European manufacturer

olympia electronics SAFETY & SECURITY SYSTEMS

for a safer world!

SELF TESTING NON-MAINTAINED EMERGENCY CEILING MOUNTED LUMINAIRES WITH WIRELESS COMMUNICATION

CE

TECHNICAL CHARACTERISTICS *(for LED MODULE specifications see page 6)*

	GR-290/M/WL	GR-291/M/WL	GR-292/M/WL	GR-293/M/WL
OPERATION VOLTAGE	220-240V AC / 50-60Hz			
MAX. SUPPLY CURRENT	19.5mA AC			
MAXIMUM POWER CONSUMPTION	4.3W / 4.7 VA			
MINIMUM POWER FACTOR (λ)	0.9			
U-OUT	6V			
TX/RX FREQUENCY RANGE	868.150-868.450MHz			
TX POWER	11dBm			
BATTERY	4.8V/1.2Ah, NiMH (4KRMT 15/51)			
INSULATION BETWEEN SUPPLY & CONTROL TERMINALS	Basic insulation			
INSULATION BETWEEN SUPPLY & BATTERY CIRCUIT	Basic insulation			
WORKING VOLTAGE AT WHICH THE INSULATION IS DESIGNED	500V			
BATTERY PROTECTION	Deep discharge and overcharge protection			
BATTERY VOLTAGE RANGE	4-6V			
BATTERY SUPPLY CURRENT DURING EMERGENCY	(Vbat=4.8V):500mA		(Vbat=4.8V):230mA	
BATTERY CHARGE CURRENT RANGE	130 - 200mA (normal charge) / 20 - 30mA (trickle charge)			
BATTERY DISCHARGE CURRENT RANGE	400 - 600mA		180 - 300mA	
INDICATIONS - CONTROLS	Charge, lamp fault, battery fault			
CHARGE TIME	24 hours			
MINIMUM DURATION	1.5 hour		3 hours	
LIGHT SOURCE	1 white power LED			
EMERGENCY ILLUMINATION	300lm		150lm	
DEGREES OF COVER PROTECTION	IP40			
PRODUCED IN ACCORDANCE WITH	EN 60598-1, EN 60598-2-22, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3, EN 62311, ETSI EN 303 446-1 V1.1.0, ETSI EN 300 220-2 V3.1.1			
OPERATION TEMPERATURE RANGE	5 to 40 °C			
Prated/Irated	2.1W/660mA		1W/320mA	
CONTROL GEAR MAX.TEMPERATURE (tc)	65°C at Q2			
RELATIVE HUMIDITY	Up to 95%			
CONSTRUCTION MATERIAL	ABS/PC			
EXTERNAL DIMENSION	Ø125 x 65 mm			
WEIGHT	450gr.			
GUARANTEE	3 years (1 year for the battery)			
CONTROL GEAR WITH AUTOMATIC TEST FUNCTION	**EL-T**			
Controlgear is suitable for LED module only				
The controlgear has mains-connected windings of transformer				

Do NOT stare at operating light source.The luminaire should be positioned so that prolonged staring into the luminaire at a distance closer than 0.4m is not expected.
E_{thr} = 718 lux.

Thank you for your trust in our products
Olympia Electronics - European manufacturer

GENERAL

This device is used indoors (ta 40°C) in places where emergency luminaires are needed. Each device must be permanently connected to mains power supply. The luminaires GR-290/M/WL and GR-292/M/WL are suitable for corridors lighting and the GR-291/M/WL and GR-293/M/WL for open area lighting. In normal operation the battery is charging. In case of a mains power supply failure, the device enters emergency mode and the illumination LED turns on. When the mains power supply is restored the device turns to normal operation.

Battery Charging

The battery charging is completely controlled. In this case, is achieved the perfect battery maintenance , as well as the elongation of its duration. When the battery has completely charged, it charges with a maintenance current.

Battery charge failure due to shortcut
The recharging device will recharge the battery normally after the short circuit is removed and the batterie(s) are reinstalled.

Battery Cut-off
The device in this operation when the mains power supply fails and battery has lost its energy. During this operation the device enters the idle state and battery consumption is negligible, in order to be protected from deep discharge.

Automatic Operational Test
It is conducted automatically every 15 days. In order to be performed, the mains power supply and the battery should be connected.

