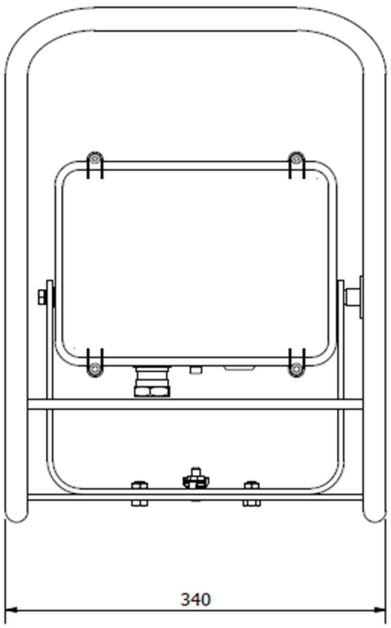
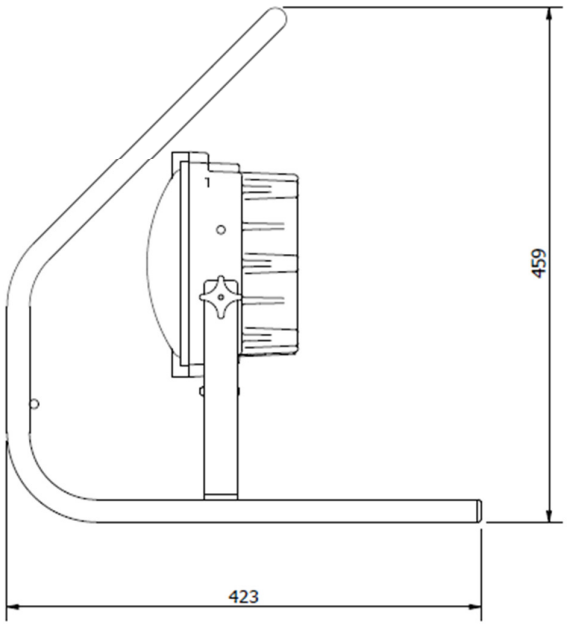
INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

HDL106T - Transportable Floodlight

ATEX & IECEx

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.





Weight 9kg

Type Of Protection	Ex e mb (Increased safety,encapsulation), Ex tb (dust)	
Protection Standards	(IEC) EN 60079-0, (IEC) EN 60079-7, (IEC) EN 60079-18, (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 SIR 10.0055X EU - Type Examination Certificate Sira 10ATEX5115X	
Equipment Coding	HDL106TN 100V to 254V 50/60Hz	HDL106TN 18V to 54V AC/DC
*ambient ratings vary depending on the plug/sockets connected to the luminaire.	Ex e mb IIC T4 Gb Ex tb IIIC T103°C Db IP6X -20°≤ Ta ≤+50°C or Ex e mb IIC T3 Gb Ex tb IIIC T103°C Db IP6X -20°≤ Ta ≤+59.5°C	Ex e mb IIC T4 Gb Ex tb IIIC T87°C Db IP6X -20°≤ Ta ≤+55°C
ATEX Coding	⟨Ex⟩ II 2GD	
Ingress Protection	IP66/67	
Laser safety class	Class 1 LED product	
CE Mark 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” and the "Equipment and Protective Systems intended for use in Explosive Atmospheres Regulations 1996". [This legislation is the equivalent in UK law of EU directives 2014/35/EU, 2014/30/EU, 2012/19/EU and 2014/34/EU respectively]. The Equipment is declared to meet the provisions of the ATEX directive (2014/34/EU) by reason of the EU Type Examination and compliance with the Essential Health and Safety Requirements. M Poutney Technical Manager	

SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number).

