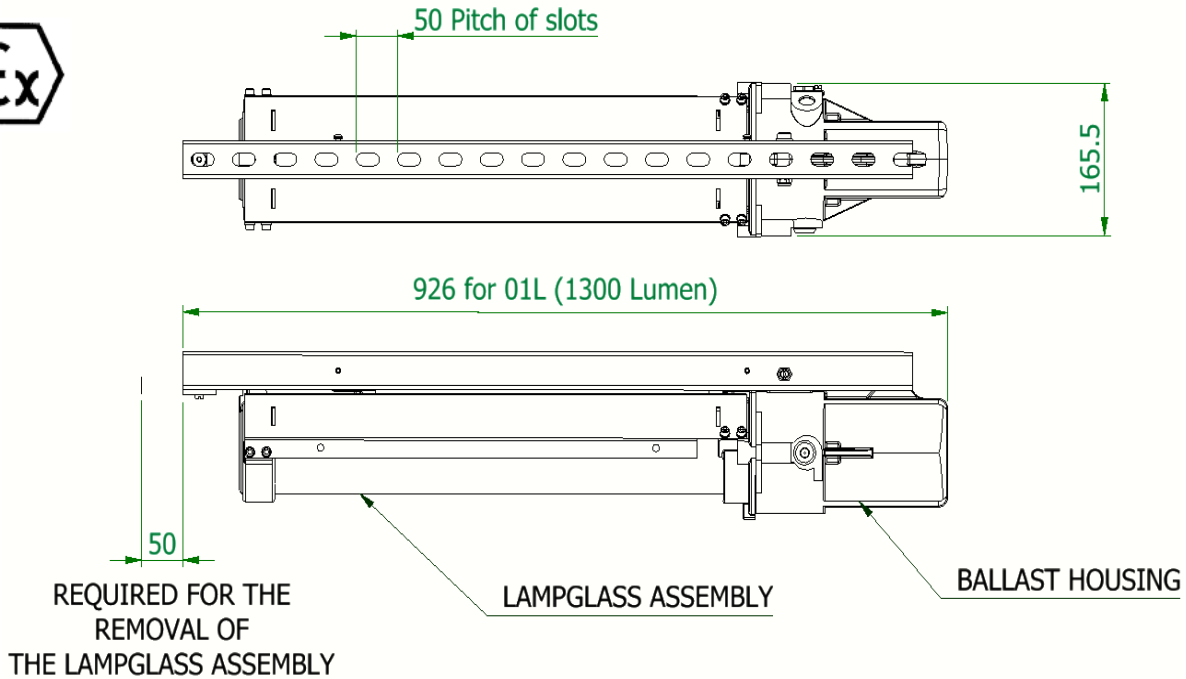


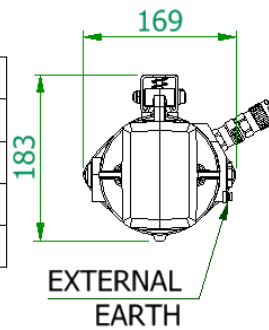
INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS



Lomond LED ATEX, IECEx and UKEX

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.



