



1 TYPE EXAMINATION CERTIFICATE

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

3 Certificate Number: Sira 19ATEX4227X Issue: 4

4 Equipment: P2***** and P4***** Series SafeSite GRP LED Linear

5 Applicant: Dialight Corporation

6 Address: 1501 Route 34 South
Farmingdale
New Jersey 07727
USA

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of Category 3 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 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018 EN 60079-31:2014

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This Type Examination Certificate relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 3GD
Ex ec IIC T4 / T5 Gc
Ex tc IIIC T95°C / 130°C Dc
Ta = -20°C - +50°C for T5 and 95°C
Ta = -40°C - +65°C for T4 and 130°C

Signed: M Halliwell

Title: Director of Operations



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13 DESCRIPTION OF EQUIPMENT

The P2***** and P4***** Series SafeSite GRP LED Linear comprises a plastic body with a plastic cover and a 4mm thick glass window or PC 943-A window; held together by sixteen, M6 x 20 mm, stainless steel, socket head type screws. The glass window is secured within the cover by the compression of the cast ring and glue, the PC window is secured within the cover by O-ring and screw. There is a terminal box at two side of luminaire separately, the cover of terminal box is same with luminaire body. Two cable entries are at each side of terminal box, it can be placed M25 or M20 certified cable gland or stopping plug with suitable IP code. Internally, the following may be fitted: a certified driver, up to 108 LEDs and 216 LEDs for P2***** series and P4***** series, three types certified terminal blocks, one type uncertified terminal block and three type's pluggable internal connectors. The guard is an alternative, and the guard is installed by M6 screw with 5.5Nm, the guard can be remove by screw driver only.

The Ni-MH battery pack will be used in luminaire and the battery pack can be charged by the internal luminaire power supply in explosive atmosphere. The specification of battery pack are 7.2Vdc/6Ah and 7.2Vdc/4Ah.

The luminaire can be mounted via hook, loop, chain mount or mounting bracket with difference installation angle "0°, 30°, 45°, 60° and 90°"

Entity parameters: 100Vac – 277Vac with 50/60 Hz or 120Vdc – 250Vdc; 51W Max. for P4***** series luminaire and 29W Max. for P2***** series luminaire.

Breakdown of the model number P2***** and P4***** are as follows:

Model	Type designation key	Designator & application
P2***** And P4*****	1st and 2nd asterisk: Product Series	P2: Polymeric Universal Linear P4: Polymeric Universal Linear
	3rd asterisk: Certification	B: ATEX/IECEx Zone 2, 21, 22
	4th asterisk: Lens Options	8: Flat Glass - Diffused Replaceable B: Bubble Polycarbonate Diffused Replacable
	5th asterisk: Optics	M: Medium (TIR)
	6th asterisk: CCT & CRI	C: Cool White 5000K - 80 CRI N: Neutral White 4000K - 80 CRI W: Warm White 2700K - 80 CRI G: Green A: Amber
	7th asterisk: Operating Voltage	2: 100 - 277 VAC/120-250VDC Integrated Driver
	8th asterisk: Lumen Output Range	3: 2.1 -3K (P2 std/opt. on P4) 6: 5.1-6K (P4 only)
	9th asterisk: Controls	A: DALI C: IIoT Compatible D: Dimming (0-10V) J: Wireless 2.4GHz K: Wireless 2.4 GHz + Utility Grade Metering N: No Options
	10th asterisk: Mounting Options	5: M25 - 2 Entries Each Side 2: M20 - 2 Entries Each Side

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Model	Type designation key	Designator & application
	11th asterisk: Hardware/Cable Options	N: Standard (4mm ² terminals) 6: Terminal Block - Screw Down (6mm ² terminals) 4: Terminal Block - Push Down (4mm ² terminals) D: Terminal Block - Push Down (6mm ² terminals) Din Rail
	12th asterisk: Electrical Options	W: Standard (three Phase Thru)
	13th asterisk: Finish	G: Grey
	14th asterisk: Battery Backup	N: Standard F: Emergency, 90 min. G: Emergency, 180 min

Variation 1 - This variation introduced the following changes:

- i. The clause 15.4 of Specific Conditions of Use was changed as below, the product description was also amended:

The terminals shall only be fitted with wires that have cross sectional area falling within the following limitations:

- i. WAGO 2004-conductor series terminals: single-core, finely stranded and standard: min. 0.5 mm² to 6 mm²
- i. WAGO 862-conductor series terminals: single-core, finely stranded and standard: min. 0.5 mm² to 4 mm²
- i. Weidmüller Type MK6 series terminals: single-core, finely stranded and standard: min. 0.5 mm² to 6 mm²
- i. Others terminal: the conductor shall less than 4mm²

Variation 2 - This variation introduced the following changes:

- i. Introduction of an alternative cell to existing battery pack 9300-GPL-0002-xx and 9300-GPL-0001-xx.

Variation 3 - This variation introduced the following changes:

- i. To align the revision of the drawing 8854GPL000500 in IECEx and ATEX certificates same as in the UKCA certificate.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	06 November 2019	R80002700A	The release of the prime certificate.
1	03 December 2019	R80025678A	The introduction of Variation 1.
2	20 November 2020	R80062162A	Transfer of certificate Sira 19ATEX4227X from Sira Certification Service to CSA Group Netherlands B.V..
3	16 February 2023	R80133862A	The introduction of Variation 2.

