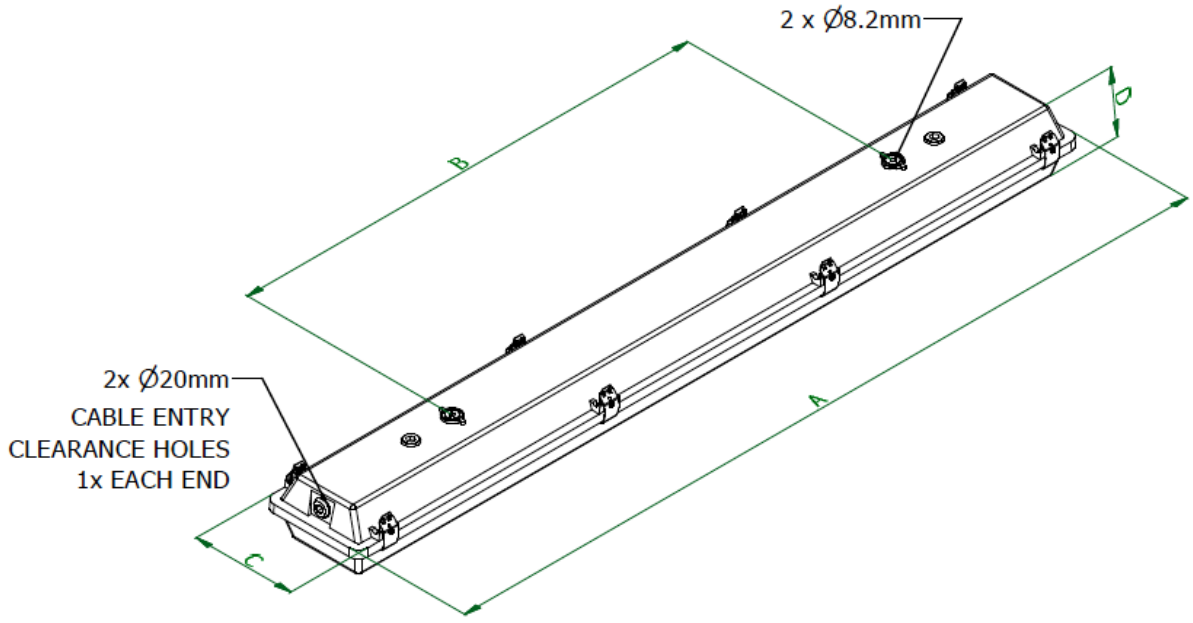
INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

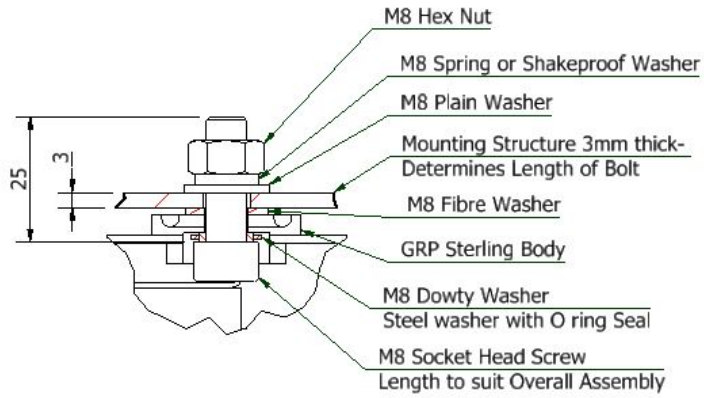
Sterling III - LED Luminaires

Industrial Non-Emergency

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



Dimension			
Dim	03 L	06 L	09 L
A	702	1312	1312
B	500	800	800
C	172	172	172
D	106	106	106



Section Thru Mounting Holes
Typical Arrangement of Sealing Washers

0.0 Specification	
Type of Protection	N/A
Standards	EN 60598-1, EN 60598-2-22
Area Classification	Industrial, (Non- Hazardous)
Ambient	03L -20°C to +55°C, 06L, -20°C to +50°C, 09L -20°C to +45°C
Ingress Protection	IP65 to EN 60529
CE	The CE marking of this product applies to "The Electrical Equipment (Safety) Regulations 2006", "The Electromagnetic Compatibility Regulations 2004", the "Waste Electrical and Electronic Equipment Regulations 2006". [This legislation is the equivalent in UK law of EU directives 2014/35/EU, 2014/30/EU, 2012/19/EU respectively].
UKCA	The UKCA marking of this product applies to "The Electrical Equipment (Safety) Regulations 2016", "The Electromagnetic Compatibility Regulations 2016", the "Waste Electrical and Electronic Equipment Regulations 2012 M Poutney Technical Manager