		TEMPERATURE CLASSIFICATION
Luminaire	Gas Group	T6
01L	IIB / IIC	-20°C TO +55°C



Type of Protection	Ex d (flameproof), Ex tb (dust)
Protection Standards	(IEC) EN 60079-0, (IEC) EN 60079-1, (IEC) EN 60079-31
Area Classification	Zone 1 and Zone 2 areas to (IEC) EN 60079-10-1 Zone 21 and Zone 22 areas to (IEC)EN 60079-10-2
Installation	(IEC) EN 60079-14
Certificate	IECEX Certificate of Conformity IECEX CML16.0016X EU Type Examination Certificate CML 16ATEX 1020X UK Type Examination Certificate CML21UKEX1497X
Equipment Coding	Ex db IIC T6 Gb Ex tb IIIC T85°C Db
ATEX/UKEX Coding	⊕ II 2 G D
Ingress Protection	IP66/67 to EN 60529
 	<p>The CE marking of this product applies to "The Electrical Equipment (Safety) Directive", "The Electromagnetic Compatibility Directive", the "Waste Electrical and Electronic Equipment Directive" and the "Equipment and Protective Systems intended for use in Explosive Atmospheres Directive". [2014/35/EU, 2014/30/EU, 2012/19/EU and 2014/34/EU respectively].</p> <p>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" and the "Equipment and Protective Systems intended for use in Explosive Atmospheres Regulations 2016</p> <p>The Equipment is declared to meet the provisions of the ATEX directive (2014/34/EU) by reason of the Type Examination/EU Type Examination and meets the UK statutory requirements SI 2016 No.1107 and compliance with the Essential Health and Safety Requirements. M Poutney Technical Manager</p>

SPECIAL CONDITIONS FOR SAFE USE

The Lomond Range of Luminaires shall only be installed in areas where there is a low risk of impact.

IMPORTANT

1. High voltage insulation testing may be carried out, but the test voltage must not exceed 500V DC.

GENERAL INSTALLATION NOTES.

1. Do not attempt installation until you are familiar with all warnings, precautions and procedures within this instruction sheet.
2. The presence of certain chemicals in the explosive atmosphere may cause a chemical reaction with non-metallic materials such as the silicone gaskets that could have detrimental effect on their performance. Chemical compatibility is highly dependent on concentration, temperature, humidity and other environmental conditions. The end use will assume responsibility for evaluation of gaseous or direct contact compatibility at their site prior to product installation. If in doubt please contact Chalmit sales.

SPECIAL NOTES

NO ATTEMPT must be made to remove the reflector from the lamp glass assembly.
The glass assembly should be kept clean.

The terminal block is suitable for cables from 0.5mm² to 4mm² An external and internal earth is provided.

Ratings – Control Gear During Normal Operation

No. off LED strips	Lumens	Driver Current	Power Consumption Watts	Line Current	RMS Inrush Current/ Duration
2	1314	350mA	19	0.10 – 0.09A	36.2A (0.99uS)

1.0 Introduction – Protection Concept

The Lomond Zone 1 LED Luminaires are surface mounted or suspended. They are mainly used in harsh environments, and are constructed using an Aluminium Housing Casting attached to a Glass Tube diffuser by Aluminium Cast Caps. The control gear and LED strips are mounted on a removable tray which for maintenance has hanging straps.

2.0 Storage

Luminaires and control gear boxes are to be stored in cool dry conditions preventing ingress of moisture and condensation.

3.0 INSTALLATION AND MAINTENANCE NOTES SPECIFIC TO THIS PRODUCT.

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 *EN/IEC 60079-14* or the local hazardous area code of practice, whichever is appropriate, and fitting of specified insulating material to be adhered to where a specific fire resistance rating is required.

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 Luminaires are heavy and suitable means of handling on installation must be provided.

Guards can be supplied with or fitted retrospectively to protect glass if there is a higher than normal risk of mechanical damage.

This Luminaire has passed thermal shock testing during certification, it is still advisable to mount the Luminaire in locations to reduce the possibility of thermal shock.

Certification details on the rating plate must be verified against the application requirements before installation.

The information in this leaflet is correct at the time of publication. The company reserves the right to make specification changes as required.

Warning: *Luminaires are assessed and/or tested for EMC requirements. This is based on the disposition of entry cables and, where appropriate, through wiring arrangements as supplied or specified. Users must take care not to introduce wiring into parts of the apparatus materially different to that which could be reasonably inferred from the disposition of fixed supply terminals and specified wiring.*

3.1.1 Use in Combustible Dust Atmospheres

Where the equipment is used in ignitable dust atmospheres reference must be made to the selection and installation standards in order that the equipment is used correctly. In particular this applies to the de-rating of surface temperature for use where dust clouds may be present. Dust layers should not be allowed to accumulate on the fitting surface and good housekeeping is required for safe operation. Dust in layers has the potential to form ignitable clouds and to burn at lower temperatures.

