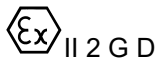




## EU Type Examination Certificate CML 17ATEX1148 Issue 2

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **HP Spartan LED Luminaire**
- 3 Manufacturer **Raytec Ltd**
- 4 Address Unit 15 Wansbeck Business Park  
Rotary Parkway  
Ashington  
Northumberland  
NE63 8QW
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive.  
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 conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 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 60079-0:2012+A11:2013    EN 60079-1:2014    EN 60079-7:2015  
EN 60079-18:2014    EN 60079-31:2015    EN 60079-28:2015
- 10 The equipment shall be marked with the following:



II 2 G D

Ex db eb mb op is IIB+H2 T4 Gb

Ex db eb mb op is IIB T4 Gb

Ex tb op is IIIC T104°C Db

Ta= -50°C to +50°C



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## 11 Description

The HP Spartan LED Luminaire are a Floodlight and Highbay luminaire that are suitable for installation in either Gas or Dust environments with different mounting arrangements and orientations.

The encapsulated LED Head assembly contains up to 2 x 12 LED circuits protected by encapsulation, located behind a glass window. The LED Head connects to either:

- A combined flameproof PSU and increased safety JB assembly, or
- An increased safety JB assembly;

The combined flameproof PSU and increased safety JB assembly, consists of separate enclosures containing LED Driver circuits and suitably certified Ex component terminals for connection of internal and field wiring using suitably certified cable glands. The two enclosures are separated using a suitably certified bushing.

The increased safety JB assembly consisting a single enclosure containing suitably certified Ex Component terminals for connection of internal and field wiring using suitably certified cable glands. The combined assembly is used with a separately mounted combined flameproof PSU and increased safety JB assembly, connected using suitably certified cable glands.

The combined or separate assemblies have an environmental rating of IP 66.

An optional self-adhesive anti-static film can be fitted over the glass externally

Operating voltage may be 150 -264V AC/DC or 110V -264V AC/DC

The equipment may be also be fitted with alternative labels, when the equipment is marketed under the name of 'Wadco Lighting' and carries the following alternative model names:

Nomenclature:

**MM (1) - HP (22) (33) K - W - xxyy**

Where:

MM	SP	SPARTAN High Power Flood,
	WB	Wadco Bosse High Power Flood,
(1)	X	Zone 1 /Zone 21
(22)	FL	Floodlight
	BY	Highbay
	F	Floodlight (Wadco Bosse)
	HB	Highbay (Wadco Bosse)
(33)	**	Lumens (x 1,000) up to a maximum of 25
K		Lumens (x 1,000)
W		White Light



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### **Variation 1**

This variation introduces the following modifications:

- i. To allow an alternative label to be fitted, the equipment is marketed under the product range name 'Wadco Lighting'.
- ii. To allow the use of alternative model names

### **Variation 2**

This variation introduces the following modifications:

- i. To allow a 110V-264V AC/DC supply rating option, in addition to the existing 150V-264V AC/DC option. The supply voltage rating is dependent on the power supply fitted.
- ii. To permit the use of an optional self-adhesive anti-static film which can be fitted over the glass externally.
- iii. The description on the certificate has been updated to show details of the above modifications.
- iv. Compiling of all drawings from the previous certificate issues into one complete list of current drawings.
- v. Change to the Condition of Manufacture defining the service temperature range of the line bushings

## **12 Certificate history and evaluation reports**

<b>Issue</b>	<b>Date</b>	<b>Associated report</b>	<b>Notes</b>
0	24/07/2017	R1722A/00	First issue
1	05/03/2018	R11644A/00	To introduce variation 1
2	15/06/2018	R11782A/00	To introduce variation 2

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

## **13 Conditions of manufacture**

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

- i. Where the product incorporates certified parts or safety critical components, the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. The manufacturer shall fit only the certified Ex Components listed in the certification documentation and the manufacturer's instructions. All Special Conditions of Certification/ Special Conditions for Safe Use/ Schedule of Limitations shall be satisfied for each part fitted.
- iii. If the terminals or components are fitted with cables/wiring by the manufacturer; all cables/wires shall be suitable for rated voltage and current of each separate circuits and Ex Components to which they are connected.
- iv. All creepage and clearance distances as defined in IEC 60079-7 Table 2 shall be observed for the voltage rating marking.



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- v. The routine overpressure test shall be carried out in accordance with the static method (IEC 60079-1, clause 15.1.3.1) at the following pressures:

Type	Test Pressure
MMX-HP (Zone 1/ 21 Group IIB + H2 Version)	7.61 bar x 1.5 = 11.42 bar
MMX-HP (Zone 1/ 21 Group IIB Version)	6.73 bar x 1.5 = 10.10 bar

- vi. All "m" equipment shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion (separation of any adhered parts) or softening.
- vii. A dielectric strength test shall be carried out on all units manufactured in accordance with EN 60079-7:2015 clause 7.1 and EN 60079-18:2015, clause 9.2, at 1508 V for 1 minute, or alternatively at 1.2 times this test voltage for 100 ms. No breakdown shall occur. Tests shall be carried out between each circuit and earth.
- viii. The Line Bushing shall be suitable for service temperature range of at least -50°C to +85°C

**14 Special Conditions for Safe Use (Conditions of Certification)**

None

## Certificate Annex



**Certificate Number** CML 17ATEX1148  
**Equipment** HP Spartan LED Luminaire  
**Manufacturer** Raytec Ltd

The following documents describe the equipment or component defined in this certificate:

### Issue 0

Drawing No	Sheets	Rev	Approved date	Title
1050-SD-00034	1 of 4	A	24/07/2017	General Construction Details
1050-SD-00034	2 of 4	A	24/07/2017	Power Supply, Bushing, Flamepaths and Notes
1050-SD-00034	3 of 4	A	24/07/2017	Light Engine Details
1050-SD-00034	4 of 4	A	24/07/2017	Nameplate, Wiring etc..
1050-SD-0001	1 to 5	A	24/07/2017	HPFL FMEA Dated 22-05-2017
1050-SD-0002	1 of 1	A	24/07/2017	HP Flood Protection circuit schematic
1050-SD-0003	1 of 1	A	24/07/2017	Protection circuit parts list

### Issue 1

Drawing No	Sheets	Rev	Approved date	Title
1050-SD-0006	1 of 1	A	05/03/2018	WADCO BOSSE HP LED LUMINAIRE ZONE 1 NAMEPLATE

### Issue 2

Drawing No	Sheets	Rev	Approved date	Title
1050-SD-00034	1 to 4	B	15/06/2018	Spartan High Power LED Floodlight/Highbay
1050-SD-0001	1 to 5	A	15/06/2018	HPFL FMEA Dated 22-05-2017
1050-SD-0002	1 of 1	A	15/06/2018	HP Flood Protection circuit schematic
1050-SD-0003	1 of 1	A	15/06/2018	Protection circuit parts list
1050-SD-0006	1 of 1	A	15/06/2018	Wadco Bosse HP LED Luminaire Zone 1 nameplate

Note: The above complete list of drawings supersedes the drawing lists from the previous certificate issues.