

# LightGrid Wireless Control System

## Mesh Node



Outdoor Lighting Control System Designed for Street and Roadway Applications. It enables remote monitoring, control, and asset management of a single fixture or a group of fixtures through a web enabled Central Management System.

- Optimized Energy Usage: *On/Off & Dimming*
- Query by Location: *Available Every 15 Minutes*
- Reduce and Streamline Repair Calls: *Day Burner/Dark Night Alerts*
- Accurate Energy Usage Measurement: *+/- 0.5% Accuracy*



### System Architecture

Nodes reside on top of each light fixture on a standard ANSI socket and operate in a mesh network, communicating to each other as well as the gateway. The gateway connects nodes to the Central Management System through a standard TCP-IP interface.

### Why Mesh?

Mesh systems provide a cost-effective lighting controls solution in urban environments that typically have dense pole locations, because each gateway can support hundreds of nodes.

### Product Features

- Universal Voltage (120-480V) Standard
- Enhanced Surge Protection 10kV/5kA per ANSI C136.2-2015
- 0-10V (Analog) and DALI (Digital) Dimming Interfaces
- Plug and Play Auto Commissioning
- Connects through ANSI 7-Pin
- Integrated GPS
- Max Load 1,000 Watts / 1,500VA



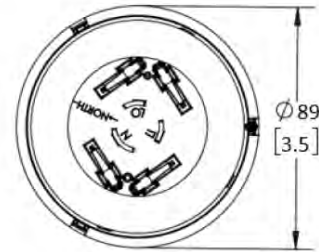
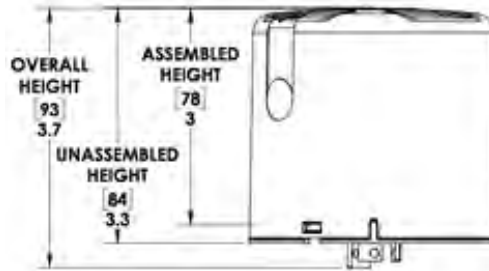
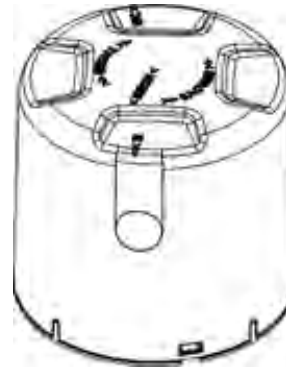
# Product Specifications

## Node Specifications:

- Input Voltage: 120-480V
- Both 0-10V and DALI Dimming Supported per ANSI C136.41-2013
- Operating Temp: -40° to +50°C
- Surge Protection: 10kV/5kA Standard, per ANSI C136.2-2015
- Typical Power Consumption: 1.5W @ 120V, 2W @ 277-347V, 2.4W @ 480V
- Photocell: Complies with ANSI C136.10-2006
- GPS Accuracy: +/- 3m in clear open sky
- Max Load Capacity: 1,000 Watt / 1,500VA Load
- Inrush Current Limiting at Turn On
- Utility Grade Energy Measurement per ANSI C12.20: +/- 0.5% Accuracy
- IR Output for Utility Meter Calibration Validation
- Ingress Protection: Class IP65
- Digital In/Out and Analog Inputs
- Configurable Serial In/Out Communication
- Weight: 0.52 lbs
- Warranty: 5 Years Standard, 10 Year Extended Available

## Network, Compliance & Security:

- Radio Frequency: 915 MHz ISM Band, FCC CFR 47 15.247 Intentional Radiators, ICES-005
- Network Communication: IEEE 802.15.4, 6LoWPAN 50 Channel FHSS
- EMI: Complies with FCC CFR 47 15.208, 15,209 and ICES-005 (B) / NMB-005 (B)
- Security: AES Encryption and "End to End" Certificate Based Authentication



## Ordering Number Logic

ID	Voltage	Configurations	Metering Type	Metering Precision	Commissioning	Max Load	Network	Location Options	Dimming	Options
ELWN	1 = 120-480V	A = ANSI Socket (External Node)	8 = Load + Node	U = 0.5% Utility Grade	B = GPS	A = 1,000 Watts/ 1,500 VA	A = Network A B = Network B C = Network C D = Network D	XX = Default	AD = 0-10V/ DALI	None = Default 2 = 5.16.8 update

## Examples

ELWC1A8UBXXXXAD: 120-480V, ANSI Socket, Load and Node Metering, Utility Grade, GPS Commissioning, 1500W Load, LTE Network, DALI/0-10V Dimming



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