



# 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 15.0068** Page 1 of 4 Certificate history:  
Status: **Current** Issue No: 7 Issue 6 (2018-04-05)  
Date of Issue: 2020-02-06 Issue 5 (2017-10-04)  
Applicant: **Raytec** Issue 4 (2017-04-04)  
Unit 15 Wansbeck Business Park Issue 3 (2016-07-13)  
Rotary Parkway, Ashington Issue 2 (2016-06-27)  
Northumberland, NE63 8QW Issue 1 (2016-02-04)  
United Kingdom Issue 0 (2015-10-23)  
Equipment: **Spartan Linear Luminaire**  
Optional accessory:  
Type of Protection: **Non-Sparking, Encapsulation, Dust**  
Marking: **Standard**  
Ex nA mc IIC T\* Gc / Ex tc IIIC T\*\*°C Dc  
Ta= -40°C to +##°C  
**Emergency**  
Ex nA mc IIC T\* Gc / Ex tc IIIC T\*\*°C Dc  
Ta= -20°C to +##°C  
See Annex for Specific marking and ambient range

Approved for issue on behalf of the IECEx  
Certification Body:

**S. Roumbedakis**

Position:

**Technical Manager**

Signature:  
(for printed version)

Date:

2020-02-06

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.
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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





# IECEX Certificate of Conformity

Certificate No.: **IECEX CML 15.0068**

Page 2 of 4

Date of issue: 2020-02-06

Issue No: 7

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

Additional 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 60079-0:2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-15:2010** Explosive atmospheres - Part 15: Equipment protection by type of protection "n"  
Edition:4

**IEC 60079-18:2014** Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"  
Edition:4.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

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 Reports:

[GB/CML/ExTR15.0073/00](#)  
[GB/CML/ExTR16.0095/00](#)  
[GB/CML/ExTR20.0007/00](#)

[GB/CML/ExTR16.0013/00](#)  
[GB/CML/ExTR17.0048/00](#)

[GB/CML/ExTR16.0083/00](#)  
[GB/CML/ExTR18.0066/00](#)

Quality Assessment Report:

[GB/SIR/QAR13.0018/07](#)



# IECEx Certificate of Conformity

Certificate No.: **IECEx CML 15.0068**

Page 3 of 4

Date of issue: 2020-02-06

Issue No: 7

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Spartan LED Linear Luminaires are a range of LED luminaires. There are four luminaires sizes available varying in length; WL84, WL84-1200, WL168 and WL168-1500. LV (Low Voltage) or HV (High Voltage) variants are available. The HV luminaires may also be supplied with a battery pack and inverter to enable operation in 'emergency' mode.

**See Annex for full description**

**SPECIFIC CONDITIONS OF USE: NO**



# IECEx Certificate of Conformity

Certificate No.: **IECEx CML 15.0068**

Page 4 of 4

Date of issue: 2020-02-06

Issue No: 7

**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**  
Refer to Certificate Annex

**Annex:**

[IECEx CML 15.0068 Iss 7 Annex.pdf](#)

**Annexe to:** IECEx CML 15.0068 Issue 7  
**Applicant:** Spartan LED Linear Luminaires  
**Apparatus:** Raytec Ltd



## Description

The Spartan LED Linear Luminaires are a range of LED luminaires. There are four luminaire sizes available varying in length; WL84, WL84-1200, WL168 and WL168-1500. LV (Low Voltage) or HV (High Voltage) variants are available with the following ratings; The HV luminaires may also be supplied with a battery pack and inverter to enable operation in 'emergency' mode.

Power Supply Variant	Ratings
HV Standard	110-280 VAC and 154 – 355 VDC
HV Emergency	110-280 VAC
LV Standard	18-48 VAC
HV Dual	110-280 VAC and 154 – 355 VDC
LV DC	18-48 VAC and 18-68 VDC
HV Intelligent Emergency	110-280 VAC

The Spartan LED linear Luminaire enclosure is made from extruded aluminium with a transparent polycarbonate lens. The aluminium enclosure has cast aluminium end sections fitted with cast aluminium covers. The equipment utilises silicone sponge gaskets to seal the external lens and end covers to the main enclosure and maintain the IP65 rating. Samples of the luminaire have also been independently tested against the requirements of IEC 60529 Ed 2.1 and have passed IPX6 and IPX7.

