

# MANUAL OF ECULED212S-250-ST TYPE EMERGENCY LIGHTING CONVERSION KITS FOR LED LAMPS

**WARNING!** It is important that these instructions are read thoroughly before any installation work commences. They must also be retained on file to provide information on use and maintenance by end-user. All installation work must be carried out by a suitable qualified person and must comply with the instructions and all other relevant regulations. Before any intervention to the unit, make sure that the mains voltage is disconnected.

## INSTRUCTIONS

The environmental temperature and humidity conditions of the luminaire where the unit will be mounted in should be suitable to the below indicated specifications. To achieve optimum performance, the unit and the battery pack should be placed enough distant from the lamp and driver inside the luminaire and they should be kept at a max ambient temperature below 50°C. The cable lengths are recommended max 100cm. Do not make longer the battery cable. First install the module and battery pack. Connect the LED lamp, driver and the charging indicator. Connect the battery socket. Connect the mains.

**WARNING !** The unswitched line and the switched line should be on the same phase. For the complete charge of the battery, the unit should be left on charge for a minimum period of 24 hours.

## OPERATING INSTRUCTIONS

The battery automatically charges through the unswitched line of the luminaire and the green charging indicator LED lamp is lit. At that time the LED lamp could be turned ON/OFF through the wall switch connected to the driver circuit driven by the switched line. When the mains goes out, the unit will automatically remove the power supply of the switched line and energise the LED lamp (at the emergency lighting level) through the battery and not depending on the wall switch position. When the mains is recovered, the luminaire will be energised by the switched line through the wall switch and the battery will start the charge.

## TEST INSTRUCTIONS

**Function Test :** This is a practical test to check shortly the function of the unit. While the test button is pressed the luminaire will run at emergency mode. The Function Test has to be carried out once in a month by pressing the test button or removing the mains line fuses.

**Duration Test :** The mains power of the luminaire has to be disconnected once at every 12 months and the Duration Test has to be carried out to check battery backup duration. Before starting the Duration Test the unit should be left on charge for a minimum period of 24 hours. If the backup does not extend to the declared duration, the battery packs have to be replaced. The replaced batteries have to be returned to the manufacturer or to be left at the special waste containers for recycling.

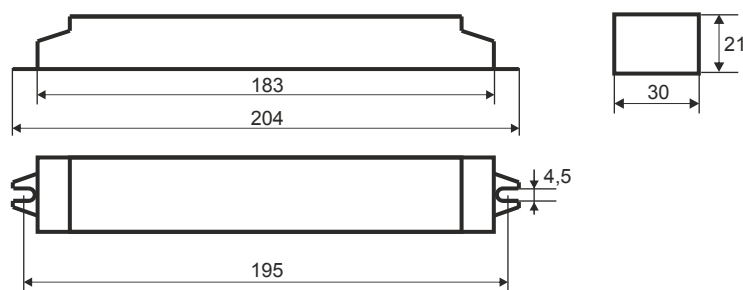
**WARNING !** Do not dismantle any part of the unit, do not drill or bore. It does not contain any parts repairable by the installer or user. Any of those kind of unauthorized interventions will cancel the warranty conditions.