1. When the Lexan polycarbonate lens is fitted, the HDL106T Modular Floodlight/Bulkhead shall not be moved while connected to an electrical supply. When in use, the equipment shall be supported and mounted in a fixed and stable arrangement. The equipment shall be removed from the hazardous area if dropped and shall be inspected in order to determine its continued suitability for use in the hazardous
2. Except for internal wiring, not more than one single or multiple strand lead shall be connected into either side of any terminal, unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated crimped boot lace ferrule.
3. Leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1 mm of the metal of the terminal throat.
4. When terminals in accordance with certificate Sira 01ATEX3247U are used, all terminal screws, used and unused, shall be tightened down to between 0.5 Nm and 0.7 Nm.
5. When terminals in accordance with certificate Sira 01ATEX3249U are used, all terminal screws, used and unused, shall be tightened down to between 1.2 Nm and 2 Nm.
6. When terminals in accordance with certificates Sira 01ATEX3247U and Sira 01ATEX3249U are used, they shall only be installed and wired with cable within a temperature range of -10°C to 80°C.
7. When cross-connecting combs are used on terminals to certificates Sira 01ATEX3247U and Sira 01ATEX3249U, the relevant conditions associated with those certificates shall be applied.
8. Cable entry holes shall be fitted with either an appropriately certified cable gland or appropriately certified blanking element. These shall provide and maintain a minimum enclosure ingress protection of IP66 or IP67 as appropriate.
9. If more than 8 individual LEDs are not illuminated, the LED assembly shall be replaced.
10. The supply circuit must be protected by a fuse capable of withstanding a prospective short circuit current of 1500 A.
11. The HDL106E and HDL106NE, the battery powered emergency versions, are suitable for an ambient temperature range of -20°C to +50°C when installed with the terminal cross-link in accordance with the manufacturer's installation instructions, which achieves a 100% output, i.e. 48 illuminated LEDs. The HDL106E and HDL106NE are suitable for an ambient temperature range of -20°C to +55°C when the terminal cross-link is not installed, which achieves 50% output, i.e. 24 illuminated LEDs.
12. When the Lexan polycarbonate lens is fitted, the equipment shall only be used in areas with a low risk of mechanical impact.
13. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.

1.0 Introduction

The Chalmit HDL106 Transportable range brings to hazardous areas 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 up to 150,000 + hours @ 25°C ambient (L70). They are housed in an impact and corrosion resistant marine grade aluminium enclosure with a toughened glass or polycarbonate 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.

Important:

Electrostatic Charging Hazard: Clean only with a damp cloth, when fitted with a polycarbonate lens.

LED White High Power.
Voltage ranges: 100 – 254V 50/60 Hz
18 – 54V AC/DC

Electrical Operating	**24 x LED HDL106TN**	**48 x LED HDL106TN**
Power Watts	27W	53W
Current Amps	0.29 – 0.11A	0.56 – 0.22A

Electrical Operating	**24 x LED HDL106TN**	**48 x LED HDL106TN**
Power Watts	27W	53W
Current Amps	1.5 – 0.49A	2.9 – 0.98A

For lumen output photometric data can be requested.

Power Factor 0.9 minimum

Over voltage 375V

Linkable Ambient restrictions apply when linking multiple units with CEAG Sockets. Please contact Chalmit Technical for further information.

Storage Luminaires are to be stored in cool dry conditions -20°C to +50°C preventing ingress of moisture and condensation.

PAT Testing (Insulation) 500V DC MAX for 1 min

1.0 Installation and Safety

1.1 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. Certification details on the rating plate must be verified against the application requirements before installation.
The user must ensure that there is no potential difference between the earth supply to the luminaire and the local earth. If this is not possible, the external earth on the product should be used to earth the luminaire to metalwork in the surrounding environment.
The information in this leaflet is correct at the time of publication. The company reserves the right to make specification changes as required.

1.2 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 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.

1.3 Hybrid Mixtures – Gas and Dust

Where hybrid mixtures exist as defined in EN 1127 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.

1.4 Tools

5mm Allen Key (Hex)
Spanners for installing cable glands. Pliers, knife, wire strippers/cutters.

2.0 Electrical Supplies

A maximum voltage variation of +6%/-6% on the nominal is expected. (The safety limit for T rating is +10%). Equipment must not be operated outside of the rated voltage of the control gear. The lamp supply is regulated therefore the light output over the supply range is constant.

3.0 LED Array & Driver

This product is fitted with LEDs that can last up to 150,000 + hours @ 25°C ambient (L70). Therefore in many applications replacement of the LED array 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 assembly.
Care must be taken when disconnecting and reconnecting wiring.
If required contact Chalmit Technical.

4.0 Inspection and maintenance

Visual inspection should be carried out before each use to ensure that the housing and cable show no signs of damage; refer to EN/IEC 60079-17. For details of spare cable, plug and socket assemblies, please contact Chalmit.

5.0 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.

6.0 Routine Maintenance

Visual tests and checks should be carried out at intervals described by the appropriate regulations, EN/IEC 60079-17, 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. *Torque Values- Stirrup mounting point: 10Nm, Aluminium/Glass Diffuser fixing screws: 4Nm, Polycarbonate Diffuser fixing screws: 1.5 - 2Nm.*
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.

7.0 Disposal of Material

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. 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 therefore must not be treated as commercial waste.

