

# LUMEWAVE

By  **ECHELON**

## Wireless Outdoor Lighting Controller (TOP900 Series)



### Product Description

Part of a Lumewave by Echelon intelligent control system, the TOP900 Series is a wireless controller that installs directly to an exterior lighting fixture, providing remote monitoring and control. The TOP900TLX controller mounts to the NEMA standard ANSI C136.41-2013 twist-lock connector, typically installed by the fixture manufacturer. In a retrofit application, typically the TOP900TN is used. The controller gathers data regarding the operational condition of lamps, energy usage, voltage, current, power factor, and fixture location that is transmitted over the Lumewave by Echelon control network and analyzed by the central management system (CMS) software.

### Operation

With the controller, fixtures can be addressed and grouped for unified ON/OFF, high-low stepped dimming with OFF, or 0-10 volt continuous dimming operation. The TOP900 provides adjustable photocell thresholds (typically for daytime overrides to accommodate weather-related light level changes) as well as time of day and astronomical clock functionality. The operational parameters of each controller may also be independently adjusted via the CMS.

### Specifications/Submittal Block

Project:

Date:

Detail:

### Features/Benefits

- Component of intelligent networked control system
- 120-277 and 347/480 voltage models available
- Integral GPS receiver (optional models)
- Compatible with most lamp types, including LED, eHID, plasma, and induction
- Power metering calibrated to 1% accuracy
- Secure AES 128-bit encryption
- High end trim for enhanced energy savings
- Energy code compliant (CA Title 24-2013, ASHRAE 90.1-2013)

### Applications

- Street, roadway, and Department of Transportation (DOT) lighting
- Parking facilities
- Auto dealership lots
- Campus lighting
- Sidewalks
- Hike and bike trails

# Product Specifications

## Control Specifications

- Control profiles and interfaces
  - Power to fixture ON/OFF
  - Bi-level with OFF
  - 0-10V (sink) dimming control in .1V increments with 0V turning fixture power OFF
- Control events and schedules
  - Weekday and weekend schedules
  - Up to eight control events per day
  - Scheduled events based on time of day and/or astronomical time
  - Schedule use of motion sensors and photocell
  - Real-time commands and overrides
- Photocell daytime override
- Data logging
- Failure detection and reporting
- Photocell thresholds synchronization
- Direct motion detector interface
- Over the air flashing (program updates)

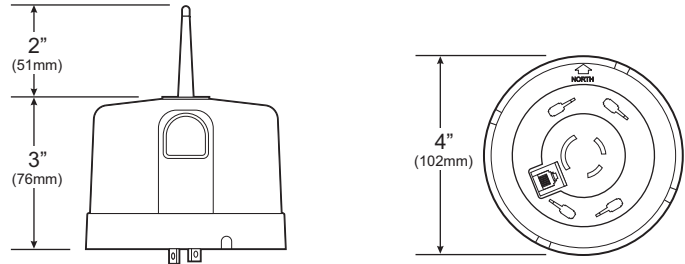
## Electrical and Operational Specifications

- Operating voltage: 100-480 Vac 50/60 Hz
- Power switching: 1000W
- Power consumption: <2W @ 120/277; 3W @ 480
- Operating temperature: -40C to +70C
- 345J surge protection
- Zero crossing
- Failsafe: power ON, lamp level high
- Wireless standard:
  - IEEE 802.15.4
  - Operating frequency: 902-928 MHz
  - 10 channel DSSS (Direct Sequence Spread Spectrum)
  - RF power: adjustable to +24 dBm (250 mW)
  - Range: TOP900 to TOP900 1 mile+ line of sight
  - Range extender: TOP900 can be used as repeater
- IP66 certified
- FCC and IC approved
- UL 916/773 and Canadian C12.2 listed
- RoHS compliant
- 5 year limited warranty\*

\*Subject to terms and conditions found at [http://echelon.com/lp/warranty\\_five\\_year](http://echelon.com/lp/warranty_five_year)

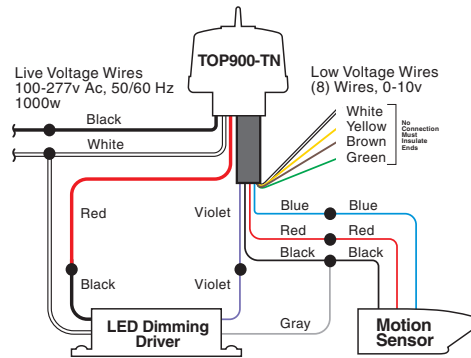


# Dimensions



Device dimensions are identical for all models (TOP900TLX shown here).

# Wiring Diagram



## Ordering Information:

Ordering #	Product Name	Product Description
100118	TOP900TLX-GRY	Wireless controller, NEMA standard ANSI C136.41-2013, 120-277V
100125	TOP900TLX-BLK	Wireless controller, NEMA standard ANSI C136.41-2013, 120-277V
100134	TOP900TLX-480-GRY	Wireless controller, NEMA standard ANSI C136.41-2013, 120-277, 347/480V
100135	TOP900TLX-480-BLK	Wireless controller, NEMA standard ANSI C136.41-2013, 120-277, 347/480V
100136	TOP900TLX-480-GPS-GRY	Wireless controller, NEMA standard ANSI C136.41-2013, 120-277, 347/480V, integral GPS
100137	TOP900TLX-480-GPS-BLK	Wireless controller, NEMA standard ANSI C136.41-2013, 120-277, 347/480V, integral GPS
100106	TOP900TN-GRY	Wireless controller, 1/2" threaded nipple, 120-277V
100124	TOP900TN-BLK	Wireless controller, 1/2" threaded nipple, 120-277V