GW-132 Button Type Dimming Controller (Patent Pending)

GWI has redesigned GW-130 and 132 is a “Closed Loop System”, with 128-bit AES HW encryption, with a secondary authentication code between smart phone and GWI server. The GW-130 Twistlock Dimming Controller C136.10, whereas the GW-132 is a Internal enclosure for decorative lighting, but can be placed internally in fixtures without a 7-PIN receptacle wired directly to the driver. The features are the same as for the GW-130 and GW-132 units with user-friendly APP smartphone(s) application for parent and slave controls/node working with High Power Bluetooth Mesh V5.0 for street/road lighting 3,740 feet/1,140 meters between poles “MESH” system. Based on contour of land, an advanced, GWI modular design is highly flexible solution for today's increasingly demanding Ultra Low Power, Ultra-Long Range, and higher throughput applications in the IoT world. If unit/node and/or fixture it will fail off and send an alert to parent storage to be collected until Smart Phone is close to Parent Node to send the alerts back to the SP in a report format of Fixture by identification tag number.

Dimensions: 3.750 in. x 1.250 in.

The core components utilize an enhanced 51 kernel control chip and an online Bluetooth Mesh wireless communication module. As a result, the product is powerful, lightweight, reliable, easy to install and maintain, and 2/3 the cost of any current intelligent control systems on the market. The GW-130 and GW-132 meets the Mesh Protocol of Bluetooth Smart V5.0 communication standards and provides advantages such as flexible networking, strong anti-interference/long distance communications of up to 3,740 feet (1140 meters) between nodes and/or nodes to enhance duplication, and the ability to support multiple groups of streetlights with a maximum of infinity nodes. The GW-130 has a built-in light control circuit to automatically detect light intensity in the external environment and turn the streetlight on or off accordingly.

FEATURES

- Close Loop System
- Smart APP’s is Android and IOS
- Bluetooth High Power V5.0 GEN 5
- Distance between poles, 3,740 feet/1,140 meters
- Automatic connection between fixture/node and smartphone application within 5 seconds
- Recovery ALERTS off fixtures failures from the Parent Node to the Smartphone
- Security: AES128 encryption and authentication code between Smartphone and customer and/or GWI server via cloudy
- Dimming capabilities from 1-100 by increments of one
- Bluetooth and power to the fixtures MUST be on
- Evacuation/SOS strobe function defined as a group
- Automatic reset following a power outage as to the next schedule point
- Separated multi-infinite streets/roads application with the same APP

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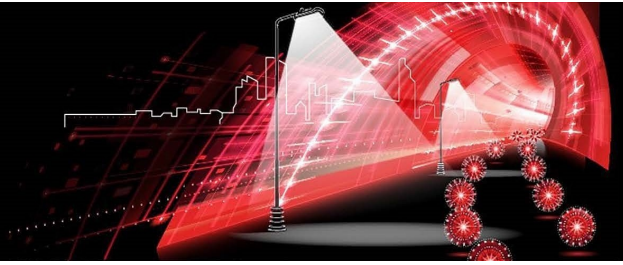

GW-132 SPECIFICATIONS (CONT.)

- Each fixture icon on the Smartphone APP will have an identification number within the group
- Each NODE has capability of Calendar/Day Light Saving Time
- Fixture/NODE with issue will fail off
- Parent/node will save failed fixture data/alerts and can forward them to the Smartphone
- Separated multi-infinite streets/roads application. From one Fixtures to infinite
- Uses 7-Pin and meets C136.10 configuration
- 81,000 cycles On/Off
- All mesh messages are encrypted and authenticated.
- Network security, application security, and device security are addressed independently.
- Security keys can be changed during the life of the mesh network via a Key Refresh procedure.
- Message obfuscation makes it difficult to track messages sent within the network providing a privacy mechanism to make it difficult to track nodes.
- Mesh security protects the network against replay attacks.
- The process by which devices are added to the mesh network to become nodes, is itself a secure process.
- Nodes can be removed from network securely, in a way which prevents trashcan attacks.
- ARM CryptoCell-310 cryptographic co-processor

APPLICATIONS

- LED luminaires that require dimming-dusk-to-dawn control (parks, parking lots, garages, villages/towns/small cities main street and college campuses

CERTIFICATIONS

- Meets UL773
- ROHS compliant
- Manufactured in an ISO Certified Facility

OPERATING CHARACTERISTICS

- Load Rating: 1800 VA driver
- Up to 120-amp inrush
- On/Off Ratio: 2-5 second time delay
- Switch: > 80,000 On/Off operations at rated load

ADDITIONAL FEATURES

ENHANCED LIGHT SENSING

The silicon light sensor is designed to sense sunlight while being "blind" to light emitted from LEDs. This reduces LED sensitivity and significantly decreases false turn-off in high ambient light situations.