To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU 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 lighting products

Chalmit®	**CHALMIT LIGHTING** PO Box 5575 Glasgow, G52 9AP Scotland	HUBBELL®

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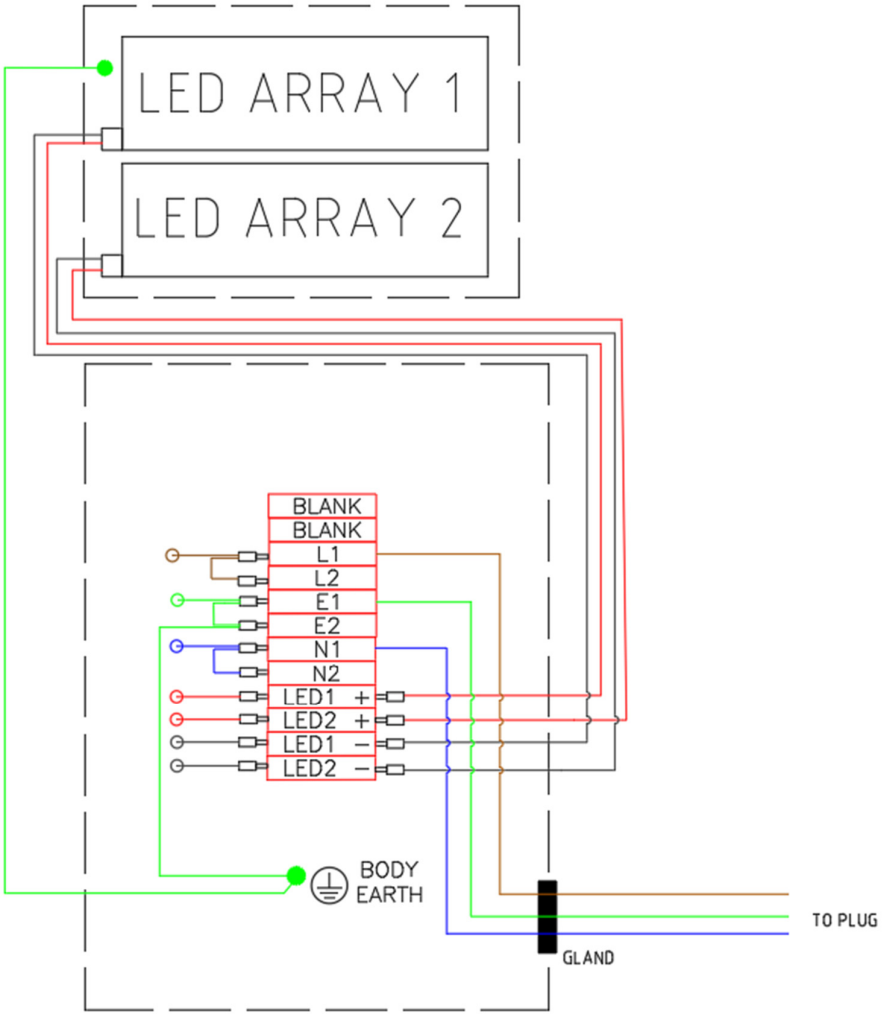
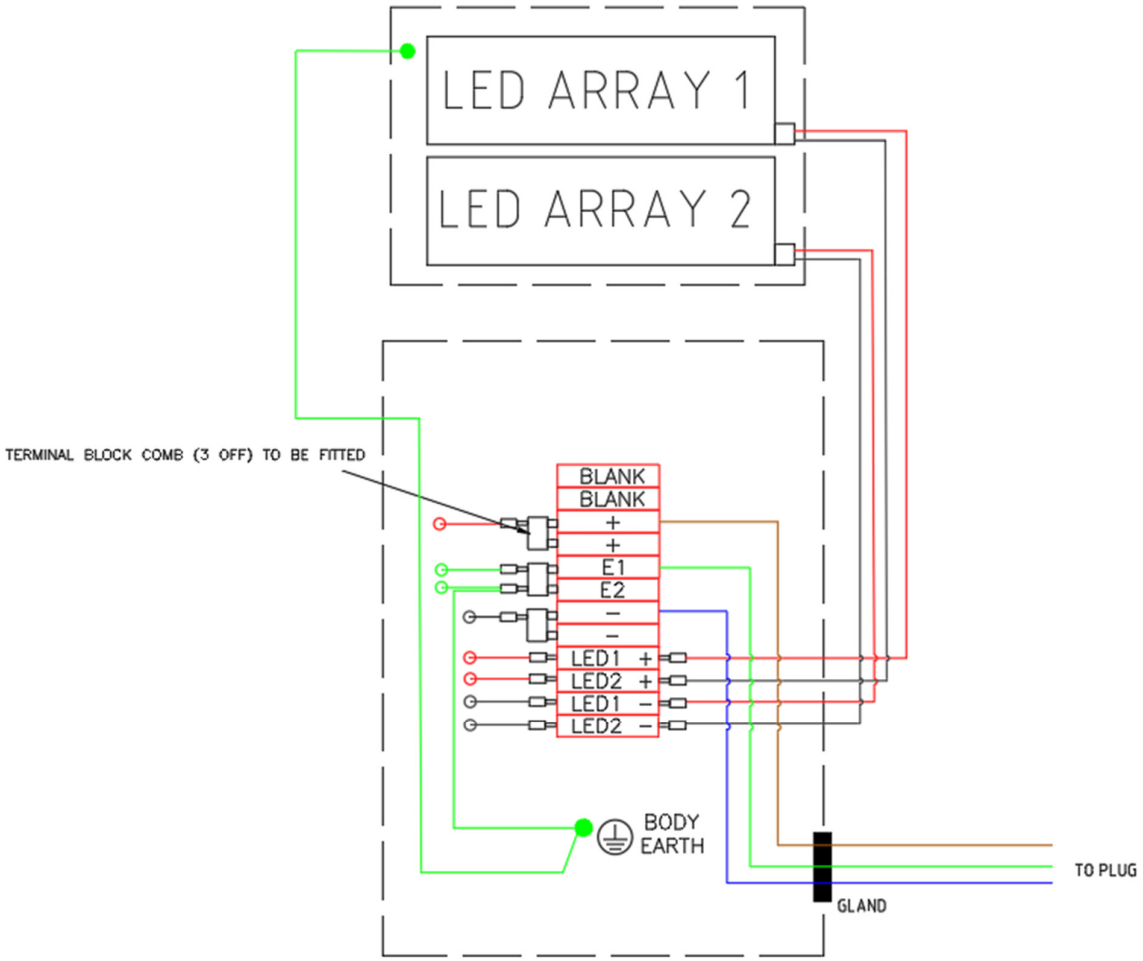
Web:	www.chalmit.com		London EC4N 6AF UK

