



1     **TYPE EXAMINATION CERTIFICATE**

2     Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3     Certificate Number:     **Sira 11ATEX4314X**                             Issue:     **10**

4     Equipment:             **HDL 206 Warrior Modular Floodlight/Bulkhead**

5     Applicant:             **Chalmit Lighting**             (Trading as Hadar Lighting)

6     Address:                388 Hillington Road, Glasgow G52 4BL,  
                                  United Kingdom

7     This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8     CSA Group Netherlands B.V. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of Category 3 equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

          The examination and test results are recorded in the confidential reports listed in Section 14.2.

9     Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

          EN 60079-0:2012             EN 60079-7:2007             IEC 60079-18:2009 Ed 3     EN 60079-31:2009

10    If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11    This Type Examination Certificate relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12    The marking of the equipment shall include the following:

          Refer to the Schedule

Project Number     0739

Signed: 

Title: Director of Operations

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## SCHEDULE

### TYPE EXAMINATION CERTIFICATE

Sira 11ATEX4314X  
Issue 10

#### 13 DESCRIPTION OF EQUIPMENT

##### Marking

###### All Versions



II 3 G D

###### HDL206S and HDL206N (100 V to 254 V 50/60 Hz)

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

Ex e mb IIC T3 Gc  
Ex tb IIIC T103°C Dc IP66/67\*\*  
Ta = -20°C to +59.5°C

###### HDL206E and HDL206NE

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

Ta = -20°C to +55°C\*

###### HDL206N (18 V to 54 V AC/DC)

Ex e mb IIC T4 Gc  
Ex tb IIIC T87°C Dc IP66/67\*\*  
Ta = -20°C to +55°C

###### HDL206A

Ex e mb IIC T6 Gc  
Ex tb IIIC T70°C Dc IP66/67\*\*  
Ta = -20°C to +50°C

Ex e mb IIC T5 Gc  
Ex tb IIIC T85°C Dc IP66/67\*\*  
Ta = -20°C to +65°C

\* See certificate conditions.

\*\* When the polycarbonate diffuser option is fitted, IP rating becomes IP66 only

The Type HDL206 Warrior 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 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, such that it 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.

The base of the enclosure is also fitted with Exe certified terminals, which provide connection facilities for coming cables and between the control board and LED assembly.

The interior of the enclosure may also be fitted with an encapsulated fuse assembly.

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

Internal and external earthing facilities are provided.

The units are designed for use on an electrical supply of either 100 to 254 V 50/60 Hz or 24 V ac/dc dependant upon their construction.

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

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## SCHEDULE

### TYPE EXAMINATION CERTIFICATE

**Sira 11ATEX4314X**  
**Issue 10**

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

**Variation 1** - This variation introduced the following changes:

- i. The numbering of the Special Conditions for Safe Use was corrected.
- ii. The Special Condition for Safe Use that controls the replacement of the LEDs was amended, refer to clause 15.8.
- iii. The optional addition of a coloured glass plate to the inside of the LED assembly housing was recognised.

**Variation 2** - This variation introduced the following changes:

- i. The introduction of two alternative encapsulated power supply and control board assemblies.

**Variation 3** - This variation introduced the following changes:

- i. The addition of an optional, aluminium battery housing to the rear of the unit, this allows battery operation. In this arrangement, the unit is designated as a HDL206E Emergency LED Floodlight.
- ii. The Description of Equipment was amended to clarify that the applicable electrical rating depends on the construction of the unit.

**Variation 4** - This variation introduced the following changes:

- i. The introduction of a new luminaire, type reference HDL206A, with a T6 temperature classification.
- ii. Following appropriate assessment to demonstrate compliance with the requirements of a later standard, EN 61241-0:2006 and EN 61241-1:2004 were replaced by EN 60079-31:2009.
- iii. The inclusion of an extra wide beam (90°) version.
- iv. The option of a 'warm white light version' and the separation of the 'yellow light version' into two categories; 'yellow filter white light' and 'yellow filter warm white light' was endorsed.
- v. A 'single compartment' LED enclosure version was recognised.
- vi. The previously certified label drawings were corrected.
- vii. A new Condition of Certification was recognised

**Variation 5** - This variation introduced the following changes:

- i. Following appropriate assessment to demonstrate compliance with the requirements of the latest technical knowledge, EN 60079-0:2012 replaced EN 60079-0:2006.