The end sections house separately certified terminals and a maximum of two separately certified cable entries per end. The end covers house either the encapsulated power supply or the optional emergency mode battery. The covers are fixed to the end sections using two M6 bolts per cover. Alternatively, an option of fitting a blanking cover at one end to provide two cables entries at one end can be used on WL84 and WL84-1200 standard variants only.

The main section of the luminaire is fitted with a PCB populated with 84 LED's. The WL84 and WL84-1200 variants are fitted with one light engine and one external lens The WL168 and WL168-1500 variants are fitted with two light engines and two external lenses.

The LED's are available in white, coloured or infra-red. The enclosure has fixing holes to the rear, the size, pitch and quantity can be customised to suit customer needs. All enclosures offer internal and external earthing facilities.

An optional replaceable antistatic lens film is available across the range.

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## Marking

The equipment should be marked with the following:

Standard		Emergency	
 Ex nA mc IIC T5 Gc Ex nA mc IIC T4 Gc Ex tc IIIC T80°C Dc Ta= -40°C to +60°C	 Ex nA mc IIC T6 Gc Ex tc IIIC T65°C Dc Ta= -40°C to +45°C	 Ex nA mc IIC T5 Gc Ex nA mc IIC T4 Gc Ex tc IIIC T75°C Dc Ta= -20°C to +50°C	 Ex nA mc IIC T6 Gc Ex tc IIIC T65°C Dc Ta= -20°C to +40°C

## Conditions of Manufacture

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

1. 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.
2. A dielectric strength test shall be carried out on all units manufactured in accordance with EN 60079-15:2010 clause 23.2.1 and EN 60079-18:2015, clause 9.2, depending on the power supply type and input rating at the voltages and durations shown in the following table

Power Supply Type/ Rating	110 to 280 Vac		154 to 355 Vdc
HV	1560V AC for 1 Minute	1810 V for 100 mS	2111 Vdc for 1 minute
Power Supply Type/ Rating	18 to 48 Vdc		28 to 68 Vdc
LV	500 Vac for 1 Minute		700 V for 1 Minute

No breakdown shall occur. Tests shall be carried out between each circuit and earth.

3. A visual inspection shall be carried out on the encapsulated parts to check for damage, in accordance with EN 60079-18:2015, clause 9.1.
4. Alternative nameplates marked with "op is" are also acceptable.

## Specific Conditions of Use

None.

## Details of certificate changes

### **Issue 1 This Issue introduced the following changes:**

- 1 Allow transparent antistatic film to be fitted the lens across the range.
- 2 Add a variant WL168-1500 standard & emergency.
- 3 Add a variant W84-1200 standard & emergency.

### **Issue 2 This Issue introduced the following changes:**

- 1 To allow WL168 and WL168-1500 mains powered (HV) standard variants to be fitted with an alternative dual channel power supply

### **Issue 3 This Issue introduced the following changes:**

- 1 To increase the voltage range for the low voltage options. The product description was updated to reflect the changes made by this variation.

### **Issue 4 This Issue introduced the following changes:**

- 1 To assess the product against IEC 60079-28:2015
- 2 To include Ex op is marking in line with IEC 60079-28:2015
- 3 To update IEC 60079-18:2009 to IEC 60079-18:2014
- 4 To update the conditions of manufacture to reflect updated standards and clause numbers.

### **Issue 5 This Issue introduced the following changes:**

- 1 Replace discrete logic components with microprocessor system.
- 2 Addition of 3 indication LEDS.

### **Issue 6 This Issue introduced the following changes:**

- 1 To include a change of address
- 2 To include a minor change to the component values on the Dual PSU circuit
- 3 To include a DC option (HV Standard and Dual PSU)
- 4 Minor change to marking T4/T5

### **Issue 7 This Issue introduced the following changes:**

- 1 To implement minor changes to the PSU electronic circuit
- 2 To remove IEC 60079 28:2015 from scope