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

HIGH VOLTAGE



LOW VOLTAGE



Note: For 24 LED luminaires, there will only be one LED array connected to the terminal block.

	EU-Declaration of conformity **UE-Déclaration de conformité** **EU-Konformitätserklärung**			
Manufacturer	Chalmit	Address	388 Hillington Road, Glasgow. G52 4BL Scotland UK	
Product	HDL 106 Transportable Modular Floodlight/Bulkhead			
EU - Type Examination Certificate	Sira 10ATEX5115X			
Notified Body	CSA Group Netherlands B.V. 2813			
ATEX Coding	Ex II 2 GD	ATEX Classification	Group II Category 2 GD	
Equipment Coding:				
HDL106TN 100V to 254V 50/60Hz	Ex e mb IIC T4 Gb , Ex tb IIIC T103°C Db IP6X -20˚C □ Ta □ +50˚C or Ex e mb IIC T3 Gb , Ex tb IIIC T103°C Db IP6X -20˚C □ Ta □ +59.5˚C			
HDL106TN (18V to 54V AC/DC)	Ex e mb IIC T4 Gb , Ex tb IIIC T87°C Db IP6X -20˚C □ Ta □ +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 60079-7, EN 60079-18, EN 60079-31.				
Area Classification EN 60079-10-1and 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: Prescription de la directive: Bestimmungen der Richtlinie:			Standard & Date Certified to Standard & date certifiée à Standard & Datum Zertifiziert nach	Standards Date Declared to Normes date Déclaré Standards Datum erklärt
2014/34/EU	Equipment and protective systems intended for use in potentially explosive atmospheres.		EN 60079-0: 2012 EN 60079-7: 2007	2018 2015
2014/34/UE	Appareils et les systèmes de protection destinés à être utilisés en atmosphères potentiellement explosibles.		EN 60079-18: 2009 EN 60079-31: 2009	2015 EN 60079-31: 2014
2014/34/EU	Geräte und Schutzsysteme zur bestimmungs-gemäßen Verwendung in explosionsfähigen Bereichen.			
2014/30/EU	Electromagnetic compatibility		EN 55015 : 2013	
2014/30/UE	Compatibilité électromagnétique		EN 61547 : 2009	
2014/30/EU	Elektromagnetische Verträglichkeit		EN 61000-3-2 : 2014	
2014/35/EU	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	
2012/19/EU	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	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	01/01/2021	Technical Manager Directeur technique Technischer Leiter	

Quality Assurance Notification by: Notification d'assurance qualité par: Qualitätssicherungsnotifikation durch:	**SGS Fimko OY** **0598**	Quality Management System Acreditation: Système de Management Qualité Accréditation: Qualitätsmanagementsystem Akkreditierung:	**ISO 9001**
		Environmental Management System. Système de gestion de l'environnement. Umwelt kontroll system.	**ISO 14001** by/par/durch **Loyd's Register**
		Certificate No./Certificat N°/Zertifikat Nr.	**LRQ 4005876**