EU Type Examination Certificate CML 16ATEX1130 Issue 11

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

2 Equipment **Spartan LED Linear Luminaire**

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 CML B.V., Chamber of Commerce No 67386717, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, 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 IEC 60079-0:2018 EN 60079-31:2014

10 The equipment shall be marked with the following:

Standard	**Emergency**
Ex II 2 D	Ex II 2 D
Ex tb IIIC T80°C Db	Ex tb IIIC T76°C Db
Ta= -40°C to +60°C	Ta= -20°C to +50°C
Ex tb IIIC T65°C Db	Ex tb IIIC T66°C Db
Ta= -40°C to +45°C	Ta= -20°C to +40°C

11 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
HV Universal	110-254V AC and DC
HV Universal DALI Dimmable and Extended Input Voltage	110-277V AC and DC

The Spartan LED linear Luminaire enclosure is made from extruded aluminium with a transparent polycarbonate lens or a flat glass. The aluminium enclosure has cast aluminium end sections fitted with cast aluminium covers.

The equipment utilises silicone sponge gaskets to seal the external lens/glass and end covers to the main enclosure and maintain the IP66 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 an encapsulated light engine. This light engine is an extruded aluminium frame fitted with a PCB containing up to 80 surface mounted LED's.

These LED's are fitted with transparent polycarbonate lenses, each lens covering up to 16 LED's. The PCB; complete with fitted lenses, is encapsulated securing the lenses in place and coating the PCB up to the walls of the light engine.

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.

Variants of the standard mains voltage luminaires can be supplied which deliver increased light output, these are designated WL84-HO and WL168-HO and can have a maximum power of 46W and

92W respectively. Additionally, an increased light output emergency model WL84-HO-EM (alternately marked WL84-HO-EMX) is available with a maximum power of 60W and battery pack.

Additional separately certified components:

Terminal Type	Manufacturer	Certificate No.	Temperature Range
MK6/MK3/BK	Weidmuller	TUV 18 ATEX 8209U IECEx TUR 18.0019U	II 2 G Ex eb IIC Gb -60°C to +130°C
862 Series	Wago	PTB 03ATEX1189U IECEx PTB 05.0003U	II 2 G Ex eb IIC Gb, Ex eb I Mb -55 °C to +105°C

Variation 1
This variation introduces the following modifications:

i. To assess the product against EN 60079-28:2015.
ii. To include Ex op is marking in line with EN 60079-28:2015.

Variation 2
This variation introduces the following modifications:

i. Replace discrete logic components with microprocessor system.
ii. Addition of 3 indication LEDS.

Variation 3
This variation introduces the following modifications:

i. To include a change of address
ii. To include a minor change to the component values on the Dual PSU circuit
iii. To include a DC option (HV Standard and Dual PSU)
iv. Minor change to marking T4/T5
v. The description has been modified in accordance with the modifications above.

Variation 4
This variation introduces the following modifications:

i. To implement minor changes to the PSU electronic circuit that do not affect the types of protection.
ii. To remove EN 60079-28:2015 / IEC 60079 28:2015 Ed. 2 from the scope and to amend the marking to remove “op is”.
iii. To transfer the CML UK ATEX Certificates to CML BV

Variation 5
This variation introduces the following modifications:

i. To update to the latest edition of the standards
ii. To permit alternate LED arrangement
iii. To permit the inclusion of LED optics
iv. To permit alternate LED driver use with WL84
v. To permit a change to diffuser lens design
vi. To update terminal certificate numbers
vii. To assess and permit a non-metallic paint layer (applied externally to the equipment)

viii. To update the description in line with the above modifications
ix. To remove condition of manufacture

Variation 6
This variation introduces the following modifications:

i. Alternative electronic components for power supply unit.
ii. Correction of typographical errors on schedule drawings.

Variation 7
This variation introduces the following modifications:
i. To assess the Universal Power Supply.
ii. To assess the High Output variant of the Spartan LED Linear Luminaires

Variation 8
This variation introduces the following modifications:
i. To provide clarification on product specification on certification documents.
ii. To introduce a High Output Emergency variant of the luminaire.

Variation 9
This variation introduces the following modifications:
i. Assessment of Extended Input Voltage Universal PSU.
ii. Assessment of DALI Dimmable Universal PSU.
iii. CML 13ATEX1130, Issue 9 was reverted to a Type Examination Certificate. Issues 7 and 8 were mistakenly issued as a Type Examination Certificate.

Variation 10
This variation introduces the following modifications:
i. To permit updated power supply table within description.

Variation 11
This variation introduces 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.
iii. To introduce an optional flat glass version.
iv. To remove the reference to WAGO 262 & 264 terminal blocks.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	13 Jul 2016	R1297A/00	Issue of prime certificate
1	03 Apr 2017	R1869A/00	The issue of variation 1
2	04 Oct 2017	R1870A/00	The issue of variation 2
3	05 Apr 2018	R11641A/00	The issue of variation 3
4	03 Feb 2020	R12972A/00	The issue of variation 4
5	10 Mar 2021	R13683C/00	The issue of variation 5

Issue	Date	Associated report	Notes
6	29 Jun 2021	R14354A/00	The issue of variation 6
7	24 Aug 2022	R15050A/00	The issue of variation 7
8	03 Feb 2023	R16135A/00	The issue of variation 8
9	16 Apr 2024	R17429A/00	The issue of variation 9
10	07 Feb 2025	R18347A/00	The issue of variation 10
11	13 Aug 2026	R21580A/00	The issue of variation 11

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.