Refer to EN (IEC) 60079-10-2 & EN (IEC) 60079-14 for additional details of selection and installation.

3.1.2 Hybrid Mixtures – Gas and Dust

Where hybrid mixtures exist as a potentially explosive atmosphere, consideration should be given to verifying that the maximum surface temperature of the Luminaire is below the ignition temperature of the hybrid mixture.

3.2 Tools

Suitable spanners for installing cable glands. 3mm flat blade screwdriver.
8mm Hexagonal Allen Key. Pliers, knife, wire strippers/cutters.

4.0 Electrical Supplies

The supply voltage and frequency should be specified when ordering. A maximum voltage variation of +6%/-6% on the nominal is expected. (The safety limit for T rating is +10%). Luminaires should not be operated continuously at more than +6%/-6% of the rated supply voltage of the control gear.

5.0 Light Emitting Diodes (LED)

LED's are supplied in 1300 Lumen options with the colour temperature of 4000K

6.0 Mounting

Luminaires should be installed where access for maintenance is practical and in accordance with any lighting design information provided for the installation.

The lamp glass assembly must be removed prior to mounting the Luminaire. This is achieved by removing the spring nut/square washer at the end of the channel, releasing the two screws connecting the assembly to the Aluminium housing and unclipping the suspension cable. The mounting channel should be secured in any orientation using a minimum of two fixing points. The Luminaire should then be reassembled. Fit the spring nut/ square washer in the undercut in the lamp glass end casting to prevent movement due to vibration.

7.0 Cable Connection

7.1.0 Cables

The temperature conditions of the supply cable entry point are such that 70°C (ordinary PVC) cable can be used. 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 4.0mm². An internal earth tag can be fitted to the cable gland.

7.1.1 Cable Glands

The installer and user must take responsibility for the selection of cables, cable glands and seals.

The product is certified for ATEX, IECEx and UKEX and to comply with the certification for installation cable glands and sealing plugs must be ATEX, IECEx or UKEX certified depending on site requirements.

Cable glands for entry into Ex d enclosures when fitted with any gland to body sealing method and the supply cable must reliably maintain the IP66/67 rating of the enclosure. The cable gland must withstand an impact value of 7Nm or 4Nm where the risk of mechanical damage is low.

Sealing plugs must be similarly rated and a tool must be used for their removal. Where the cable is not reliably clamped externally to the apparatus, the cable gland must clamp the cable against a pull in Newtons of 20x the cable OD in mm for non-armoured cable and 80x the cable OD for armoured cable. Selected metal industrial cable glands may meet this requirement. Glands for metal covered mineral insulated cables must be Ex d certified. Where brass cable glands are used in a corrosive environment nickel plating should be used. Two tapped cable entries are provided, one with a plug and seal suitable for permanent use, the other has a travelling plug. M20 x 1.5 entries are standard, other sizes are available on request

7.1.2 Electrical Connections

Luminaires are supplied as standard for looping, the rating is 16A, Terminals for up to 4mm². If work is to be done on any Luminaire which has already been connected to the electrical system, it must be isolated from the system. Refer to 6.0 for method of opening the product, this will give access to the mains terminals.

7.1.3 Installation of Electronic Drivers

High voltage insulation testing may be carried out, but the test voltage must not exceed 500V DC.

When the unit is ready for operation the mains connections must be made. After commissioning the unit can be shut down for a long period without loss of function.

8.0 Servicing and Operation

8.1.0 Releasing the LED Tray / Gear Tray

- a. Remove the Lamp glass assembly as described above (Refer to 6.0). The lamp glass should be jacked out as the screws are progressively slackened, if not jar the ballast housing slightly to free it. Allow the lamp glass to hang on the suspension cord.

