Type Examination Certificate CML21UKEX3321 Issue 0

United Kingdom Conformity Assessment

1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended)

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

3 Manufacturer **Raytec Ltd.**

4 Address **Unit 15 Wansbeck Business Park,**
Rotary Parkway, Ashington
Northumberland NE63 8QW,
United Kingdom

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.

8 This Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN IEC 60079-7:2015+A1:2018 EN 60079-18:2015+A1:2017

EN 60079-31:2014

10 The equipment shall be marked with the following:

II 3 G D

Ex ec mc IIC T4 Gc

Ex tc IIIC T90°C Dc

Ta= -40°C to +60°C

R C Marshall
Operations Manager

11 Description

The Spartan Mid Power Floodlight/Highbay are suitable for installation Zone 2 environments with different mounting arrangements and orientations

The LED assembly contains up to 48 LED's, located behind a glass window.

The assembly consists of a single enclosure containing suitably certified Ex Component terminals for connection of internal and field wiring using suitably certified cable glands. The window casting consists of dicast aluminium and glass.

Inside the enclosure consists of an encapsulated terminal board for supply and internal connections

The equipment will deliver between 5000 and 15000 lumens over a 110 to 277V range. Various beam patterns are available and also an emergency option. External mounting brackets will determine if it is a floodlight or Highbay luminaire.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	20 Oct 2021	R13715A/00	Issue of Prime Certificate.

Note: Drawings that describe the equipment are listed or referred to in the Annex.

13 Conditions of Manufacture

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

i. The LED driver shall each be subjected to an electric strength test in accordance with IEC/EN60079-18 Clause 9.2 using a test voltage of 1500Vac applied between the terminals and the surface of the encapsulant (covered in foil), for a period of 1 second.
Alternatively:
   a) a voltage of 20% higher may be applied for 0.1 second
   b) a d.c. test voltage is allowed as an alternative to the a.c. test voltage and shall be 170% of the specified a.c. r.m.s. test voltage. There shall be no flashovers.

ii. The LED driver 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 equipment shall be subjected to an electric strength test in accordance with the requirements of IEC/EN60079-7 Clause 6.1 using a test voltage of 1500Vac applied between the supply terminals and frame, for a period of 1 second.
Alternatively, a d.c. test voltage is allowed as an alternative to the a.c. test voltage and shall be 170% of the specified a.c. r.m.s. test voltage.

iv. The manufacturer shall ensure that requirements for suitable glands for use with this equipment are included in the instructions supplied with all equipment.

14 Specific Conditions of Use

None.

Certificate Annex

Certificate Number	**CML 21UKEX3321**
Equipment	**SPARTAN Mid Power Floodlight/Highbay**
Manufacturer	**Raytec Ltd.**

The following documents describe the equipment defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
1250-A-0003	1 of 1	A	20 Oct 2021	Light Engine Assembly 15K Lumen Medium Power Flood
1250-SD-0001	1 to 2	A	20 Oct 2021	Spartan Mid Power LED Floodlight/Highbay
1250-SD-0002	1 to 3	A	20 Oct 2021	PCB Schematic SPARTAN MPFL Power Supply
1250-SD-0003	1 to 5	A	20 Oct 2021	FMEA-Resistors-Spartan MPFL Power Supply
1250-SD-0004	1 of 1	A	20 Oct 2021	Parts List Spartan MPFL power Supply
1250-SD-0005	1 of 1	A	20 Oct 2021	Thermal Fuse Conditions

Source: https://www.raytecled.com/