



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.: issue No.:

Status:

Date of Issue: **2010-05-27** Page 1 of 4

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

Electrical Apparatus: **Type HDL 103 LED Luminaire**
Optional accessory:

Type of Protection: **Increased safety, encapsulation, dust**

Marking: **Ex emb IIC T5 Gb**
Ex t IIIC T68°C Db IP66/IP67
Ta = -20°C to +55°C

Approved for issue on behalf of the IECEx D R Stubbings BA MIET
Certification Body:

Position: Certification Manager

Signature:
(for printed version)

Date: 2010-05-27

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



IECEX Certificate of Conformity

Certificate No.: IECEX SIR 09.0065X

Date of Issue: 2010-05-27

Issue No.: 0

Page 2 of 4

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 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 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/ExTR10.0126/00](#)

Quality Assessment Report:

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



IECEx Certificate of Conformity

Certificate No.: IECEx SIR 09.0065X

Date of Issue: 2010-05-27

Issue No.: 0

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Type HDL 103 LED Luminaire comprises an aluminium or stainless steel cylindrical base and lid. The lid is secured to the base by four M8 x 20 mm steel screws. The unit is intended for use in fixed installations and is provided with mounting points for this purpose.

The lid comprises an aluminium or stainless steel plate and translucent polycarbonate dome. A metal ring secures the dome to the outside of the plate. An LED assembly is mounted to the plate in the space formed between the plate and the dome. The LED assembly comprises a printed circuit board and a translucent polycarbonate cover. The polycarbonate cover is mounted to the plate such that it forms an encapsulated housing for the printed circuit board. The printed circuit board may be fitted with up to 6 coloured or infra-red LEDs.

Up to 3 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 V at 0.12 A to 254 V at 0.047 A, 50/60 Hz and 24 V at 0.5 A a.c./d.c.

CONDITIONS OF CERTIFICATION: YES as shown below:

- 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.

continued



IECEx Certificate of Conformity

Certificate No.: IECEx SIR 09.0065X

Date of Issue:

2010-05-27

Issue No.: 0

Page 4 of 4

Additional information:

Conditions of Certification (continued):

- 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. The supply circuit must be protected by a fuse capable of withstanding a prospective short circuit current of 1500A.

The following Conditions of Manufacture apply:

- i. Every unit 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.
- ii. Every unit shall be subjected to a visual inspection in accordance with Clause 9.1 of IEC 60079-18:2009.