Automatic Autonomous Test
The Automatic Autonomous Test is conducted and measures the device's back up operation and emergency duration. The BATTERY FAULT LED blinks during the measurement, indicating this process to the user. This test is conducted automatically every six months. In order to be performed, the mains power supply and the battery should be connected and fully charged. If the battery is not fully charged, the test is postponed until the battery is completely charged. If during this test, the autonomy is less than the nominal then the battery fault led turned on continuously and the battery must be replaced.

Wireless communication
The WL luminaire models have the ability to communicate over the air with Olympia's control panels for wireless emergency luminaires. The luminaires can also communicate with a PC/laptop through a gateway (Ethernet, Wi-Fi, USB). For more information, please refer to Wireless Emergency Lighting guides, available on the company's website.

Back Up Operation
The autonomous duration of battery during emergency mode is at least the one that is stated in the list of the technical characteristics. During emergency mode, a light source test is also performed.

ATTENTION!!!
1. Operations for installation, maintainance or testing must be done by authorized personnel only.
2. The device must be connected to the mains power supply through a fuse dependent by the total amount of the line's power load.
3. The replacement of the battery and the light source must be done using parts of the same type, by the manufacturer or by a competent person.
4. In case of inactive use for a period greater than 2 months, disconnect the battery by pulling out the battery's connector.
5. **It is not allowed to discard batteries into common trash bins, they must be discarded only in battery recycling points. Do not incinerate.**

NOTE: LED= Light Emitting Diode
LABELING EXPLANATION:
X: Self contained
0: Non maintained **(*)**
A: Including test device
B: Including remote test mode
C: Including inhibiting mode
F: Automatic test gear complying with IEC 61347-2-7 denoted EL-T
90: 1.5 hour duration
180: 3 hour duration

X	0	A	B	C	F	9	0

Maintained operation: The luminaire lights its illumination source, when it is powered by the mains power supply or not.
(*) Non Maintained operation: The luminaire turns on illumination source, only in case of power supply failure.

Connectors:
CN1: Power supply & communication signals
CN5: Battery connector
CN2: Non user connector
CN3: Non user connector

Status of LEDs

LEDs	Description of indication
CHARGE	◌: Battery charging, ●: battery charged, ○: disconnected or unfunctional battery
LAMP FAULT	◌: Operation check, ●: lamp fault, ○: normal operation
BATT. FAULT	◌: Autonomy test, ●: battery fault, ○: normal operation
Note	◌: Blinking, ●: constantly on, ○: off

Wireless Communication LED indications (interior)

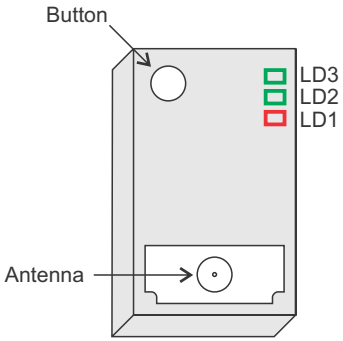
The **top LED** (LD3-green) indicates the network connection status.
This LED may blink according to the following patterns:
1. Steady ON: The device has established direct connection to a Gateway device, and at least one more Gateway device is available for alternate routing
(false condition).
2. Rapid flash [5 times/s]: The device has established direct connection to a single Gateway device.
3. Fast flash [2 times/s]: The device has established connection to a Router device and at least one more Router device is available on the same hop level, as an alternate route (redundant connection).
4. Moderate flash [1 second ON / 1 second OFF]: The device has established connection to a single Router device, and no alternatives exist on the same hop level.
5. No light: The device is disconnected.

The **middle LED** (LD2-green) indicates the received signal strength (RSSI) of the router module.
This LED may blink according to the following patterns:
1. Very fast flash [5 times/s]: received signal strength is excellent.
2. Fast flash [2 times/s]: received signal strength is good.
3. Moderate flash [1 second ON / 1 second OFF]: received signal strength is acceptable for reliable communication.
4. Very slow [2 seconds ON / 2 seconds OFF]: received signal strength is not acceptable for reliable communication, or no signal.