1.0 Introduction – Sterling III Safe Area LED Luminaire

The Sterling Safe Area LED Luminaires are surface mounted or suspended, utilising the 2 holes on the base of body. They are mainly used in harsh environments and are constructed using a corrosion resistant glass reinforced polyester body attached to an injection moulded polycarbonate diffuser by self-retaining stainless-steel toggle clips. The control gear and LED's are mounted on a removable tray, which for maintenance has hanging straps. Note: The ratings are listed in Table A & B

2.0 Storage

To optimise lifetime, luminaires should be stored in cool dry conditions preventing ingress of moisture and condensation between -25°C to +60°C

3.0 Installation and Safety

3.1 General

There are no health hazards associated with this product whilst in normal use.
However, care should be exercised during the following operations.
Installation should be carried out in accordance with the local area code of practice, whichever is appropriate.
In the UK the requirements of the 'Health and Safety at Work Act' must be met.

Handling and **Electrical work** associated with this product to be in accordance with the *'Manual Handling Operations Regulations'* and *'Electricity at Work Regulations, 1989'*. Your attention is drawn to the paragraphs (i) 'Electrical Supplies', (ii) 'Electrical Fault Finding and Replacement' and (iii) 'Inspection and Maintenance'. The luminaires are Class 1 and should be effectively earthed.
The information in this leaflet is correct at the time of publication. The company reserves the right to make specification changes as required.

3.2 Tools
Screwdriver flat blade 12mm and 3mm. Suitable spanners for installing glands.
Pliers, knife, wire strippers/cutters.

3.3 Electrical Supplies
The supply voltage and frequency should be specified when ordering. A maximum voltage variation of +/-6% on the nominal is acceptable; however, the ballast is designed to accept tolerances of up to +/-10%. Luminaires should not be operated continuously at more than +/-10% of the rated supply voltage of the control gear.

3.4 Light Emitting Diode (LED)
LED's are supplied in 3000, 6000 or 9000 Lumen options with the colour temperature of 3000K,4000K or 5000K (Check nameplate)

3.4.1 Dimming Option
If the product has a /DM suffix this means it comes fitted with a dali dimmable ballast.
2 additional cable cores are needed to run the DALI data cable to DALI switch or PC with compatible software and hardware

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.
On mounting the luminaire by using the 8.2mm ∅ holes, it is the responsibility of the user to ensure that an adequate seal is made to maintain the desired IP rating with a minimum of IP65. Washers are provided. Other mountings are available on request.

3.6 Cabling and Cable glands
3.6.1 Cables
The GRP models have facility for through wiring but do not have a facility for looping. The metal bodied series have the facility both looping and through wiring.

The temperature conditions of the supply cable entry point are such that 70ºC (ordinary PVC) cable can be used. 300/500V cable ratings are adequate and no special internal construction is necessary. Where MCB's are used, the type with the higher short time tripping current ratio used for motor starting and lighting should be specified. The standard maximum looping size is 2.5mm² with 2.5mm² through wiring. An internal earth tag can be fitted to the cable gland.

Note: Through wiring when used, is subject to a maximum current of 16A.

3.6.2 Cable Glands
Cable glands when installed should maintain the minimum IP65 rating of the enclosure. The cable gland should adequately secure the cable in the unit. 2 off 21mm diameter holes are provided. One transit plug is fitted, the other entry is permanently plugged. It is the responsibility of the user to ensure that an adequate seal between the gland body and the apparatus is maintained.

3.6.3 Cabling
Access for cabling is via diffuser cover, care is to be taken as there is no suspension of diffuser cover. The diffuser clips are undone, and the diffuser laid aside. The gear tray can be removed by undoing the spring clips on the suspension cables. The cable glands should be fitted with suitable washers to maintain the desired IP

rating. Any earth tag connections should be fitted. The connecting terminals are identified, and the conductors should be bared back so that they make full contact in the terminals, but the bare conductor should not be more than 1mm beyond the terminal. Unused terminal screws should be tightened. The cores must be identified by polarity and connected in accordance with the terminal markings. Before re-fitting the cover, a final check on the correctness of connections should be made.

3.7 Replacing LED's

Before opening the diffuser cover, ensure that the luminaire is isolated from mains supply. Access for re-lamping is via the diffuser cover; care is to be taken, as there is no suspension facility for the diffuser cover.
It is recommended on failure of LED's an entire geartray kit including driver should be fitted. This will maximise the lifetime of the product.

Note the diffuser cover orientation on removal as the diffuser cover must be refitted in its original orientation to maintain the IP rating.

