

Add smart, full-featured controls to your street lights.

Data sheet

Light Sense node for Intelligent Lighting

Light Sense node is designed to convert LED fixtures into intelligent focal centers, providing actionable insights that go far beyond illumination and mere granular lighting control. Our Smart Communities solutions and cloud-based IoT services are now at your fingertips.

Main features.

- Cellular connectivity enables gateway-free installation
- Advanced 4G LTE CAT-M IoT technology
- Auto-commissioning with integrated GPS
- Simple plug-and-twist mounting to luminaires via existing National Electrical Manufacturers Association (NEMA) 5- or 7-pin photo-control socket in accordance with American National Standards Institute (ANSI) C136.41
- Advanced lighting control with on-board photocell and (voltage) 0-10V dimming
- Utility-grade energy measurement with metering Class 0.5 accuracy
- Measures and reports electrical and sensor data to NetSense® Lighting Application

Advanced 4G LTE IoT CAT-M IoT connectivity

No additional networking equipment is needed to deploy with 4G LTE connectivity. Fast, reliable, and nationwide 4G LTE connectivity from Verizon Wireless allows for gateway-free deployment.



Lighting control

Light Sense node is connected to incoming AC mains and the LED driver/standard ballast. This direct connection provides on/off control and performance monitoring of the luminaire. Luminaire dimming control follows the 0-10VDC dimming standard.

Onboard sensors

Light Sense node sensors include: GPS, photocell, utility-grade power metering and temperature.

Security

Light Sense node connects to the network using highly secure, certificate-based authentication and encryption for each device.

Certifications

Underwriters Laboratories (UL), Federal Communications Commission (FCC)

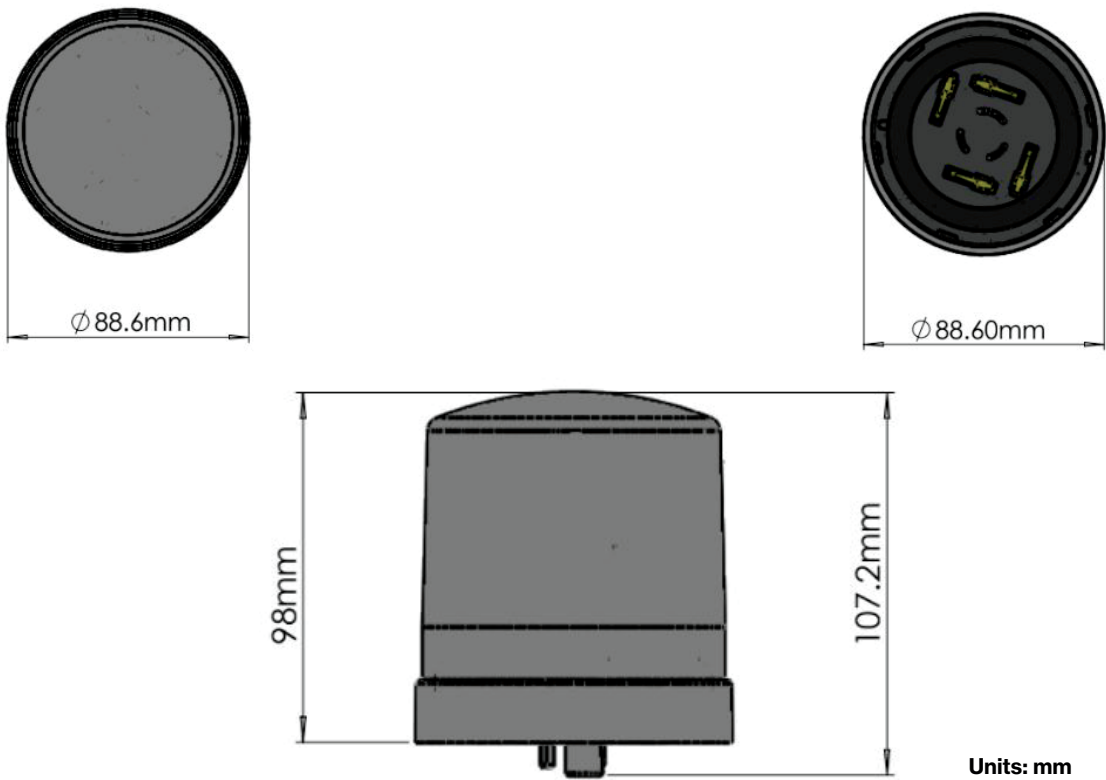


Product specifications

| | |
|---|---|
| Order code | S80-000123 |
| Communication | |
| Communication | Cellular (4G LTE) Lightweight machine-to-machine (LwM2M) protocol |
| LTE frequency bands | LTE band 4 and 13 |
| Cellular data rate | LTE CAT-M |
| Security | |
| Encryption | DTLS1.2 PSK with 256-bit AES encryption |
| Power and electrical | |
| AC input voltage | 120-277V/60Hz |
| Node power consumption | 1.0W Typical (1.2W max) |
| Surge rating | 6KV/3kA ANSI C136.2 |
| Energy measurement | Metering accuracy ANSI C12.20 Class 0.5 (relevant sections), Pulse LED Support for energy measurement |
| On-board sensors | Photocell, GPS, power metering, temperature |
| GPS accuracy | 3m (clear open sky) |
| LED Luminaire Control | |
| Ballast rating | E-Ballast and Standard/HID Ballast* rating of 5A max at 120V/277V 60Hz |
| Dimming control output | 0-10 VDC |
| Photocell | |
| Operating levels | ANSI C136.10 Turn-on typical at 16 Lux, turn-off typical at 24 Lux, (On:Off ratio of 1:1.5) |
| Physical | |
| Mounting | Twist-lock National Electrical Manufacturers Association (NEMA) photo-receptacle (ANSI C136.41) 5-wire/7-wire receptacle |
| Weight | 0.6 lbs |
| Color | Light gray |
| Dimensions | 107.2 mm height x 88.6mm diameter |
| Environmental and compliance | |
| Water ingress | IP66, UL773 wet rated |
| Vibration | 3G vibration per ANSI C136.31 2010 |
| Operating temperature | -40C to 55C |
| Relative humidity operating range | 5% to 95% non-condensing |
| Certifications | UL, FCC |
| Region of certification and LTE operation | USA |

* For Standard/HID Luminaires support the luminaire must have main AC entry SPD rated at ANSI C136.2-2018 20kV/10kA

Mechanical dimensions



Ordering information

| Order code | Description |
|------------|---|
| S80-000123 | Light Sense node, 4G LTE, 0-10V, NEMA, 120-277V |