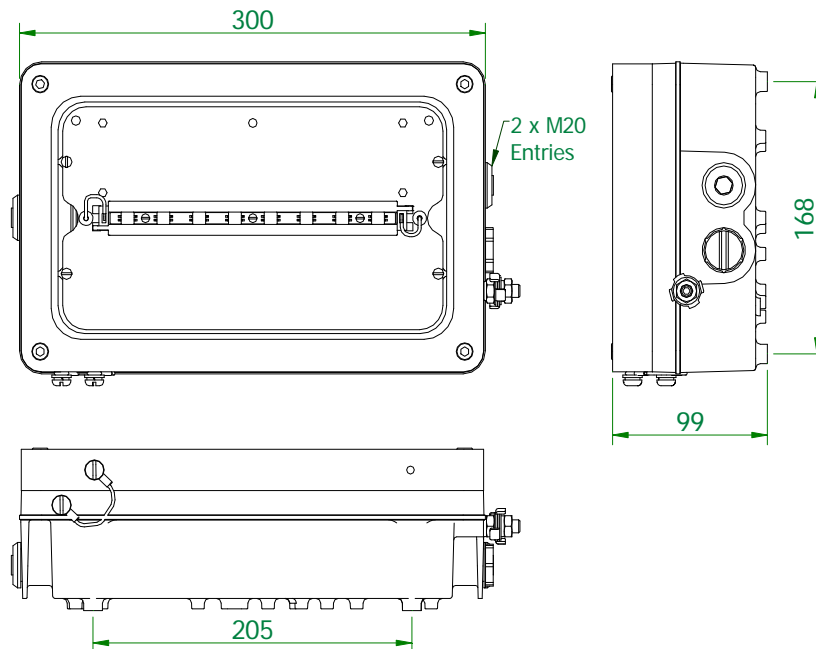


# INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

## NEXLED Emergency

### *Industrial*

**Important:** Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should be followed at all times and this data should be used as a guide only.



Ingress Protection  
Laser safety class  
CE Mark



IP66 and IP67 to BS EN 60529  
Class 1 LED product

The CE marking of this product applies to "The Electrical Equipment (Safety) Regulations 1994", "The Electromagnetic Compatibility Regulations 1992", and the "Waste Electrical and Electronic Equipment Regulations 2006" [This legislation is the equivalent in UK law of EC directives 2006/95/EC, 2004/108/EC and 2002/96/EC respectively].

Declaration of  
compliance with  
standards

The Equipment is declared to meet the provisions of the directives listed above.

I MacLeod Technical Manager

**1.0 Introduction**

The Chalmit NexLED emergency brings the very latest in lighting technology. It is a compact light source that uses ultra bright light emitting diodes to provide light from mains power. The LEDs are maintenance free and can last in excess of 50000 hours or more. They are housed in an impact and corrosion resistant marine grade aluminium enclosure with a toughened glass lens. The control gear is electronic with regulated lamp output. The LEDs work equally well at very low temperatures as they do at high and produce a product with very low overall power consumption. The LEDs also emit no ultra-violet light and no forward heat.

The product is available with 2 or 8 lamps and as an exit sign version with which a self adhesive label kit is used.

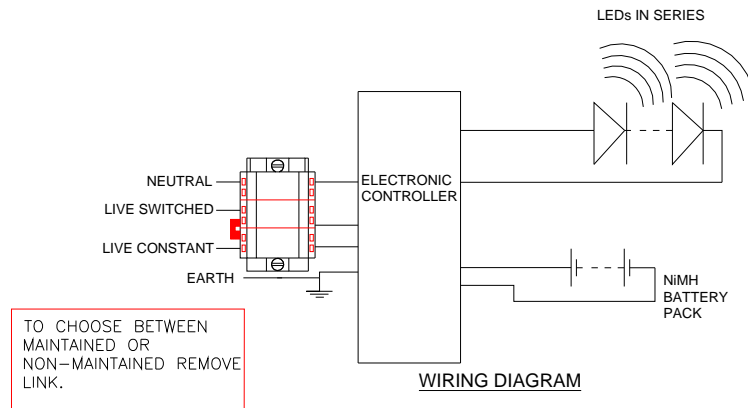
Led	2 x 1W	8 x 1W
Voltage range AC	220-254V	
Frequency range Hz	50/60Hz	
Power Watts 220-254V	7W	15W
Current Amps 220-254V	49mA	65mA

Equipment should not be operated continuously at more than +10/-10% of the rated voltage of the control gear.