14 Specific Conditions of Use (Special Conditions)

None.

Certificate Annex

Certificate Number	CML 16ATEX1130
Equipment	Spartan LED Linear 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
920-SD-0029	2 of 4	A	13/07/2016	Label drawing
980-SD-0023	1 of 1	A	13/07/2016	Spartan LED linear – Zone 2
920-SD-0007	1 of 4	C	13/07/2016	Spartan Linear Ex em
920-SD-0007	2 of 4	C	13/07/2016	Spartan Linear Ex em
920-SD-0007	3 of 4	B	13/07/2016	Spartan Linear Ex em
920-SD-0007	4 of 4	A	13/07/2016	Spartan Linear Ex em

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
920-SD-0029	2 of 4	B	03/04/2017	Label drawing
980-SD-0023	1 of 1	C	03/04/2017	Spartan LED linear – Zone 2
920-SD-0007	1 of 4	D	03/04/2017	Spartan Linear Ex em
920-SD-0007	2 of 4	E	03/04/2017	Spartan Linear Ex em

Issue 2

Drawing No	Sheets	Rev	Approved date	Title
910-SD-0047	1 of 1	A	04/10/2017	SPARTAN INTELLIGENT EMERGENCY PCB SCHEMATIC.
910-SD-0048	1 of 1	A	04/10/2017	PARTS LIST SPARTAN INTELLIGENT EMERGENCY POWER SUPPLY
910-SD-0049	1 to 8	A	04/10/2017	FMEA SPARTAN INTELLIGENT EMERGENCY POWER SUPPLY

Issue 3

Drawing No	Sheets	Rev	Approved date	Title
920-SD-0007	1 of 4	E	05/04/2018	Spartan LED Linear – Ex em
920-SD-0007	2 of 4	G	05/04/2018	Spartan LED Linear – Ex em
*910-SD-0001	2 of 4	C	05/04/2018	Spartan LED Floodlight Ex EM
*910-SD-0002	1 of 2	B	05/04/2018	HV & HV Emergency PSU Schematics
*910-SD-0003	1 to 5	A	05/04/2018	HV PSU Fault Assy
*910-SD-0004	1 of 5	B	05/04/2018	HV Emergency PSU Fault Assy
*910-SD-0004	2 of 5	A	05/04/2018	HV Emergency PSU Fault Assy
*910-SD-0004	3 of 5	B	05/04/2018	HV Emergency PSU Fault Assy
*910-SD-0004	4 of 5	A	05/04/2018	HV Emergency PSU Fault Assy

Certificate Annex

Certificate Number CML 16ATEX1130

Equipment Spartan LED Linear Luminaire

Manufacturer Raytec Ltd.

Drawing No	Sheets	Rev	Approved date	Title
*910-SD-0004	5 of 5	B	05/04/2018	HV Emergency PSU Fault Assy
*910-SD-0005	1 of 2	A	05/04/2018	HV & Emergency PSU Component Tolerance List
*910-SD-0005	2 of 2	B	05/04/2018	HV & Emergency PSU Component Tolerance List
*910-SD-0009	1 of 1	A	05/04/2018	LV PSU Schematics
*910-SD-0010	1 to 5	A	05/04/2018	LV PSU Fault Assy
*910-SD-0011	1 of 1	A	05/04/2018	LV PSU Component Tolerance List
*920-SD-0026	1 to 4	A	05/04/2018	Dual PSU Circuit diagram
*920-SD-0027	1 of 1	B	05/04/2018	Spartan Dual Certification Parts List
*920-SD-0028	1 to 5	A	05/04/2018	Dual PSU FMEA
*920-SD-0030	1 to 2	A	05/04/2018	18-48 AC/18-68V DC PSU Circuit diagram
*920-SD-0031	1 of 1	A	05/04/2018	Component Tolerance LV Power Supply
*920-SD-0032	1 to 4	A	05/04/2018	LV PSU Parts List/FMEA

* Power supplies previously assessed for use with CML 16ATEX1130 and IECEx CML16.0052 as referenced on drawing 920-SD-0007. These drawings have been added to the certificate by this variation for completeness.

