



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEX Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX SIR 10.0055X** issue No.: **13**

Status: **Current**

Date of Issue: **2017-03-23** Page 1 of 5

Applicant: **Chalmit Lighting**  
(Trading as Hadar Lighting)  
388 Hillington Road  
Glasgow G52 4BL  
**United Kingdom**

Equipment: **HDL106 Transportable Modular Floodlight/Bulkhead**  
Optional accessory:

Type of Protection: **Increased Safety, Encapsulation and Dust**

Marking: **Refer to the Annex**

Approved for issue on behalf of the IECEX Certification Body: **N Jones**

Position: **R. A. CRAIG**  
**11 Certification Manager**

Signature:  
(for printed version)

Date: **2017-03-23**

### Certificate history:

Issue No. 13 (2017-3-23)  
Issue No. 12 (2017-2-24)  
Issue No. 11 (2016-7-11)  
Issue No. 10 (2015-5-29)  
Issue No. 9 (2015-2-27)  
Issue No. 8 (2014-5-9)  
Issue No. 7 (2014-2-28)  
Issue No. 6 (2013-9-24)  
Issue No. 5 (2013-9-2)  
Issue No. 4 (2013-2-27)  
Issue No. 3 (2012-12-21)  
Issue No. 2 (2012-3-9)  
Issue No. 1 (2010-10-27)  
Issue No. 0 (2010-4-21)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEX Website](http://www.iecex.com).

Certificate issued by:

**SIRA Certification Service**  
**CSA Group**  
Unit 6, Hawarden Industrial Park  
Hawarden, Deeside, CH5 3US  
**United Kingdom**

**sira**  
CERTIFICATION





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Manufacturer: **Chalmit Lighting**  
(Trading as Hadar Lighting)  
388 Hillington Road  
Glasgow G52 4BL  
United Kingdom

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

## STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-18 : 2009</b> Edition: 3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
<b>IEC 60079-7 : 2006-07</b> Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

## TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

### Test Report:

GB/SIR/ExTR10.0077/00  
GB/SIR/ExTR12.0313/00  
GB/SIR/ExTR13.0295/00  
GB/SIR/ExTR15.0059/00  
GB/SIR/ExTR16.0143/01

GB/SIR/ExTR10.0253/00  
GB/SIR/ExTR13.0047/00  
GB/SIR/ExTR14.0052/00  
GB/SIR/ExTR15.0157/00  
GB/SIR/ExTR17.0028/00

GB/SIR/ExTR12.0052/00  
GB/SIR/ExTR13.0245/00  
GB/SIR/ExTR14.0111/00  
GB/SIR/ExTR16.0143/00  
GB/SIR/ExTR17.0059/00

### Quality Assessment Report:

GB/BAS/QAR06.0027/06

GB/SIR/QAR06.0035/02



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The HDL106T Transportable Modular Floodlight/Bulkhead comprises an aluminium or stainless steel rectangular base with clear or translucent polycarbonate cover. The cover is secured to the base by four M6 x 16mm screws. The module is intended for use in temporary fixed installations and is provided with appropriate mounting brackets for this purpose.

The base of the enclosure houses an encapsulated power supply and control board. An LED assembly is mounted to the base of the enclosure and sits above the encapsulated power supply and control board, but behind the outer polycarbonate cover. The LED assembly comprises two compartments, each with integral polycarbonate cover, which are effectively encapsulated onto an aluminium base plate. Each compartment is fitted with 24 LEDs; the LEDs can be white, infra red, coloured or a combination.

Refer to EQUIPMENT (continued) for additional Description

### SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The HDL106T Transportable 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.
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 IECEx SIR 05.0035U 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 IECEx SIR 05.0037U are used, all terminal screws, used and unused, shall be tightened down to between 1.2 Nm and 2 Nm.

See EQUIPMENT (continued) for additional conditions



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## EQUIPMENT(continued):

The base of the enclosure is also fitted with Exe certified terminals which provide connection facilities for incoming cables and between the control board and LED assembly. The interior of the enclosure may also be fitted with an encapsulated fuse assembly. Internal and external earthing facilities are provided.

Up to 8 cable entry holes may be provided depending on customer requirements.

The units are designed for use on an electrical supply of 100-240V 50/60Hz or alternatively 24V ac/dc.

An optional photocell may be supplied, which is located in an appropriate cable entry hole and provided with a steel or stainless steel shroud.