SURGE PROTECTION

Employing two or four MOV's provides ANSI Extreme Category (20kV, 10kA) surge protection for the control, and also protects the solid-state driver from differential mode transients.

DESIGN LIFE ENHANCEMENTS

The GW-132 is rated for 80,000 cycles On/Off. The printed circuit board is fiberglass/epoxy FR4 for superior strength and moisture resistance and is conformal coated to reduce water absorption. The unit provides IP65 ingress protection.

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GW-132 SPECIFICATIONS

(CONT.)

TECHNICAL INFORMATION

Technical parameters

Input	Voltage range	85-305VAC
	Working frequency	47-63Hz
	Current range	8A
	Standby power consumption	=1W
Dimming output	PWM	10V/1kHz (optional)
	0-10V	0-10V (standard)
Communication	Communication mode	Bluetooth 5.0
	Working frequency	2.4GHzISMband
	Transmitting power	+7dBm (typical value)
	Receive sensitivity	-92dBm (typical value)
	Transmission distance	Up to 60m (distance between single-points)
Antenna parameters	Working frequency	2.4GHz
	Standing wave ratio	<=1.5
	Antenna gain	2.5DBi
	Input impedance	50 Ohm
	Interface type	SMA interface
	Antenna type	Glue stick antenna
	Interface type	SMA interface
Working environment	Operating temperature	-40-+80?
	Working humidity	20-90%RH (no condensation)
	Storage environment	-40-+85? , 10-90%RH
Safety regulation/electromagnetic compatibility	FCC Certificate	X8WBT84X
	Safety regulation clauses	UL8750, EN61347-1, CLASS2, UL60950-1
	Isolation voltage	AC to dimming end, 3.75KVAC
	Isolation resistance	AC to dimming end＞50MΩAt500VDC
	Electrostatic discharge	IEC/EN61000-4-2Contact±4kV/Air±8kV
	Burst of pulses	IEC/EN61000-4-4±4kV
	Lightening and surging	IEC/EN61000-4-5L to L-line (4kV)
Others	Protection grade	IP67

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GW-132 SPECIFICATIONS

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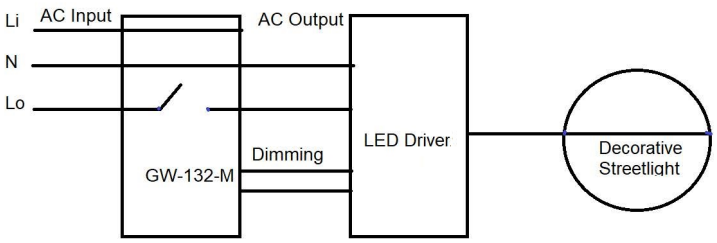
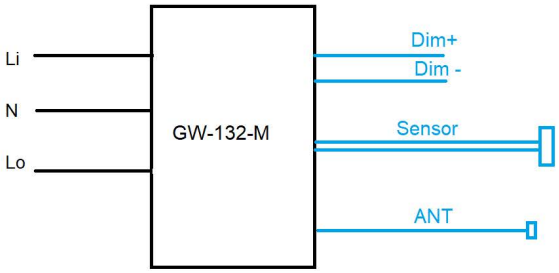
WIRING DIAGRAM





WIRING INFORMATION

Designation	Wire Color	Description	Wire Size	Length
Li	Black	Line Input Wire	14Awg	18in.
N	White	Neutral Wire	14Awg	18in.
Lo	Red	Load Wire	14Awg	18in.
Dim+	Violet	Dimming Positive	22Awg	18in.
Dim-	Gray	Dimming Negative	22Awg	18in.
Sensor	White	Photoresistor	26Awg	18in.
ANT	Black	Antenna Terminal	RG1.13	18in.