<b>Batteries</b>	8W uses 10.8V 4Ah NiMH and the 2W uses 6V 4Ah NiMH		
<b>Emergency Duration</b>	3 hours duration		
<b>Emergency Output</b>	100%		
<b>EMC</b>	EN 61547	EN 55015: 2000	DefStan 59.41
<b>Over voltage</b>	400V ac for 1 min		
<b>Looping</b>	The looping current rating is 16A. 4mm <sup>2</sup> terminals are standard (6mm <sup>2</sup> wiring can be used in the terminals in accordance with the luminaire certificate).		
<b>Ambient Range</b>	-20°C to +45°C		
<b>Tamb Storage</b>	-40°C to +50°C		
<b>Storage</b>	Luminaires are to be stored in cool dry conditions preventing ingress of moisture and condensation.		
<b>LED</b>	The 1W LED used in the Nexled is the latest technology and is a class 1 LED product.		
<b>Fuse and MCB Ratings</b>	Current consumption of an 8 lamp unit is 65mA and for a 2 lamp unit 49mA. It is recommended that for selection of MCB's users should consult the MCB manufacturer. MCB ratings can vary depending on the manufacturer and type and the size of the installation, i.e. impedance of conductors, however type 'C' breakers are usually suitable. The electronic control gear has an inrush current of 12A for less than 1ms on 230V. These figures are worst case with low resistance connections with short cables and low impedance supplies.		

**2.0 Storage**

Luminaires and control gear boxes are to be stored in cool dry conditions preventing ingress of moisture and condensation. Any specific instructions concerning emergency luminaires must be complied with.



### 3.0 Installation and Safety

#### 3.1 General

**These instructions should be read fully and carefully before attempting to install the luminaire. For details of servicing operations, opening etc. see section 6.0.**

Copies of these instructions should be held in a safe place for future reference. It is the responsibility of the installer to ensure that the apparatus selected is fit for its intended purpose and that the installation, operation and maintenance of the apparatus complies with applicable regulations, standards or codes of practice.

Installation should be carried out in accordance with *the IEE wiring regulations and any local authorised practices*. Any specific installation instructions must be referred to. In the UK the requirements of the *Health and Safety at Work Act* must be met and electrical work associated with this product must be in accordance with the *"Manual Handling Operations Regulations"* and *"Electricity at Works Regulations 1989"*. Disposal instructions should be complied with.

The luminaires should be considered Class 1 to EN 60598 and effectively earthed.

**DO NOT MEGGER**

#### 3.2 Tools

No 1/2 Philips/Pozidriv screwdrivers  
3mm and 5mm flat blade screwdriver  
Spanners for installing cable glands.  
Pliers, knife, wire Strippers/cutters.

#### 3.3 Electrical Supplies

The standard unit is rated for a nominal 220-254 AC 50/60Hz. A maximum voltage variation of +6%/-6% on the nominal is expected. The lamp supply is regulated therefore the light output over the supply range is constant.

#### 3.4 LED Module

This product is fitted with LED lamps that can last in excess of 50000 hours. Therefore in many applications replacement of the LED module will be unnecessary. If replacement is required ensure mains supplies are isolated before commencing work. Remove the front cover and then remove the LED array and mounting plate assembly by disconnecting the cables. Assembly is the reverse of disassembly making sure that the earth is connected and also ensuring the gasket/glass mating surfaces are clean and cables are not trapped.

#### 3.5 Mounting

Luminaires should be installed where access for maintenance is practical and in accordance with any lighting design information provided for the installation. Mounting is by 4 holes in the base of the body casting external to the gasket. These should be secured with lock washers or self-locking nuts and bolts and are accessed by removing the front cover. Any mounting attitude may be used.