**Variation 6** - This variation introduced the following changes:

- i. The value of three, board mounted resistors, R1, R7 and R15, was changed from 47 kΩ 0.12 W to 22 kΩ 0.27 W.

**Variation 7** - This variation introduced the following changes:

#### **R29742A/00**

- i. The use of an alternative control board for the emergency version of the luminaire was approved.
- ii. It was recognised that an optional switch may be mounted in the wall of the casting of the emergency version of the luminaire.
- iii. Type GP700DHT Battery packs were allowed to be used in the emergency battery enclosure.
- iv. The Weidmuller IECEx certified terminals, IECEx SIR 05.0035U and IECEx SIR 05.0037U, were replaced by the ATEX equivalent versions, Sira 01ATEX3247U and Sira 01ATEX3249U, consequently, the associated Special Conditions for Safe Use were amended.

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## SCHEDULE

### TYPE EXAMINATION CERTIFICATE

**Sira 11ATEX4314X**  
**Issue 10**

- v. The Wago IECEx certified terminals, IECEx PTB 04.0003U and IECEx PTB 04.0004U, were replaced by the ATEX equivalent versions, PTB 98ATEX3129U and PTB 98ATEX3125U.

#### **R32243A/00**

- i. The certification drawings were updated to show how the LED Assembly cables are sheathed.
- ii. The following changes to the encapsulation process were recognised:
  - a. The clear LED cover is now sealed to the base of the LED Light Engine plaque using silicone compound prior to encapsulation to create a sealed void.
  - b. Silicone compound is applied to the cables at the rear of the LED tray to plug the cable entry hole.
  - c. The curing times of the encapsulant have been reased.

#### **Variation 8** - This variation introduced the following changes:

- i. The use of an alternative power supply and control board for use with a 24V ac/dc supply was approved.
- ii. The recognition of a new product code "N" for a high output LED.
- iii. The product code was modified to recognise additional cable entry options.

#### **Variation 9** - This variation introduced the following changes:

- i. A new version of the High Output LED Modular Floodlight/Bulkhead was introduced; this version has a low voltage power supply, 18 V to 54 V AC/DC, and is suitable for an ambient temperature range of -20°C to +55°C.
- ii. Because of previous onsistencies, the model numbers of the currently available versions of the Transportable Modular Floodlight/Bulkhead were clarified, see list below; the marking section was amended to recognise the safety information applicable to these versions.

HDL206	Generic Name
HDL206S	Standard Version
HDL206A	T6 Rating Version
HDL206N	High Output LED Version (100 V to 254 V 50/60 Hz)
HDL206N	High Output LED Version (18 V to 54 V AC/DC)
HDL206E	Emergency Version
- iii. The application of a Trimate coating on the lens cover was permitted.
- iv. The voltage range of the high voltage version quoted in Product Description was changed from 100 to 240 V 50/60 Hz to 100 to 254 V 50/60 Hz as detailed in section 1.7 of Sira report R19590A/00 and on the manufacturer's drawings.

#### **Variation 10** - This variation introduced the following change:

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

#### **Variation 11** - This variation introduced the following changes:

- i. Correct typographical error on certificate. The battery which is currently listed as being "GP770DHT" has been corrected to read "GP700DHT".



## SCHEDULE

### TYPE EXAMINATION CERTIFICATE

**Sira 11ATEX4314X  
Issue 10**

- ii. Increase of the ambient temperature to +65°C for the "T6 version". Alternate temperature markings were introduced.
- iii. 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.
- iv. Increase of the ambient temperature to +55°C for the emergency version when operated at a 50% output. Alternate temperature markings were introduced.
- v. Introduction of a fuse on the control board for the HDL106N (18 V to 54 V AC/DC) version.
- vi. Removal of two control board options from the scope of the certification.
- vii. Recognition of the HDL106NE version.