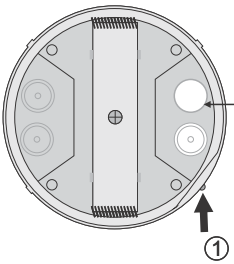
The **bottom LED** (LD1-red) indicates operation status.
This LED may blink according to the following patterns:
1. Very fast blink [5 times/s]: the module is not initialized correctly. In this case you have to press for more than 2 seconds the push button, in order to reset the module (loads default settings).
2. Moderate flash [2 times/s]: The module is properly operating.

Button functionality:
The on-board button has the two following functions:
1. Short press (<2"): a status message will be sent to the Gateway device of the wireless network.
2. Long press (>2"): Loads factory default settings to the module.

Default settings:
- SID: 00000001
- RF Channel: 13 (869.525MHz)

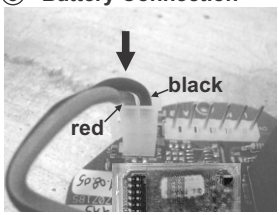


INSTALLATION INSTRUCTIONS



② **Power Connection**

③ **Battery Connection**



BEWARE of electric shock after reflector removal. Controlgear relies on the luminaire for protection against electric shock.

1. Untighten the screw and pull up the reflector.
2. **Always use in any case round mains cable, with a diameter of 5-10mm (H05RN-F type 2x1mm² or any other type, at least equal to it's mechanical and electrical properties). ATTENTION!! The cable must not be deformed in any way (This requirement is important to ensure the IP rating).** Install the included gaskets in to the cable entry holes *(verify that are not deformed)*. Make a hole in the center by using a small screwdriver. Pass the round cable through the gasket. Detach the power terminal, connect the wires as shown in the picture and attach the power terminal *(10A max)*. Supply voltage polarity is irrelevant.
3. Place the battery's connector to the corresponding connector on the PCB. Beware of correct polarity.
4. Refit the reflector (mind the correct orientation), tighten the screw securely and the luminaire is ready for mounting.

NOTE!! After finishing the installation you must power the luminaire for at least 24 hours in order to completely charge the battery. The rated autonomy duration can be achieved after that time.

Battery replacement.
It can be done only by a competent person and after the mains interruption.
1. Remove the luminaire from the suspended ceiling (Figure 3, Page 5).
2. Follow the step 1 of the installation instructions.
3. Disconnect the connector and remove the old battery.
4. Connect the new battery with the same type (step 3 of the installation instructions) and place it in the position of the old one.
5. Replace the removed parts and power the device.

Important notice for the installed luminaires in one area !!!
The installer must connect the battery's connector first and then should power the luminaire.
The time between batteries connection must be, at least 1.5 minute.
With this variation, it is ensured that the non synchronized Automatic Autonomous Test for two or more luminaires installed in one area, is not conducted in the same day.

The light source contained in this luminaire shall only be replaced by the manufacturer, or his agent, or a similar qualified person.

NOTE! The light source is non-user replaceable.

CAUTION : Do not view directly with bare eyes.

MOUNTING THE LAMP IN SUSPENDED CEILING

Set up the lamp to the suspended ceiling as it is shown bellow *(Required opening 110mm)*:

Step 1

Bend the springs, to get into the hole of the suspended ceiling, as you can see to the next figure.

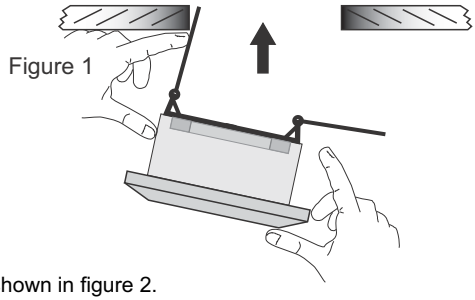
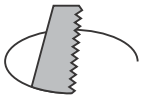


Figure 1



Step 2

Push up the luminaire, as shown in figure 2.

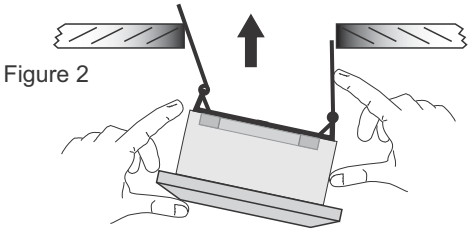


Figure 2

Step 3

Continue to push upwards until the lamp locks.