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GW-132 SPECIFICATIONS

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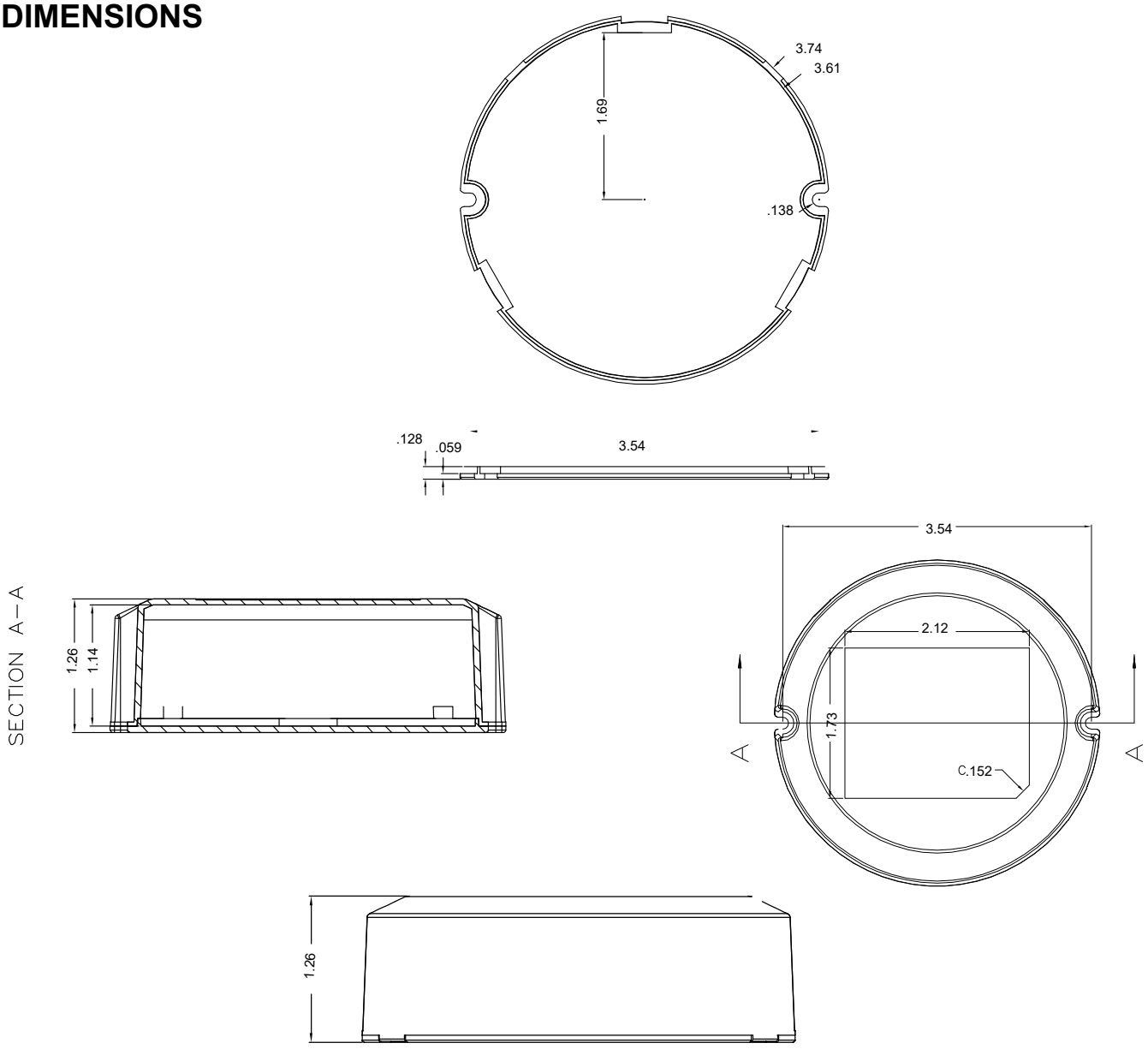
DIMENSIONS



WARRANTY

10 year warranty - All photocontrols are marked with the date of manufacture. This product is warranted to operate within its original specifications and shall be free of electrical or mechanical defects. Manufacturer's warranty shall be limited to providing a replacement control of same type and shall not cover costs of removal, replacement or loss of service nor any consequential damages. This warranty is in lieu of and excludes all other warranties either expressed or implied. Full warranty statement is available by consulting factory.

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