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Issue	Date	Report number	Comment
4	09 May 2023	R80163239A	The introduction of Variation 3.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

- 15.1 The IP64 was followed EN 60079-0, the IP66/67 as per EN 60529.
- 15.2 The equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
- 15.3 All cable entry holes shall be fitted with either an IECEx / ATEX certified cable gland or an IECEx / ATEX certified stopping plug that is suitable for the application. The type of cable, glands and stopping plugs shall have temperature ratings of at least 70°C
- 15.4 The terminals shall only be fitted with wires that have cross sectional area falling within the following limitations:
 - WAGO 2004-conductor series terminals: single-core, finely stranded and standard: min. 0.5 mm² to 6 mm²
 - WAGO 862-conductor series terminals: single-core, finely stranded and standard: min. 0.5 mm² to 4 mm²
 - Weidmüller Type MK6 series terminals: single-core, finely stranded and standard: min. 0.5 mm² to 6 mm²
 - Others terminal: the conductor shall less than 4mm²
- 15.5 All fixing screws for sealing on enclosure will be torqued to 5.5±0.5Nm.
- 15.6 The equipment shall be installed such that the supply cable is protected from mechanical damage. The cable shall not be subjected to tension or torque. If the cable is to be terminated within an explosive atmosphere then the free end shall be terminated in a suitably certified termination facility.
- 15.7 The installation shall provide a controlled environment that limits the pollution degree to the pollution degree 2 or better as defined in EN 60664-1.
- 15.8 Temperature code depends on ambient temperature as follows:

T-code	Ambient Temperature
T5 and T95°C	-20°C to 50°C
T4 and T130°C	-40°C to 65°C

Note: P2*****F, P2*****G, P4*****F or P4*****G luminaire can be used in ambient temperature “-20°C to 50°C” only.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

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- 17.2 Holders of Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 The equipment shall be subjected to a dielectric strength test at 500 Vac for at least 60 s without dielectric breakdown occurring between input terminal of LED board and the earthing. Alternatively the test may be carried out at 600 Vac for at least 100 ms, 700 Vdc for at least 60 s or 840 Vdc for at least 100 ms. Between input terminal of lamp board and the earthing.
- 17.4 The equipment shall be subjected to a dielectric strength test at 1554 Vac for at least 60 s without dielectric breakdown occurring between input terminal of luminaire and the earthing. Alternatively the test may be carried out at 1865 Vac for at least 100 ms, 2198 Vdc for at least 60 s or 2638 Vdc for at least 100 ms. Between input terminal of luminaire and the earthing. The surge protector and overcurrent protection device (MOV) in power supply shall be removed when do routine testing.
- 17.5 The special conditions for safe use detailed in the individual certificates of the terminals and stopping plug that forms part of the equipment Area Light shall be adhered to.
- 17.6 The battery indicator PCB and WIFI PCB shall be provided a transient over-voltage protection to ensure the input voltage does not exceed 140% of the voltage rating of the PCB.
- 17.7 The process for potting the power supply shall be followed as set out in schedule drawing 8854-GPL-0002-00 and a visual inspection should be conducted to make sure there is no damage that would result in exposure of the components.
- 17.8 The equipment incorporates the following, component-certified and equipment-certified device as listed below:

WAGO Terminal Blocks			
Manufacturer	Type	Certificate No.	Code
WAGO Kontakttechnik GmbH	WAGO 4 conductor device connector type 862-****/999-950	PTB 03 ATEX 1189U	Ex e IIC Gb Ex e I Mb
As above	WAGO type PE & Through terminal blocks type TOP JOB S2004-*** and type TOP JOB S 2004-***7 series	PTB 05 ATEX 1095U	Ex e IIC Gb Ex e I Mb

Weidmuller Terminal Blocks			
Manufacturer	Type	Certificate No.	Code
Weidmuller Interface GmbH	Terminals MK/BK Series	TUV 18 ATEX 8209U	Ex eb IIC Gb

Stopping Plug			
Manufacturer	Type	Certificate No.	Code
Hawke International	Type 375 Range of Stopping plugs	Baseefa12ATEX0095X	Ex eb IIC Gb Ex tb IIIC Db IP66/IP67

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Power supply			
Manufacturer	Type	Certificate No.	Code
Dialight Corporation	8850-GPL-*****	Sira 19ATEX4141U	Ex ec IIC Gc

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Certificate Annexe



Certificate Number: Sira 19ATEX4227X
Equipment: P2***** and P4***** Series
SafeSite GRP LED Linear
Applicant: Dialight Corporation

Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
8854GPL000500	1 to 12	A	05 Nov.19	ZONE 2 FIXTURE

Issue 1 - No new drawings were introduced.

Issue 2 - No new drawings were introduced.

Issue 3

Drawing	Sheets	Rev.	Date (Stamp)	Title
9300-GPL-0001-xx	1 of 1	C	16 Jan 23	GRP Battery Assembly 6Ah
9300-GPL-0002-xx	1 of 1	C	16 Jan 23	GRP Battery Assembly 4Ah

Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
8854GPL000500	1 of 12	B	27 Apr 23	Zone 2 Fixture

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