Type Examination Certificate CML 23ATEX4285X Issue 2

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **SPARTAN LED Street Luminaire type SPZ**

3 Manufacturer **Raytec Ltd.**

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

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

6 Eurofins CML B.V., Chamber of Commerce No 67386717, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, 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 of Directive 2014/34/EU.

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 Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Annex VIII 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 IEC 60079-0:2018 EN IEC 60079-7:2015+A1:2018 EN IEC 60079-18:2015+A1:2017

EN 60079-31:2014

10 The equipment shall be marked with the following:

Ex II 3 G

Ex ec mc IIC T4 Gc

Ta = -40 °C to +50 °C

Ex II 3 D

Ex tc IIIC T80°C Dc

Ta = -40 °C to +50 °C

L A Brisk
Assistant Certification Manager

11 Description

The SPARTAN LED SPZ Street Luminaires range are luminaires intended for mount on either a vertical or horizontal pole that provides downward illumination in Zone 2 and Zone 22 *G*as and Dust explosive atmospheres.

The luminaires consist of an aluminium housing containing the Light Engine, LED Driver, and connection facilities. The housing is mounted using a pole entry that permits the assembly to be mounted on either a vertical or horizontal pole with a downward illumination with an orientated angle up to a maximum +/-15° from the horizontal of the glass window.

The Main Body housing is constructed using a cast/extruded aluminium body that is common with separate Driver/Connection and Light Engine compartments.

A cast/extruded aluminium Lid with recessed Silicone Sponge gasket bolts to the Main Body housing to form and seal the Driver/Connection compartment. The compartment contains a Stainless Steel /Steel / Aluminium chassis plate mounted with LED Driver and terminal blocks that provide connections for internal and external wiring. Field wiring enters via a cable entry with a suitably certified Cable Gland.

The Light Engine carrier assembly is constructed using 96 LEDs mounted on an Insulated Metal Substrate (IMS) Printed circuit Board (PCB). The LEDs are mounted in 6 separate segments, each containing 16 LED's. Each segment is fitted with an optic/lens bolted to the PCB.

The PSU compartment contains an encapsulated LED Driver and, certified terminal blocks for connection of field using a certified cable entry, and internal wiring between the LED Driver and Light Engine. The LED Driver and certified terminal blocks are mounted on either a stainless steel or aluminium chassis plate.

The units have an environmental rating of IP64. The equipment may also be marked with the manufacturer's ingress protection rating of IP66. An ingress protection rating of IPX6 has not been verified under the CML certification.

Rating

LED Driver	Input	Maximum Power
SPARTAN UNIVERSAL OUTPUT HV UNIT	110 V to 254 V	60 W
Extended Input Voltage Universal Power Supply	110 to 277 V	60 W
DALI dimmable Universal Power Supply	110 to 277 V	60 W

Components covered by Ex Certificates

Component	Manufacture	Certificate	Standards Applied
862 SERIES	WAGO	PTB 03ATEX1189U Issue 01	EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018
MK6 SERIES BK SERIES MK3 SERIES	WEIDMULLER	TUV 18ATEX8209U Issue 02	EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018

Variation 1
This variation assesses the following modifications:

i. Assessment of Extended Input Voltage Universal PSU.
ii. Assessment of DALI dimmable Universal PSU.

Variation 2
This variation assesses the following modifications:

i. To assess and permit an alternative non-metallic paint layer (applied externally to the equipment).
ii. To update the label details to remove the UKEX markings.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	08 Jun 2023	R15842A/00	Issue of Prime Certification
1	16 Apr 2024	R17429A/00	Issue of variation 1
2	13 Aug 2026	R21580A/00	Issue of 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 of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated. The manufacturer shall supply copies of instructions for all certified Ex-Equipment and Ex-Components fitted.

ii. A dielectric strength test shall be carried out on all units manufactured in accordance with IEC 60079-7:2015 clause 7.1 and IEC 60079-18:2014, clause 9.2, at 1560 Vac for 1 minute, or alternatively at 1.2 times this test voltage for 100 ms. Alternatively, a 1.4 times d.c. voltage dielectric strength test may be carried out. No breakdown shall occur.

Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.

iii. A visual inspection shall be carried out on the encapsulated parts to check for damage, in accordance with IEC 60079-18:2014, clause 9.1.

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 (Special Conditions)

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

i. Equipment must only be installed in a position that satisfies a low risk of mechanical danger from impact. (4 J).

Certificate Annex

Certificate Number	CML 23ATEX4285X
Equipment	SPARTAN LED Street Luminaire type SPZ
Manufacturer	Raytec Ltd.

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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
1286-SD-00001	1 of 3	B	08 Jun 2023	Spartan Street General Construction Detail
1286-SD-00001	2 of 3	B	08 Jun 2023	Spartan Street Power Supply and Light Engine Detail
1286-SD-00001	3 of 3	B	08 Jun 2023	Spartan Street Typical Wiring Diagram and Pole Mount Orientations

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
1286-SD-00001	1 to 3	C	16 Apr 2024	Spartan Street

Issue 2

Drawing No	Sheets	Rev	Approved date	Title
1286-SD-00001	1 to 3	D	13 Aug 2026	Spartan Street