- b. Slacken the gear tray securing screw to allow the gear tray to be withdrawn.
- c. Access to the LED strips and the control gear can be gained. The gear tray assembly can then be installed in the lamp glass assembly by reversing the above process.
- d. Apply a smear of non-setting grease to the flamepath on the lamp glass assembly before fitting it to the ballast housing. These two parts should be aligned carefully and the bolts should tighten without difficulty. If not, attempt to improve the alignment.
- e. Secure the assembly by alternately tightening the securing screws. Some resistance may be encountered because of air locking of the enclosure. The assembly is completed when the lamp glass assembly is fully home and compressing the sealing ring.

8.1.1 Commissioning

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

9.0 Inspection and Maintenance

1. Flame paths should be checked periodically for damage or corrosion.
2. Flame paths should be cleaned using a non-metallic scraper and/or suitable non-corrosive cleaning fluids.
3. Cracked or broken lamp glass assemblies must be replaced by units supplied by the manufacturer.
4. Replace any missing fasteners with items of the correct quality
5. The lamp glass assembly should be kept clean. (Solvents should not be used in the cleaning process.)
6. Parts that are cracked, damaged or worn must be replaced with the correct parts supplied by the manufacturer.

9.1.0 Replacement of Electronic Ballast .

The electronic ballast contain no replaceable parts. Should it be found necessary to replace these parts, the following procedure should be adopted:

- a. Ensure that the Luminaire is isolated from mains supplies, otherwise a risk of shock may occur.
- b. Disconnect the leads on the ballast at the terminal block.
- c. Undo the ballast securing screws and washers and withdraw the ballast from the gear body.
- d. Replace in reverse order.

9.1.1 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:

- a. Ensure LED's are lit when energised by mains supply
- b. 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 up, dried and any likely ingress points eliminated by re-gasketing or other replacements.
- c. Check cable gland for tightness and nip up if required.
- d. Check any external and internal earths.
- e. Check all terminations are firmly screwed down, tighten if necessary.
- f. 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.

9.1.2 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.

The control gear can be tested for continuity of connections with a low voltage tester.

If LED's go out repeatedly, and replacement components do not work or expected life is reduced, the control gear should be returned for replacement/testing.

On re-assembly all faulty/damaged wiring should be replaced and connections checked.

IMPORTANT. All components that are replaced must be in accordance with the manufacturer's specification. Failure to use such components invalidates the certification, approval and warranty of the Luminaire and may make it dangerous. NO modification should be made to the Luminaire without the knowledge and approval of the manufacturer. If in doubt, refer to the manufacturer.

10.0 Disposal of Material

The unit is made from combustible materials. The control gear contains plastic parts and polyester resin. 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. 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 mainly made from incombustible materials. The control gear contains plastic, resin and electronic components. All electrical components may give off noxious fumes if incinerated.