**Variation 12** - This variation introduced the following changes:

- i. The Makrolon polycarbonate lens has been replaced by a Lexan polycarbonate lens diffuser.
- ii. The drawings were revised to include the new lens details and minor editorial changes.
- iii. The Applicants and Certificate holders name and address was changed:
 

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

**Variation 13**- This variation introduced the following changes:

- i. A typographical error in the Certificate history was corrected.

## 14 DESCRIPTIVE DOCUMENTS

### 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	17 October 2011	R25857A/00	The release of the prime certificate including Variations 1 to 3.
1	08 January 2013	R27847A/00	The introduction of Variation 4.
2	27 February 2013	R29154A/00	The introduction of Variation 5.
3	19 September 2013	R31385A/00	The introduction of Variation 6.
4	27 February 2014	R29742A/00 R32243A/00	The introduction of Variation 7.
5	08 May 2014	R70004694A	The introduction of Variation 8.
6	02 April 2015	R70005931A	The introduction of Variation 9.
7	29 May 2015	R70029223A	The introduction of Variation 10.

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## SCHEDULE

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**Sira 11ATEX4314X**  
**Issue 10**

Issue	Date	Report number	Comment
8	11 July 2016	R70055620A	This Issue covers the following changes: <ul style="list-style-type: none"><li>Type Examination Certificate in accordance with 94/9/EC updated to Type Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such Type Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i></li></ul> The introduction of Variation 11.
9	10 October 2017	R70055620A/01 R70154031A	Issued to allow Report R70055620A/01 to replace Report R70055620A The introduction of Variation 12.
10	15th October 2019	0739	<ul style="list-style-type: none"><li>Transfer of certificate <b>Sira 11ATEX4314X</b> from Sira Certification Service to CSA Group Netherlands B.V..</li></ul> The introduction of Variation 13.

### 15 SPECIFIC CONDITIONS OF USE

- 15.1 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.
- 15.2 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.
- 15.3 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.
- 15.4 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.
- 15.5 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.
- 15.6 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.
- 15.7 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.
- 15.8 If more than 8 individual LEDs are not illuminated, the LED assembly shall be replaced.

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### TYPE EXAMINATION CERTIFICATE

**Sira 11ATEX4314X**  
**Issue 10**

- 15.9 The supply circuit shall be protected by a fuse capable of withstanding a prospective short circuit current of 1500 A.
- 15.10 The HDL206E and HDL206NE, 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 HDL206E and HDL206NE 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.
- 15.11 When the Lexan polycarbonate lens is fitted, the equipment shall only be used in areas with a low risk of mechanical impact.
- 15.12 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.
- 16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)**

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed reports listed in Section 14.2.

# Certificate Annexe



**Certificate Number:** Sira 11ATEX4314X

**Equipment:** HDL 206 Warrior Modular Floodlight/Bulkhead

**Applicant:** Hadar Lighting Ltd

## Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
AL 10738	1 of 1	03	17 Oct 11	Certification Nameplate HDL206
AL 10740	1 of 1	03	17 Oct 11	Certification Nameplate HDL206

## Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
AL 10814	1 of 1	01	08 Jan 13	Certification Nameplate HDL206
AL 10738	1 of 1	04	08 Jan 13	Certification Nameplate HDL206
AL 10740	1 of 1	04	08 Jan 13	Certification Nameplate HDL206

**Issues 2 to 5** - No new drawings were introduced.

## Issue 6

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
AL11553	1 of 1	00	24 Mar 15	Certification Nameplate HDL206N M20 Entries
AL11559	1 of 1	00	24 Mar 15	Certification Nameplate HDL206N M25 Entries

**Issue 7** No new drawings were introduced.

## Issue 8

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
ALC0038	1 of 1	00	08 Apr 2016	HDL206 Cert Drawings

## Issue 9

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
H040402	1 of 1	0	06 Oct 17	HDL106 Polycarbonate Diffuser
H039122	1 of 1	0	06 Oct 17	HDL206 Nameplates

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