



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

Certificate No.: IECEx SIR 09.0064X issue No.:2

Status: **Current**

Certificate history:
Issue No. 2 (2011-1-26)
Issue No. 1 (2010-9-15)
Issue No. 0 (2010-2-17)

Date of Issue: 2011-01-26 Page 1 of 6

Applicant: **Hadar Lighting**
Jubilee Industrial Estate
Ashington
Northumberland NE63 8UG
United Kingdom

Electrical Apparatus: HDL 106 Warrior Modular Floodlight/Bulkhead Luminaire
Optional accessory:

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

Marking: **Ex emb IIC T4 Gb**
Ex t IIIC T103°C Db IP66/67
Tamb -20°C to +50°C

Approved for issue on behalf of the IECEx Certification Body: C Ellaby

Position: Certification Officer

Signature:
(for printed version)

Date:

2011-01-26

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
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira
CERTIFICATION



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Manufacturer: **Hadar Lighting**
Jubilee Industrial Estate
Ashington
Northumberland NE63 8UG
United Kingdom

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:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-18 : 2009 Edition: 3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*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/ExTR10.0030/00](#)
[GB/SIR/ExTR10.0211/00](#)
[GB/SIR/ExTR11.0016/00](#)

Quality Assessment Report:

[GB/SIR/QAR06.0035/01](#)
[GB/SIR/QAR06.0035/02](#)
[GB/SIR/QAR06.0035/03](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Type HDL 106 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 incoming 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 100-240 V 50/60 Hz or alternatively 24 V 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.

CONDITIONS OF CERTIFICATION: YES as shown below:

Refer to additional sheet.



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EQUIPMENT(continued):

Conditions of Manufacture:

The Manufacturer shall comply with the following condition 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 – this Issue introduced the following changes:	
1.	Modification to the Special Condition for Safe Use viii/ix from the original certification. The Special Condition for Safe Use is modified to state: "The LED assembly shall be replaced following the failure of no more than 8 individual LEDs"
2.	The optional addition of a coloured glass plate to the inside of the LED assembly housing was recognised
Issue 2 – this Issue introduced the following change:	
1.	The introduction of two alternative encapsulated power supply and control board assemblies.



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Additional information:

CONDITIONS OF CERTIFICATION:

- i. 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.
- ii. 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.
- iii. 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.
- iv. 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.
- v. 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.
- vi. 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.
- vii. 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.
- viii. If more than 8 individual LEDs are not illuminated, the LED assembly shall be replaced.
- ix. When the optional fuse is not fitted, the supply circuit must be protected by a fuse capable of withstanding a prospective short circuit current of 1500 A.