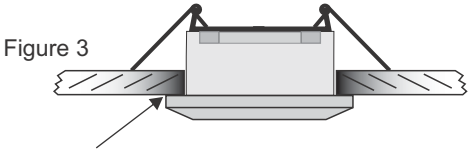


Figure 3

If you want to pull off the device, put a flat blade screwdriver, between the device and the ceiling.

SURFACE MOUNTING

Step 1. Follow the step 1 of the installation instructions.

Step 2. Unfasten the retaining screw (Figure 4) and detach the part for suspended ceiling installation.

Step 3. Drill 2 holes on the base using a 4mm drill bit in order to permit the retaining screws to pass. Mark these two drilled points on the required mounting location, drill the holes and install the supplied plastic plugs. **ATTENTION!!** Especially for the **GR-290/M/WL** and **GR-292/M/WL** luminaire installation on the ceiling you must align the base with the indications on the luminaire's base (Figure 5).

Step 4. Install the decorative rim (package included). Next, use the 2 fasteners to install the unit to the require location.

Step 5. Follow the step 2 & 3 of the installation instructions.

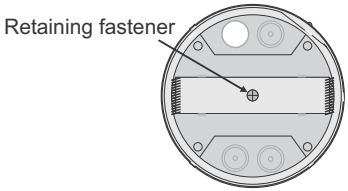


Figure 4

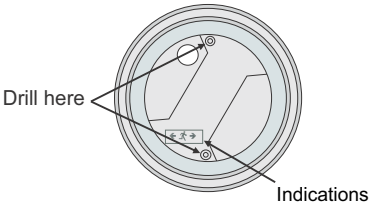


Figure 5

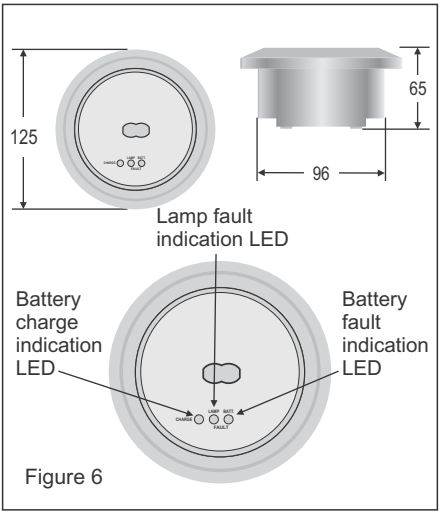
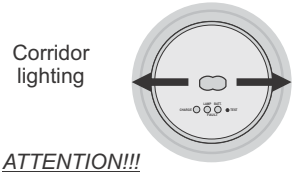


Figure 6

GR-290/M/WL, GR-292/M/WL

(Escape Route)



ATTENTION!!!
During installation follow this light direction.

GR-291/M/WL, GR-293/M/WL

(Anti-Panic Area)

LED MODULE CHARACTERISTICS				
	GR-290/M/WL	GR-291/M/WL	GR-292/M/WL	GR-293/M/WL
Manufacturer	Olympia Electronics S.A.			
Model Number	0405185			
Voltage Range	2.7-3.3V DC			
Nominal Power	2.1W		1W	
Connections	Non reversible connection between main pcb and led module			
Temperature (tc)	60 °C max. across the board			
LED Module Type	BUILT IN			

WARRANTY

Olympia Electronics guarantees the quality, condition and operation of the goods. The period of warranty is specified in the official catalogue of Olympia Electronics and also in the technical leaflet, which accompanies each product. This warranty ceases to exist if the buyer does not follow the technical instructions included in official documents given by Olympia Electronics or if the buyer modifies the goods provided or has any repairs or re-setting done by a third party, unless Olympia Electronics has fully agreed to them in writing. Products that have been damaged can be returned to the premises of our company for repair or replacement, as long as the warranty period is valid.

Olympia Electronics reserves the right to repair or to replace the returned goods and to or not charge the buyer depending on the reason of defection. Olympia Electronics reserves the right to charge or not the buyer the transportation cost.

HEAD OFFICE

72nd km. O.N.R. Thessaloniki-Katerini
P.C. 60300 P.O. Box 06 Eginio Pierias Greece
www.olympia-electronics.gr
info@olympia-electronics.gr