Issue 4

Drawing No.	Sheets	Rev	Approved date	Title
920-SD-0029	1 of 1	C	03/02/2020	Certification Nameplate LED Linear Dust only- 2D & 3D
910-SD-0051	1 of 1	A	03/02/2020	Spartan Standard Power Supply PCB Schematic
910-SD-0052	1 to 6	A	03/02/2020	FMEA Spartan Standard Power Supply
910-SD-0053	1 of 1	A	03/02/2020	Parts List Spartan Standard Power Supply
910-SD-0054	1 of 1	A	03/02/2020	Spartan Emergency Power Supply PCB Schematic
910-SD-0055	1 to 5	A	03/02/2020	FMEA Spartan Emergency Power Supply
910-SD-0056	1 of 1	A	03/02/2020	Parts List Spartan Emergency Power Supply
910-SD-0057	1 to 2	A	03/02/2020	Spartan Dual Power Supply PCB Schematic
910-SD-0058	1 to 7	A	03/02/2020	FMEA Spartan Dual Power Supply
910-SD-0059	1 of 1	A	03/02/2020	Parts List
910-SD-0060	1 of 1	A	03/02/2020	Spartan Encapsulated Power Supply With Minor Modifications

Certificate Annex

Certificate Number CML 16ATEX1130

Equipment Spartan LED Linear Luminaire

Manufacturer Raytec Ltd.

Issue 5

Drawing No.	Sheets	Rev	Approved date	Title
920-SD-0035	1 to 4	A	10/03/2021	Spartan Linear Gen 2
920-SD-0036	1 to 2	A	10/03/2021	Schematic single stage power supply
920-SD-0037	1 to 5	A	10/03/2021	FMEA single stage power supply

Issue 6

Drawing No.	Sheets	Rev	Approved date	Title
920-SD-0035	1 of 4	A	29-06-2021	Spartan LED Linear GEN 2
920-SD-0035	2 of 4	B	29-06-2021	Spartan LED Linear GEN 2
920-SD-0035	3 of 4	A	29-06-2021	Spartan LED Linear GEN 2
920-SD-0035	4 of 4	B	29-06-2021	Spartan LED Linear GEN 2
910-SD-0057	1 to 3	B	29-06-2021	Spartan dual power supply PCB Schematic
910-SD-0058	1 to 7	B	29-06-2021	FMEA Spartan dual power supply
910-SD-0059	1 of 1	B	29-06-2021	Part list spartan dual power supply
920-SD-0037	Sheet 5	B	29-06-2021	FMEA other spartan single stage power supply

Issue 7

Drawing No.	Sheets	Rev	Approved date	Title
920-SD-0035	2 of 4	C	24 Aug 2022	SPARTAN LED LINEAR – GEN 2
920-SD-0035	4 of 4	C	24 Aug 2022	SPARTAN LED LINEAR – GEN 2
SB SD 4 C 145 75 0	1 to 10	0	24 Aug 2022	Safety assessment for LED ECG 4 C 145 75 0
70.03-01	1 to 7	0	24 Aug 2022	Test Report - LED Control Gear (Parts List 4 C 145 75 0 Rev 0)
BOM 4 C 145 75 0	1 to 2	0	24 Aug 2022	LED Control Gear 700 mA, 45 W, 110 - 254 V
BOM S 002 88 0	1 to 3	0	24 Aug 2022	SMD LED Control Gear 700 mA, 45 W, 110 - 254 V
BOM 5 A 003 44 1	1 of 1	0	24 Aug 2022	Lighting, Z.-Nr.: 7 E 00 187 01 0
BOM 5 A 003 44 2	1 of 1	0	24 Aug 2022	Lighting, Z.-Nr.: 7 E 00 187 01 0
BOM 5 A 003 44 3	1 of 1	0	24 Aug 2022	Lighting, Z.-Nr.: 7 E 00 187 01 0
BOM 5 A 003 44 4	1 of 1	0	24 Aug 2022	Lighting, Z.-Nr.: 7 E 00 187 01 0
BOM 5 A 003 44 5	1 of 1	0	24 Aug 2022	Lighting, Z.-Nr.: 7 E 00 187 01 0

Certificate Annex

Certificate Number CML 16ATEX1130

Equipment Spartan LED Linear Luminaire

Manufacturer Raytec Ltd.

Drawing No.	Sheets	Rev	Approved date	Title
NP2021-15414	1 to 3	G	24 Aug 2022	ICT Approval Application EFD25/16/9 X'Fmr

Issue 8

Drawing No.	Sheets	Rev	Approved date	Title
920-SD-0035	1 of 4	B	03 Feb 2023	Spartan LED Linear – Gen 2
920-SD-0035	2 of 4	D	03 Feb 2023	Spartan LED Linear – Gen 2
920-SD-0035	3 of 4	B	03 Feb 2023	Spartan LED Linear – Gen 2
920-SD-0035	4 of 4	D	03 Feb 2023	Spartan LED Linear – Gen 2

Issue 9

Drawing No.	Sheets	Rev	Approved date	Title
920-SD-0035	1 to 4	B	16 Apr 2024	SPARTAN LED LINEAR - GEN 2

Issue 10

None.

Issue 11

Drawing No	Sheets	Rev	Approved date	Title
920-SD-0035	1 of 4	C	13 Aug 2026	SPARTAN LED LINEAR - GEN 2
920-SD-0035	2 of 4	E	13 Aug 2026	SPARTAN LED LINEAR - GEN 2
920-SD-0035	3 of 4	B	13 Aug 2026	SPARTAN LED LINEAR - GEN 2
920-SD-0035	4 of 4	F	13 Aug 2026	SPARTAN LED LINEAR - GEN 2

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