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

Certificate No.: **IECEx CML 23.0150X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2024-06-04

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

Equipment: **Spartan LED Recess**

Optional accessory:

Type of Protection: **Increased Safety Ex "eb and ec", Encapsulation Ex "mb and mc and Dust Ignition Protection Ex "tb and tc"**

Marking: **Low voltage,Standard, High Output**

Ex eb mb IIC T4/T5 Gb
Ex tb IIIC T95°C Db
Ta= -40°C to +60°C (no insulation)
Ta= -40°C to +50°C (insulation)

Ex ec mc IIC T4/T5 Gc
Ex tc IIIC T95°C Dc
Ta= -40°C to +60°C (no insulation)
Ta= -40°C to +50°C (insulation)

Emergency

Ex eb mb IIC T4/T5 Gb
Ex tb IIIC T95°C Db
Ta= -20°C to +50°C (no insulation)
Ta= -20°C to +40°C (insulation)

Ex ec mc IIC T4/T5 Gc
Ex tc IIIC T95°C Dc
Ta= -20°C to +50°C (no insulation)
Ta= -20°C to +40°C (insulation

Approved for issue on behalf of the IECEx Certification Body: **L A Brisk**

Position: **Assistant Certification Manager**

Signature: (for printed version)

Date: (for printed version) 04 June 2024

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 www.iecex.com or use of this QR Code.

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 23.0150X**

Date of issue: 2024-06-04 Issue No: 0

Manufacturer: **Raytec**
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 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

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/ExTR24.0105/00

Quality Assessment Report:

GB/SIR/QAR13.0018/12

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Spartan LED Recess luminaire is a range of LED luminaires intended for ceiling grid mounting. They are available in several sizes and model. The luminaires consist of a combination of light engines and PSUs secured onto a metallic mounting frame.

RC600600, RC3001200 and RC2751300 consist of 2 light engines and 1 PSUs secured on different sized mounting frames. RC6001200 consists of 4 light engines and 2 PSUs secured on a mounting frame. RC275800 consists of 1 light engine and 1 PSU secured on a mounting frame. Special application model allows for the light engines and PSUs to be fitted without the mounting frame.

See Annex for full description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:
See Annex for Specific Conditions of Use.

Annex:

Annex IECEx CML 23.0150X.pdf

Annexe to: IECEx CML 23.0150X Issue 0

Apparatus: Spartan LED Recess

Applicant: Raytec Ltd.

Description

The Spartan LED Recess luminaire is a range of LED luminaires intended for recessed mounting with different arrangements and orientations. They are available in several sizes and model. The luminaires consist of a combination of light engines and PSUs secured onto a metallic mounting frame.

RC600600, RC3001200 and RC2751300 consist of 2 light engines and 1 PSUs secured on different sized mounting frames. RC6001200 consists of 4 light engines and 2 PSUs secured on a mounting frame. RC275800 consists of 1 light engine and 1 PSU secured on a mounting frame. Special application model allows for the light engines and PSUs to be fitted without the mounting frame.

The luminaire range is available in Low voltage (18 to 84 V AC, 18 to 68V DC), standard (110 to 280 V AC, 154 to 355 V DC), high output (110 to 280 V AC, 154 to 355 V DC), and emergency (110 to 280 V AC, 154 to 355 V DC). Emergency is supplied with a rechargeable battery pack.

All luminaires within the range may be installed with or without insulation as specified in the user instructions.

Installed WITHOUT Insulation				
Model	**Variant**	**Voltage**	**Ambient**	**Marking**
RC600600 RC6001200 RC3001200 RC2751300 Special App	Low Voltage	18 to 84 V AC 18 to 68V DC	-40°C to +60°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	Standard	110 to 280 V AC 154 to 355 V DC	-40°C to +60°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	High Output	110 to 280 V AC 154 to 355 V DC	-40°C to +60°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	Emergency	110 to 280 V AC 154 to 355 V DC	-20°C to +50°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
RC275800 Special App	Low Voltage	18 to 84 V AC 18 to 68V DC	-40°C to +60°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	Standard	110 to 280 V AC 154 to 355 V DC	-40°C to +60°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	Emergency	110 to 280 V AC 154 to 355 V DC	-20°C to +50°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db

Installed WITH Insulation				
Model	**Variant**	**Voltage**	**Ambient**	**Marking**
RC600600 RC6001200 RC3001200 RC2751300 Special App	Low Voltage	18 to 84 V AC 18 to 68V DC	-40°C to +50°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	Standard	110 to 280 V AC 154 to 355 V DC	-40°C to +50°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	High Output	110 to 280 V AC 154 to 355 V DC	-40°C to +50°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	Emergency	110 to 280 V AC 154 to 355 V DC	-20°C to +40°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
RC275800 Special App	Low Voltage	18 to 84 V AC 18 to 68V DC	-40°C to +50°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	Standard	110 to 280 V AC 154 to 355 V DC	-40°C to +50°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db
	Emergency	110 to 280 V AC 154 to 355 V DC	-20°C to +40°C	Ex eb mb IIC T4/T5 Gb Ex tb IIIC T95°C Db

Each light engine has a metallic enclosure with polycarbonate lens, internally holding an encapsulated PCB consisting of 80 LEDs (zone 2 model without encapsulant). The PSU has a metallic tray and lid, internally holding an encapsulated power supply and battery pack where applicable. Both enclosures utilise a silicone gasket secured between mounting faces. The metallic mounting tray is available in several sizes (model dependent).

PSU and light engines are connected using separately certified cable glands and suitable conductors. Separately certified terminals are utilised in both the light engine and PSU.

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. A dielectric strength test shall be carried out on all units manufactured in accordance with IEC 60079-7 clause 7.1 and IEC 60079-18 clause 9.2. Tests shall be carried out between each circuit and earth and between each circuit and the surface of the encapsulant.

- Standard and emergency models shall withstand a voltage of 1560V for a minimum of 1 minute without dielectric breakdown.
- Low voltage model shall withstand a voltage of 500V for a minimum of 1 minute without dielectric breakdown.
- Alternatively at 1.2 times the test voltages above for 100ms.

- Alternatively, a 1.4 times d.c. voltage dielectric strength test may be carried out.

iii. A visual inspection shall be carried out on all encapsulated parts to check for damage in accordance with IEC 60079-18 clause 9.1.

iv. When fitted with the universal power supply equipment shall only be marked T4 for Gb applications.

v. Models fitted with only 1 light engine must not be supplied by a high output PSU.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

i. Spartan Recess may be installed with insulation covering the rear of the luminaire. The insulation may be a maximum of 100mm thick and with a maximum density of 110kg/m3.

ii. Static hazard – clean only with damp cloth

Components used which are covered by Ex Certificates issued to older editions of Standards

Certificate number	Standards (incl Ed)	Assessment result
IECEX PTB 05.0003U	IEC 60079-0:2017 Ed. 7.0 IEC 60079-7:2017 Ed. 5.1	Standards editions aligned with equipment certificate.
IECEX TUR 18.0019U	IEC 60079-0:2017 Ed. 7.0 IEC 60079-7:2017 Ed. 5.1	Standards editions aligned with equipment certificate.

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