## TECHNICAL SPECIFICATIONS

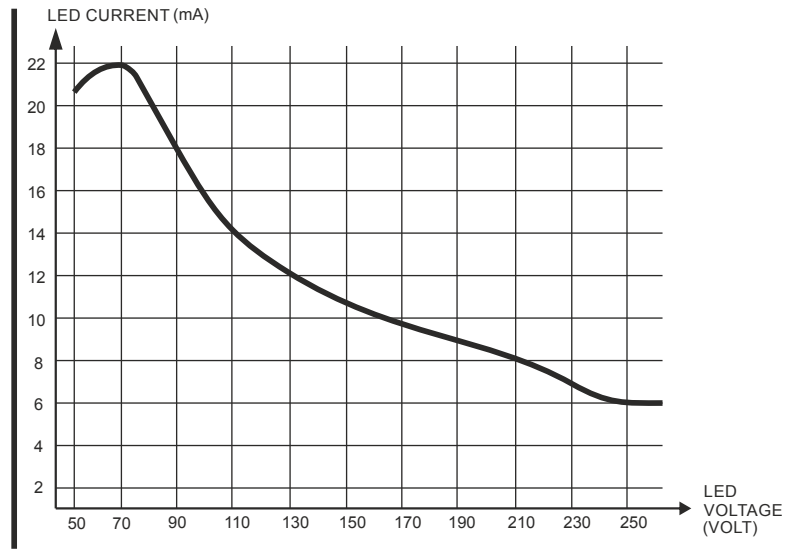
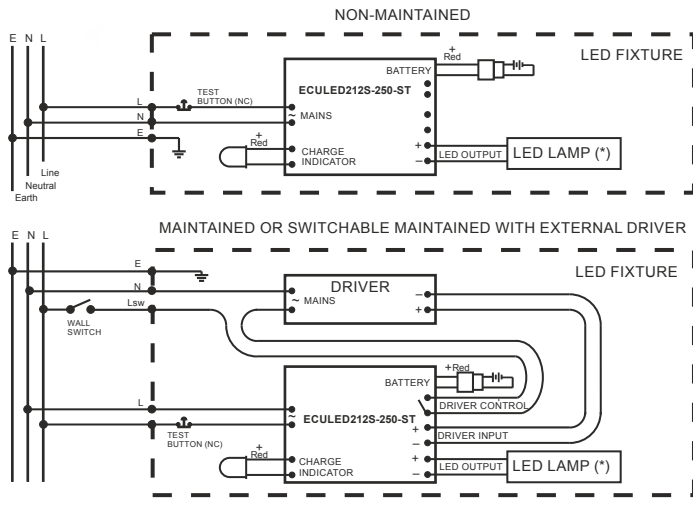
<b>Mains Supply</b>	: 230 Volt, 50/60Hz, 0.03A max, 6VA max
<b>Battery</b>	: High Temperature type Ni-Cd Battery Pack with polarised connector, nominal 3.6 Volt (3.0-4.5 Volt), 1.7Ah for 1 hour, 3.0Ah for 3 hours operation
<b>Lamp</b>	: 30-250 Volt LED Lamp
<b>Emergency Duration</b>	: 1 hour or 3 hours
<b>Operating Mode</b>	: Non-maintained, maintained or switchable maintained with external driver.
<b>Charger</b>	: Current controlled charger. The ballast is suitable for use only on battery supply not having a trickle or intermittent re-charging circuits. The charger will charge the battery normally after the test of EN 6 1347-2-7 Standard, Part 22.3.
<b>Charge Indicator</b>	: Ø5mm green LED lamp with panel type holder (60cm standard)
<b>Battery Protection</b>	: Over charge & deep discharge protection. The ballast is not proof against supply voltage polarity reversal but have a polarised battery connector.
<b>Output Protection</b>	: Open circuit, short circuit & overload protection
<b>Max Output Voltage</b>	: V OUT = 260V DC
<b>Terminals</b>	: 45° entry, quick fit terminal block for 0.2 -0.75mm <sup>2</sup> cross section conductors
<b>Temperature</b>	: Ambient Temperature ta: 0 -45°C, max Case Temperature tc: 70°C
<b>Class</b>	: Class II, no earth wiring required
<b>Humidity (RH%)</b>	: 20 - 90% RH
<b>Protection Class</b>	: IP20
<b>Construction</b>	: White polycarbonate (Flame rating UL94 -V2)
<b>Standards</b>	: EN61347-1, EN61347-2-7

## DIMENSIONS (mm)

### MODULE

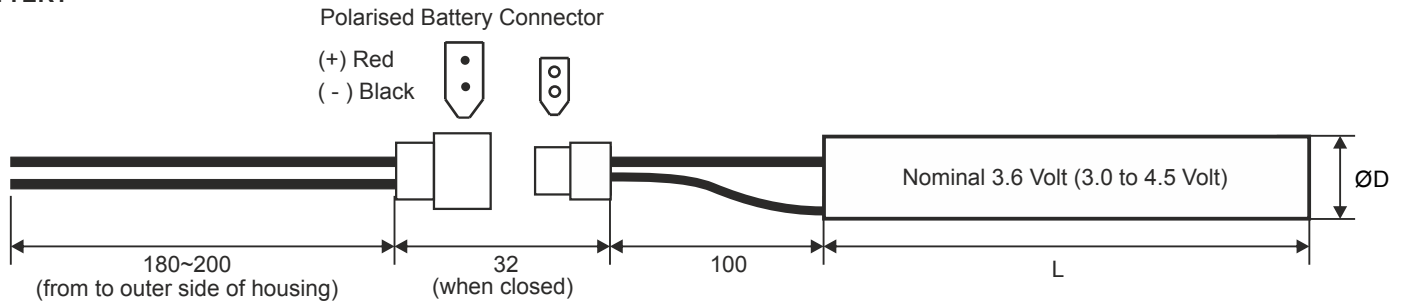


## WIRING DIAGRAMS



(\*) **LED LAMP:** Min 30V, max 250V, (Serial connected LED group or LED PCB - Ref to figure) Ballast Lumen Factor (BLF)=Emergency Ballast Lumen Factor (EBLF): % Lumen output emergency mode/mains mode .EBLF of different lamps/luminaires could be calculated easily as following:  
 -First find working voltage & current of LEDs. (By driver output)  
 -Via working voltage of LEDs & chart below determine the emergency working point on the coord nate.  
 -Find related LED current value on the left column.  
 -Calculate by formule %BLF = Emergency Current of LED / Mains current of LED

## BATTERY



### SPECIFICATIONS

Battery Type  
 Temperature Rating  
 Dimensions  
 Charge Voltage Limits  
 Max Charge Current  
 Min Charge Current  
 Discharge Voltage Limits  
 Max Discharge Current  
 Min Discharge Current

### ECULED212S-250-ST-1H (1 hour)

Ni-Cd, 3.6 Volt, 1.7Ah, SC size  
 High Temp Type, tc 70°C  
 ØD: 22mm, L:127mm  
 3.0 - 4.5 Volt DC  
 120mA  
 30mA  
 3.0 - 4.5 Volt DC  
 720mA  
 90mA