3.8 Inspection and Maintenance

3.8.1 Routine Examination

The luminaire must be de-energised before opening. Individual organisations will have their own procedures. What follows are guidelines based on our experience:

1 Ensure LED's are lit when energised by mains supply.
2 Visually check diffuser cover for damage, this should only be cleaned using a damp cloth to avoid static, and only use recommended detergents for polycarbonate. If the polycarbonate is discoloured or damaged, a new diffuser cover must be fitted.
3 When de-energised and left to cool, there should be no significant sign of internal moisture. If there are any signs of water ingress, the luminaire should be opened dried and any likely ingress points eliminated by re-gasketting or other replacements.
4 Check cable glands for tightness and nip up if required.
5 Check any external and internal earths.
6 Check all terminations are firmly screwed down, tighten if necessary.
7 Check clips visually for any damage and replace if necessary.
8 If it has been suspected that the luminaire has suffered mechanical damage, a stringent workshop check on all components should be made. All components can be removed from the luminaire for inspection.

3.8.2 Commissioning

Energise the mains and check that LED's light when the supply is energised.

4.0 Electrical Fault Finding and Replacement

The supply must be isolated before opening the Luminaire.
Any live fault finding must be done by a competent electrician and, if carried out with Luminaire in place, under a permit to work.

If LED's go out repeatedly, and replacement LED's do not work or expected life is reduced, the control gear should be returned for replacement / testing. The electronic drivers are approved components.
On re-assembly, all faulty/damaged wiring should be replaced, and connections checked.

5.0 Fuse Ratings

With the availability of MCB's with a wide range of characteristics, the individual engineer can make a better judgement of what is required. Use MCB's suitable for inrush currents to reduce ratings. Where MCB's are used, the type with the higher short time tripping current ratio used for motor starting and lighting should be specified. The inrush current can be calculated where circuit conditions are known. The inrush currents can be obtained from the manufacturer.

6.0 Disposal of Material

The fuse ratings for LED strips in circuits need to take account of the Driver within the construction of the Luminaire. All calculations must satisfy wiring regulations

Any disposal must satisfy the requirements of the WEEE directive [2012/19/EU and Regulations 2012] and therefore must not be treated as commercial waste. The unit is made from combustible materials, the control gear contains plastic parts and electronic components. All electrical components and the body parts may give off noxious fumes if incinerated. Take care to render these fumes harmless or avoid inhalation. Any local regulations concerning disposal must be complied with.

6.1 LED's

LED's in modest quantities are not "special waste". They should be broken in a container to avoid possible injury from fragmentation. Avoid inhaling dust. This applies to the UK; there may be other regulations on disposal operating in other countries.

Important: *Do not incinerate LED's.*

To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU and Regulations 2012 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.

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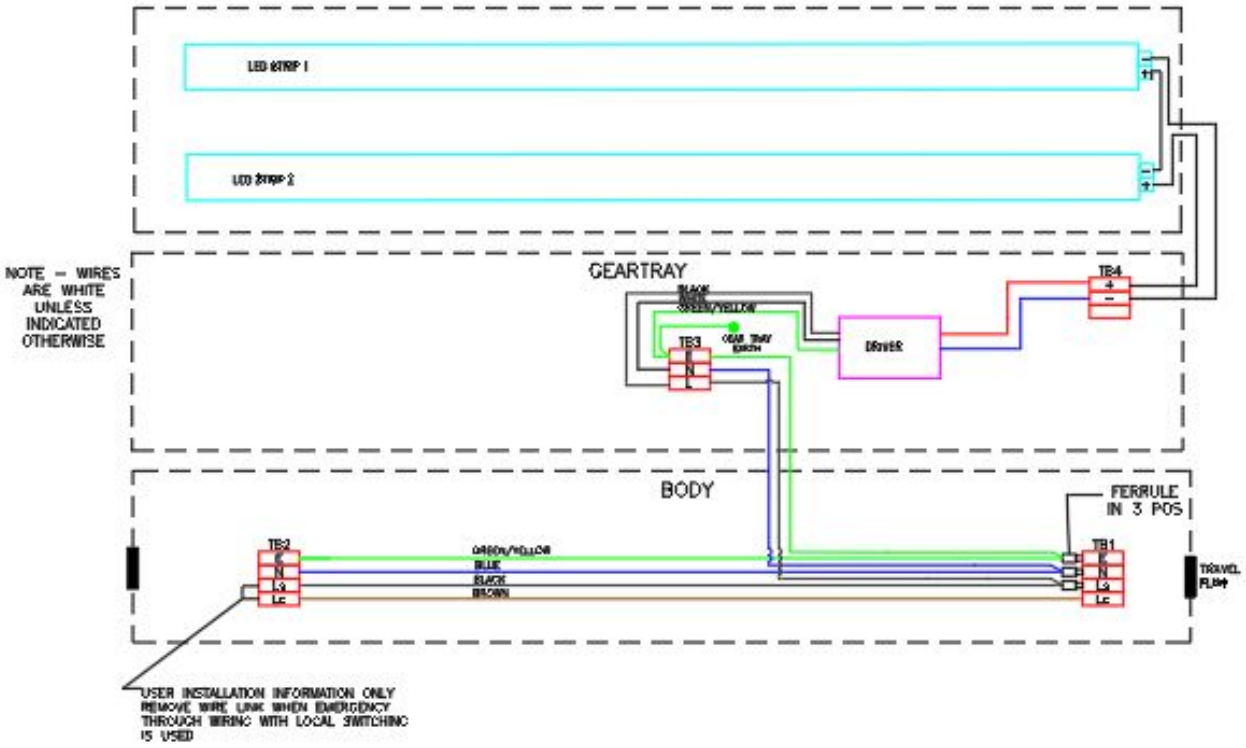
Table A	**Series Standard Circuit**		
Product code	**Body Type**	**Nominal Volts**	**Power Consumption Watts**
ST3I/03L/LE	2ft Twin	120-277Vac 50/60 Hz 120-300Vdc	23W
ST3I/06L/LE	4Ft Twin	120-277Vac 50/60 Hz 120-300Vdc	42W
ST3I/09L/LE	4Ft Twin	120-277Vac 50/60 Hz 120-300Vdc	63W

