured ambient light levels are locally interpreted into control commands to raise and lower light levels based on available daylight.

Room/Zone Control: Pairs with room control switches for code-compliant manual-on/auto-off capability. Sensors can be grouped into zones that share occupancy sensing data and coordinate light control based on detected motion.

Data Reporting: Sensor information regarding occupancy, power consumption, ambient light level, and temperature feeds Enlighted's software applications, providing insightful reporting and analytics.

Standards-Based Networking and Security: The Enlighted 802.15.4 wireless network with AES-128 encryption supports reliable communication that coexists with Wi-Fi networks by sensing low-traffic channels and transmitting in bursts.

Light Fixture Compatibility: Dimming and on/off control signaling for standard 0-10V ballasts and drivers in LED, fluorescent, HID, induction, or plasma fixtures.

The Enlighted Micro Sensor

Body	L	0.88"	22.5 mm
	Dia.	0.73"	18.5 mm
Bezel	Dia.	1.06"	27.0 mm

The Enlighted Fixture Carrier

Body	L	0.51"	13 mm
	Dia.	0.81"	20.7 mm

ENLIGHTED SPECIFICATION SUBMITTAL

Job Name:

Job Number:

Product Codes:

- ☐ SU-5E-01
- ☐ CBL-5E-CU3-12N
- ☐ CBL-5E-CU3-30N
- ☐ CBL-5E-CU3-7F
- ☐ CBL-5E-CU3-15F
- ☐ CBL-5E-CU3-30F
- ☐ CBL-5E-CU3-50F
- ☐
- ☐

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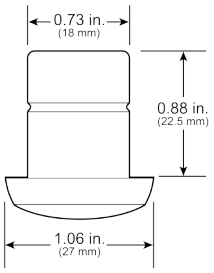
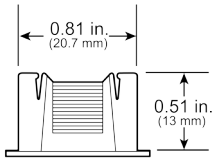
MOUNTING

The Enlighted Micro Sensor is designed to be easily mounted into lighting fixtures or ceiling tiles such that only the discrete white faceplate is visible. The sensor slides into a carrier sleeve fitting a standard 1/2 in. trade size knockout or 7/8" (22 mm) hole. Carrier sleeves compatible with either lighting fixtures or ceiling tiles are available. Sensor replacement is done without any tools by sliding the sensor out of the carrier, unplugging the connector, and installing the new sensor.

Micro Sensor



Carrier



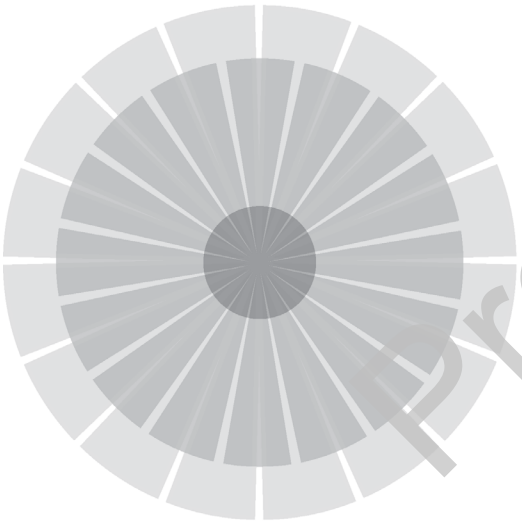
SENSOR COVERAGE PATTERNS

The Enlighted Micro Sensor uses infrared technology to detect occupancy. The human body emits heat as infrared light, and the sensor incorporates an integrated multifaceted lens that focuses the light onto a Passive Infrared (PIR) detector. Through patented algorithms running on the sensor, analysis of the PIR output determines occupancy and motion.

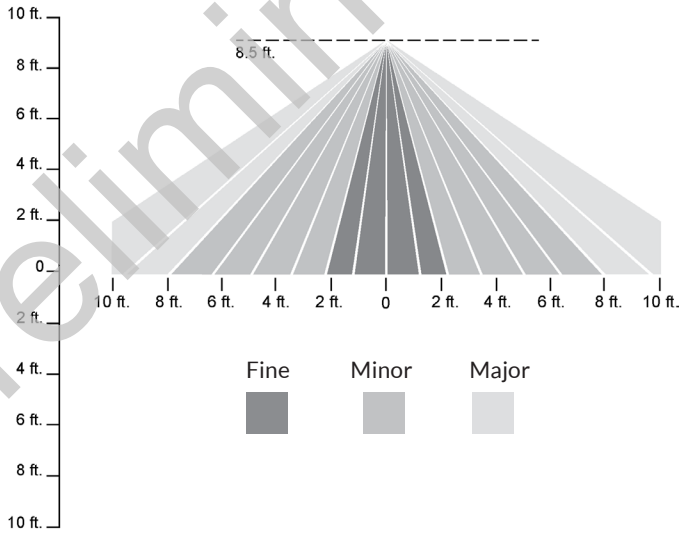
The PIR detector produces an all-encompassing field of view by aggregating many repeated narrow field of views. The detection of fine, minor, and major motion is based on the mounting height of the sensor.

Ceiling Height	Fine Motion	Minor Motion	Major Motion
8.5 ft/2.6 m	2.3 ft/0.7 m	8 ft/2.4 m	10 ft/3.0 m

Top View



Side View



TECHNICAL SPECIFICATIONS

Motion Sensing: Digital Passive IR
Photosensor: Light Pipe/Photosensor Array
Enclosure: ABS/Polycarbonate blend
Type: Closed Loop Light Sensor
Operating: 32° to 122° F / 0° to 50° C
Radio Frequency: 2400–2483.5 MHz
Wireless Protocol: IEEE 802.15.4
Wireless Range: 150 ft. (46m) radius open range
Encryption: AES-128
Bluetooth 4.0 Low Energy (BLE):
Operating Frequency: 2400–2483.5 MHz
IEEE Standard: 802.15.1

ORDERING INFORMATION

SU-5E-01	Micro Sensor
CBL-5E-CU3-12N	12 inch SU-5E Sensor Cable
CBL-5E-CU3-30N	30 inch SU-5E Sensor Cable
CBL-5E-CU3-7F	7 foot SU-5E Sensor Cable
CBL-5E-CU3-15F	15 foot SU-5E Sensor Cable
CBL-5E-CU3-30F	30 foot SU-5E Sensor Cable
CBL-5E-cu3-50F	50 foot SU-5E Sensor Cable

COMPLIANCE

Europe CE RoHS REACH
United States FC UL LISTED
Canada c UL LISTED

Warranty: 5 years
Refer www.enlightedinc.com/limited-warranty-terms for complete terms and conditions

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