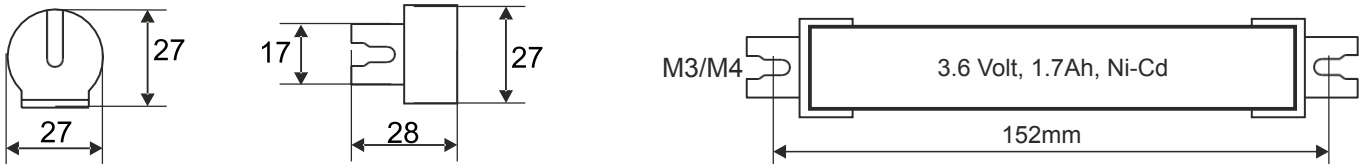
### ECULED212S-250-ST-3H (3 hours)

Ni-Cd, 3.6 Volt, 3.0Ah, C size  
 High Temp Type, tc 70°C  
 ØD: 26mm, L:153mm  
 3.0 - 4.5 Volt DC  
 160mA  
 60mA  
 3.0 - 4.5 Volt DC  
 720mA  
 132mA

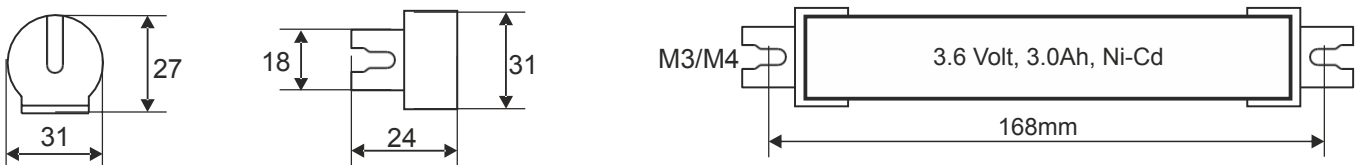
## MOUNTING PART & DIMENSIONS

The battery pack could be mounted into the lighting fixture diectly by cable tiesor by mounting parts.

### 1H MODELS

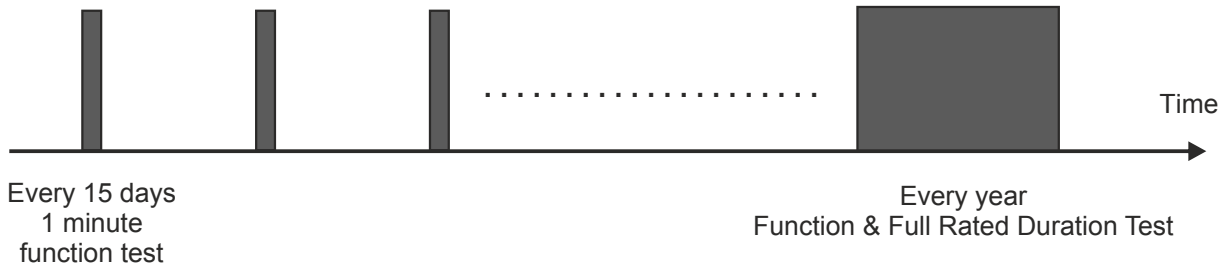


### 3H MODELS



# SELF TEST SPECIFICATIONS

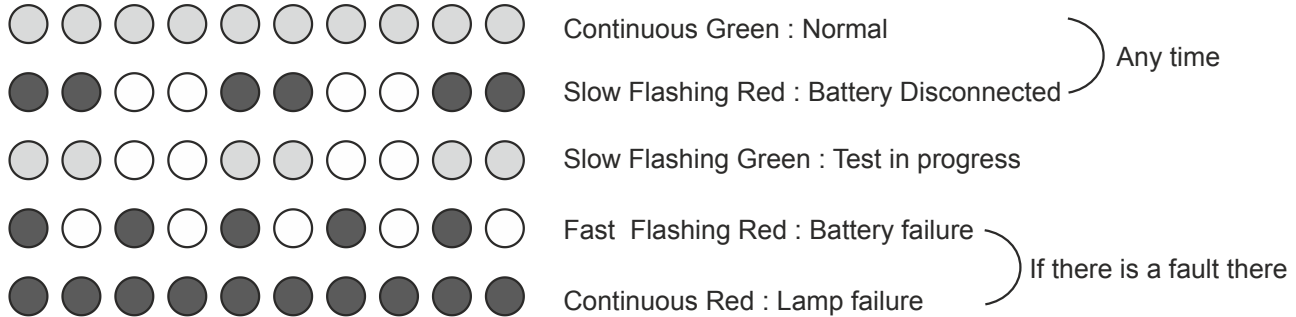
## AUTOMATIC START UP OF FUNCTION TEST & DURATION TEST



## MANUAL START UP OF FUNCTION TEST (BY PRESSING THE TEST BUTTON)



## VISIBLE INDICATION



## RESET THE FAULTS ( BY PRESSING THE TEST BUTTON)