Table B - Series Standard Circuit.				
No. of LED strips	**Lumens**	**Driver current**	**Line Current (Amp)**	**Inrush current/Duration**
03L 2 x 560mm	3592	300mA	0.2 – 0.09A	34A (2.3 µs)
06L 2 x 1120mm	6241	600mA	0.37 – 0.16A	36A (2.7 µs)
09L 2 x 1120mm	8798	850mA	0.54 – 0.24A	31A (26.5 µs)

Typical Standard LED Wiring Diagram



Note: For other Wiring Diagrams, please contact the manufacturer.

	EU/UK-Declaration of conformity **UE-Déclaration de conformité** **EU-Konformitätserklärung**		
Manufacturer	Chalmit	Address	388 Hillington Road, Glasgow. G52 4BL Scotland UK
Product	Sterling III LED Industrial		
Catalogue	ST3I/***/** Example: ST3I/03L/LE		
Area Classification	Industrial, (Non-Hazardous)		
Ingress Protection	IP65		
Ambient	03L -20°C to +55°C, 06L, -20°C to +50°C, 09L -20°C to +45°C		

Terms of the directive:		Standard & Date Certified to	Standards Date Declared to
Prescription de la directive:		Standard & date certifiée à	Normes date Déclaré
Bestimmungen der Richtlinie:		Standard & Datum Zertifiziert nach	Standards Datum erklärt
2014/30/EU Regulations 2016	Electromagnetic compatibility	EN 55015 : 2019	
2014/30/UE	Compatibilité électromagnétique	EN 61547 : 2009	
2014/30/EU	Elektromagnetische Verträglichkeit	EN 61000-3-2 : 2019	
2014/35/EU Regulations 2016	Low voltage equipment	EN 60598-1 : 2015	
2014/35/UE	Équipements électriques à bas voltage	EN 60598-2-5 : 2015	
2014/35/EU	Niederspannungsgeräte / -systeme	EN 60598-2-22 : 2014	
		EN 60529 : 1992+A2:2013	
2012/19/EU Regulations 2012	Waste of electrical and electronic equipment		
2012/19/UE	Déchets d'équipements électriques et électroniques		
2012/19/EU	Entsorgung der elektrischen und elektronischen Geräte / Systeme		
2011/65/EU Regulations 2012	RoHS II Directive		

On behalf of the Chalmit, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms to all technical and regulatory requirements of the above listed directives.

En tant que représentant du fabricant Chalmit, je déclare qu'à la date où les équipements accompagnant cette déclaration sont mis sur le marché, ceux-ci sont conformes à toutes les dispositions réglementaires et techniques des directives énumérées ci-dessus.

Hiermit bestätige ich, im Namen von Chalmit, dass am Tag der Lieferung des Produkts/der Produkte zusammen mit dieser Erklärung das Gerät/die Geräte alle technischen und regulativen Anforderungen der oben aufgeführten Direktiven erfüllt.

Name and Date
Nom et Date
Name und Datum

Mark Poutney 11/11/2021

Technical Manager
Directeur technique
Technischer Leiter

Quality Management System Acreditation: **ISO 9001**
Système de Management Qualité Accréditation:
Qualitätsmanagementsystem Akkreditierung:
Environmental Management System. **ISO 14001**
Système de gestion de l'environnement. by/par/durch
Umwelt kontroll system. **Loyd's Register**
Certificate No./Certificat N°/Zertifikat Nr. **LRQ 4005876**