Up to 6 modules may be interlinked to provide overall higher output assemblies.

### Additional CONDITIONS OF CERTIFICATION

6. When terminals in accordance with certificates IECEx SIR 05.0035U and IECEx SIR 05.0037U 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 IECEx SIR 05.0035U and IECEx SIR 05.0037U, the relevant conditions of certification 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. The LED assembly shall be replaced following the failure of no more than 8 individual LEDs.
10. The supply circuit must be protected by a fuse capable of withstanding a prospective short circuit current of 1500A.
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.

The Manufacturer shall comply with the following conditions of manufacture:

1. Every unit, including fuse assembly when fitted, shall be subjected to a routine dielectric strength test of at least 1508 V r.m.s. a.c. applied for at least 1 s, or at least 1810 V r.m.s. a.c. applied for at least 100 ms, between all terminals and the equipment enclosure, in accordance with Clause 9.2 of IEC 60079-18:2009.
2. Every unit shall be subjected to a visual inspection in accordance with Clause 9.1 of IEC 60079-18:2009



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Issue 1 to Issue 9 – for changes refer to Issue 9

#### Issue 10 – this Issue introduced the following changes:

- 1 The option of using an encapsulated fuse on the neutral terminal of the equipment was introduced.
- 2 The condition relating to the fuse protecting the circuit was modified to remove reference to the optional fuse.

#### Issue 11 – this Issue introduced the following changes:

- 1 Correct typographical error on certificate. The battery which is currently listed as being "GP770DHT" has been corrected to read "GP700DHT".
- 2 Increase of the ambient temperature to +65°C for the "T6 version". Alternate temperature markings were introduced.
- 3 Increase of the ambient temperature to +59.5°C for "High Voltage Assembly C" control board option of the HDL106S version. Alternate temperature markings were introduced.
- 4 Increase of the ambient temperature to +55°C for the emergency version when operated at a 50% output. Alternate temperature markings were introduced.
- 5 Introduction of a fuse on the control board for the HDL106N (18 V to 54 V AC/DC) version.
- 6 Removal of two control board options from the scope of the certification.
- 7 Recognition of the HDL106NE version.

#### Issue 12 – this Issue introduced the following changes:

- 1 The certificate was transferred:

From:	To:
Hadar Lighting	Chalmit Lighting
Jubilee Industrial Estate	(Trading as Hadar Lighting)
Ashington	388 Hillington Road
Northumberland NE63 8UG	Glasgow G52 4BL
United Kingdom	United Kingdom

- 2 A typographical error was corrected in the Specific Conditions of Use

#### Issue 13 – this Issue introduced the following change:

- 1 The introduction of a glass lens diffuser design as an optional alternative to the existing polycarbonate diffuser.

**Annex to:** IECEx SIR 10.0055X Issue 13  
**Applicant:** Chalmit Lighting  
**Apparatus:** HDL106 Transportable Modular Floodlight/Bulkhead.

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## Marking

### **HDL106TS and HDL106TN (100 V to 254 V 50/60 Hz)**

Ex e mb IIC T4 Gb  
Ex tb IIIC T103°C Db IP66/67  
Ta = -20°C to +50°C

Ex e mb IIC T3 Gb  
Ex tb IIIC T103°C Db IP66/67  
Ta = -20°C to +59.5°C

### **HDL106TE and HDL106NE**

Ex e mb IIC T4 Gb  
Ex tb IIIC T103°C Db IP66/67  
Ta = -20°C to +50°C\*

Ta = -20°C to +55°C\*

### **HDL106TN (18 V to 54 V AC/DC)**

Ex e mb IIC T4 Gb  
Ex tb IIIC T87°C Db IP66/67  
Ta = -20°C to +55°C

### **HDL106TA**

Ex e mb IIC T6 Gb  
Ex tb IIIC T70°C Db IP66/67  
Ta = -20°C to +50°C

Ex e mb IIC T5 Gb  
Ex tb IIIC T85°C Db IP66/67  
Ta = -20°C to +65°C

\* See certificate conditions.

## **Sira Certification Service**

Unit 6 Hawarden Industrial Park,  
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670900  
Fax: +44 (0) 1244 681330  
Email: [ukinfo@csagroup.org](mailto:ukinfo@csagroup.org)  
Web: [www.csagroupuk.org](http://www.csagroupuk.org)