



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEX CML 21.0037** Page 1 of 4 [Certificate history:](#)  
Issue 0 (2021-10-20)

Status: **Current** Issue No: 1

Date of Issue: 2022-02-25

Applicant: **Raytec Ltd**  
Unit 15 Wansbeck Business Park  
Rotary Parkway  
Ashington  
Northumberland  
NE63 8QW  
**United Kingdom**

Equipment: **SPARTAN Mid Power Floodlight/Highbay**

Optional accessory:

Type of Protection: **Increased Safety "eb", Encapsulation "mb", Dust Ignition "tb"**

Marking: Ex eb mb IIC T4 Gb  
Ex tb IIIC T90°C Db  
Ta= -40°C to +60°C

Approved for issue on behalf of the IECEx  
Certification Body:

**L A Brisk**

Position:

**Certification Officer**

Signature:  
(for printed version)

Date:  
(for printed version)

2022-02-25

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Certificate issued by:

**Eurofins E&E CML Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





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Manufacturer: **Raytec Ltd**  
Unit 15 Wansbeck Business Park  
Rotary Parkway  
Ashington  
Northumberland  
NE63 8QW  
**United Kingdom**

Manufacturing  
locations:

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"  
Edition:4.1

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

This Certificate **does not** indicate compliance with 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/CML/ExTR22.0038/00](#)

Quality Assessment Report:

[GB/SIR/QAR13.0018/09](#)



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**EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Spartan Mid Power Floodlight/Highbay are suitable for installation in Zone 1 environments with different mounting arrangements and orientations

Refer to Annex for full description and conditions of manufacture.

**SPECIFIC CONDITIONS OF USE: NO**

TBD



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

### **Issue 1:**

This variation introduces the following modifications:

1. To implement changes to the electronics/wiring diagram and the addition of a corrected electronic component tolerance list.
2. Introduction of dimensional changes to the encapsulated power supply.
3. Introduction of an optional anti-static self-adhesive film.
4. To implement changes to the condition of manufacture to standardise the routine dielectric strength test requirements.
5. The removal of drawing 1250-A-0003 from technical documents list
6. To update the product description to clarify the internal connection facilities.

### **Annex:**

[IECEX CML 21.0037 Iss. 1 Certificate Annex.pdf](#)

**Annexe to:** IECEx CML 21.0037 Iss. 1  
**Applicant:** Raytec Ltd.  
**Apparatus:** SPARTAN Mid Power  
Floodlight/Highbay



## Description

The Spartan Mid Power Floodlight/Highbay are suitable for installation in Zone 1 and Zone 21 environments with different mounting arrangements and orientations

The encapsulated LED assembly contains up to 48 LED circuits protected by encapsulation, located behind a glass window.

The main assembly consists of a single aluminium enclosure containing an encapsulated electronic power supply and suitably certified Ex Component terminals for connection of internal and field wiring using suitably certified cable glands. The window assembly consists of an aluminium casting and glass front.

The equipment will operate up to a maximum of 125W over a 110 to 277V range. Various beam patterns are available, external mounting brackets will determine if it is a floodlight or Highbay luminaire.

## Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification:

- i. The completed equipment, the LED driver and encapsulated LED assembly shall each be subjected to an electric strength test in accordance with EN/IEC 60079-7, Clause 7.1 and IEC/EN60079-18 Clause 9.2 (as applicable). The tests shall be made using a test voltage of 1554 Vac applied between the supply terminals and the surface of the encapsulant for a minimum duration of 61 seconds. Alternatively, an electric strength test at 1.2 times the test voltage for a minimum duration of 100 ms. No breakdown shall occur.
- ii. The LED driver and encapsulated LED assembly shall each be visually inspected. No damage shall be evident, such as cracks in the compound, exposure of encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion, or softening.
- iii. The manufacturer shall ensure that requirements for suitable glands for use with this equipment are included in the instructions supplied with all equipment.

## Specific Conditions of Use

None.

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