#### 3.6 Cabling and Cable Glands

##### 3.6.1 Cables

The maximum conductor size is 6mm<sup>2</sup>. Internal earth point is provided next to the main terminal block. 300/500V cable ratings are adequate and no special internal construction is necessary. The standard looping cable size is up to 6mm<sup>2</sup>. The selection of cable size must be suitable for the fuse rating. Terminals are supplied with suitability for looping. Where looping is used the maximum current is 16A. Terminals are accessed by removing the front cover and LED array assembly. Maximum cable temperature rise is 20°C above ambient.

##### 3.6.2 Cable Glands

The installer and user must take responsibility for the selection of cables, cable glands and seals. Three tapped cable entries are provided. Sealing plugs are provided and a tool must be used for their removal. Cable entries are M20x1.5.

The cable and gland assembly when installed must maintain a minimum of IP65 rating.

The cable glands must be suitable for the application.

Where brass cable glands are used in a corrosive environment, cadmium or nickel plating should be used.

### 3.7 Exit Sign Version

To apply the exit label assembly loosen the M6 wire rope fastener from the front cover, position the assembly and fix in place using the M6 fasteners provided. The illuminated height of the label is 140mm with a maximum visible distance of 28m as defined by EN1838.

### 3.8 Emergency Operation

When there is a disruption to the mains supply the Nexled will switch over to battery backup; as there is no difference in light output this will be signalled by one blink at switchover.

### 3.9 Battery Maintenance

The battery pack is a 4Ah NiMH cell pack. Periodic testing (minimum period of one year) allowing full discharge will enable the cells to remain in a healthy condition. Should the battery pack need to be replaced spares may be ordered from Chalmit Lighting. The luminaire must not be operated without the battery connected. If the battery is

removed and not replaced the control gear supply must be disconnected at the mains terminal block and secured.

## 4.0 Inspection and Maintenance

Visual inspection should be carried out at a minimum of 12 monthly intervals and more frequently if conditions are severe.

### 4.1 Electrical Fault Finding and Replacement

Any fault finding must be done by a competent electrician with the luminaire isolated and, if carried out with the luminaire in place, under a permit to work. Fault finding is by substitution with known good components.

### 4.2 Routine Maintenance

Visual tests and checks should be carried out at intervals described by the appropriate regulations and should include the following:

Check that the LEDs are working.

Check for mechanical damage/corrosion.

Check for loose connections including earthing.

Check for undue accumulations of dust or dirt.

Verification of tightness of fixing, glands, blanking plugs etc.

Check for unauthorised modifications.

Check condition of enclosure gasket and fastenings.

Check for any accumulation of moisture.

Periodic inspection of the enclosure seal should be carried out to ensure that the seal is sound.

If the luminaire has been subject to abnormal conditions, for example, severe mechanical impact or chemical spillage, it must be de-energised until it has been inspected by an authorised and competent person. If in doubt, the unit should be returned to Chalmit for examination and, if necessary, replacement. Before re-assembling, all connections should be checked and any damaged cable replaced.

## 5.0 Disposal of Material

Any disposal must satisfy the requirements of the [WEEE directive \[2002/96/EC\]](#) and therefore must not be treated as commercial waste. The unit is mainly made from incombustible materials. The control gear contains plastic resin and electronic components. All electrical components may give off noxious fumes if incinerated.

### 5.1 Battery Disposal

Nickel Hydride batteries are defined as 'controlled waste' under the hazardous waste regulations and the person disposing needs to observe a 'duty of care'.



Batteries can be returned to the manufacturers for recycling.

They must be stored and transported safely and any necessary pollution control forms completed prior to transportation. Take care to fully discharge batteries before transporting, or otherwise ensure that there can be no release of stored energy in transit. For further details refer to our Technical Department.



To comply with the Waste Electrical and Electronic Equipment directive 2002/96/EC the apparatus cannot be classified as commercial waste and as such must be disposed of or recycled in such a manner as to reduce the environmental impact.

Chalmit Lighting is a leading supplier of Hazardous Area and Marine Lighting products

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For technical support, please contact: [techsupport@chalmit.com](mailto:techsupport@chalmit.com)

Note: Chalmit Lighting reserves the right to amend characteristics of our products and all data is for guidance only.