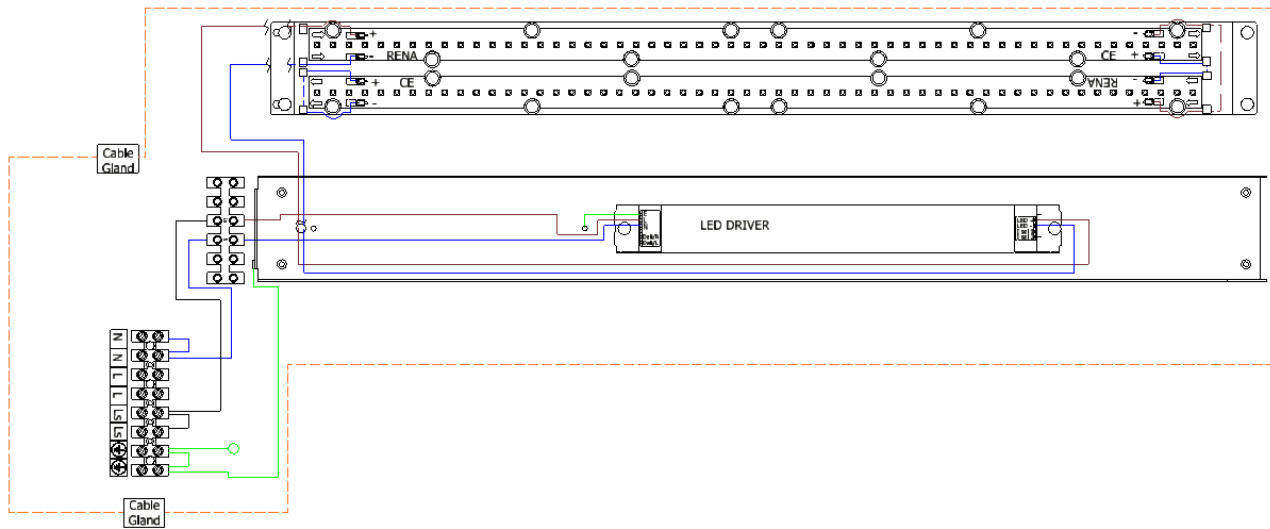
10.1 LED's

LED's in modest quantities are not "special waste". They should be broken up in a container to avoid injury. Avoid inhaling dust

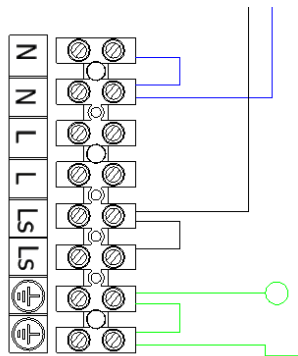


To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU and Regulations 2012 the apparatus cannot be classified as commercial waste and as such must be disposed of or recycled in such a manner as to reduce the environmental impact.

TYPICAL WIRING DIAGRAMS





TYPICAL MAINS SUPPLY TERMINAL BLOCK WIRING DIAGRAM







Chalmit Lighting is a leading supplier of Hazardous Area lighting products

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For technical support, please contact: techsupport@chalmit.com

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

	EU/UK-Declaration of conformity		
	UE-Déclaration de conformité		
	EU-Konformitätserklärung		
Manufacturer	Chalmit	Address	388 Hillington Road, Glasgow. G52 4BL Scotland UK
Product	Lomond LED Luminaire.		
Notified Body	CML B.V. 2776		
EU - Type Examination Certificate	CML 16ATEX 1020X		
Approved Body	Eurofins CML 2503		
UK Type Examination Certificate	CML 21UKEX1497X		
ATEX/UKEX Coding	 II 2 G D		
ATEX/UKEX Classification	Group II Category 2 GD		
Equipment Coding	Ex db IIC T6 Gb or Ex tb IIIC T85°C Db, Tamb -20°C to 55°C		
Ingress protection	IP66/67		
The technical basis, with respect to equivalence of			
La base technique, en ce qui concerne l'équivalence de			
Die technische Grundlage hinsichtlich der Normen			
Protection Standards EN 60079-0, EN 60079-1, EN 60079-31.			
Area Classification EN 60079-10-1 and EN 60079-10-2			
of compliance with the EHSRs is valid as there are no changes which materially affect the state of technological progress of the product.			
en conformité avec les EESS est valide puisqu'il n'y a aucun changement qui affecte matériellement l'état de l'évolution technologique du produit.			
zur Erfüllung der GSGA ist gegeben, da keine Änderungen erfolgt sind, die einen Einfluss auf den technischen Stand des Produkts haben.			
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
2014/34/EU SI 2016 No.1107	Equipment and protective systems intended for use in potentially explosive atmospheres.	EN 60079-0: 2012 EN 60079-1: 2014	
2014/34/UE	Appareils et les systèmes de protection destinés à être utilisés en atmosphères potentiellement explosibles.	EN 60079-31: 2014	
2014/34/EU	Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsfähigen Bereichen.		
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 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 Mark Poutney 08/11/2021
Nom et Date
Name und Datum

Technical Manager
Directeur technique
Technischer Leiter

Quality Assurance Notification by: **SGS Fimko OY**
Notification d'assurance qualité par: **0598**

Qualitätssicherungsnotifikation durch:

Quality Management System Accreditation: **ISO 9001**
Système de Management Qualité
Accréditation:

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

UKCA Quality Assurance Notification by: **SGS Fimko OY**
by: **10598**