



EU-TYPE EXAMINATION CERTIFICATE

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

Certificate Number: **Sira 17ATEX2195X** Issue: **3**

Equipment: **Flashlight, Model DF2001**

Applicant: **Day Sun Technology Ltd.**

Address: **No 28, Yongke 3rd RD
Yongkang District
Tainan City
Taiwan (R.O.C)**

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

CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 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 14.2.

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 60079-0:2012/A11:2013 EN 60079-11:2012

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.

This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

The marking of the equipment shall include the following:



I M1

II 1G

Ex ia I Ma

Ex ia IIC T4 Ga

Signed: Michelle Halliwell

Title: Director of Operations



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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The DF2001 is a portable, hand-held, intrinsically safe flashlight for use in hazardous locations and powered by a rechargeable, Lithium-Ion cell. It has high and low mode operating functions that allow users to operate with high brightness or long duration lighting. Listed below are the flashlight's main, component parts:

- a body assembly
- a tail assembly
- a cap assembly
- three PCBs (BAT PCB, CON PCB and LED PCB)
- a reflector
- an LED light source
- an LED low battery warning light
- an ON/OFF button

The enclosure independently meets the ingress protection requirements for IP64 of EN 60529:2013.

Variation 1 - This variation introduced the following changes:

- Change of 'Conditions of Manufacturer': permissible charging parameters.
- Removal of drawing no. DF2001 sector diagram from controlled drawings.
- Revision of descriptive document, DF 2001 CCL.
- Removal of Specific Conditions of Use: POTENTIAL ELECTROSTATIC CHARGING HAZARD - Where a static-generating mechanism is identified, such as repeated brushing against clothing, suitable precautions shall be taken, e.g. the use of anti-static footwear.

Variation 2 - This variation introduced the following changes:

- Alternate Lithium cell: LG Chem / INR18650 M26.
- Alternate Lithium cell: Great Power / INR18650-2500.
- Removed "IP64" marking from the set of certification markings.
- Removal of Ex 'op is' protection and associated marking based on the equipment being exempt from the requirements of EN 60079-28:2015.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	04 October 2018	R70156227A	The release of the prime certificate.
1	29 March 2019	R70203101A	The introduction of Variation 1
2	31 October 2019	4070	Transfer of certificate Sira 17ATEX2195X from Sira Certification Service to CSA Group Netherlands B.V.
3	18 August 2022	R80119621A	The introduction of Variation 2.

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- 15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)
- 15.1 The DF2000 shall only be charged when in the non-hazardous area, using the cradle specifically supplied by the manufacturer for use with the unit. Charging shall be at an ambient temperature range 0°C to 40°C.
- 15.2 The lithium cell inside the equipment shall not be changed by the user.
- 15.3 The flashlight shall be protected from sustained exposure to sunlight.
- 15.4 Do not open enclosure in hazardous location.
- 15.5 The DF2001 shall only be used in locations where there is a low risk of mechanical impact.
- 15.6 **POTENTIAL ELECTROSTATIC CHARGING HAZARD** - Where a static-generating mechanism is identified, such as repeated brushing against clothing, suitable precautions shall be taken, e.g. the use of anti-static footwear.
- 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.
- 17.2 Holders of EU-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 adapter and cradle supplied with the DF2001 shall be approved as SELV equipment complying with the EN 60950 series, EN 61010-1, or a technically equivalent standard. The maximum charging parameters shall not exceed 5.55 Vdc / 1.0 A.

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Certificate Annexe



Certificate Number: Sira 17ATEX2195X
 Equipment: Flashlight, Model DF2001
 Applicant: Day Sun Technology Ltd.

Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
EX01.DF2001_Explode	1 of 1	0101	04 Sep 18	Exploded view
ES01	1 of 1	0101	04 Sep 18	Schematic
DF2001 CCL	1 to 2	0101	04 Sep 18	DF2001 Critical Component List
L01. DF2001 Label	1 of 1	0101	04 Sep 18	Label
EL01	1 of 1	0101	04 Sep 18	LED PCB
EL02	1 of 1	0101	04 Sep 18	CON PCB
EL03	1 of 1	0101	04 Sep 18	Low Battery PCB
R02. DF2001 Lithium pack	1 of 1	0101	04 Sep 18	Li-ion Battery Pack Assembly
R05. DF2001 Wire	1 of 1	0101	04 Sep 18	Wire
DF2001 sector diagram	1 of 1	001	04 Sep 18	Sector Diagram
R04. DF2001 PCB Position	1 of 1	0101	04 Sep 18	Internal PCB board position
DF200101PT008	1 of 1	0101	04 Sep 18	Cap
DF200102RU002	1 of 1	0101	04 Sep 18	O-Ring, part no. 2
DF200102PT001	1 of 1	0101	04 Sep 18	Lens
DF200102PT003	1 of 1	0101	04 Sep 18	Reflector
DF200101PT005	1 of 1	0101	04 Sep 18	Battery Bracket
DF200201PT013	1 of 1	0101	04 Sep 18	Lens Bracket
Ø2x1.5t	1 of 1	0101	04 Sep 18	O-Ring, part no. 19
DF200201PT018	1 of 1	0101	04 Sep 18	Lens
DF200101PT007	1 of 1	0101	04 Sep 18	Body
Ø34.5x2.65t	1 of 1	0101	04 Sep 18	O-Ring, part no. 17
DF200201RU015	1 of 1	0101	04 Sep 18	O-Ring, part no. 14
DF200101PT014	1 of 1	0101	04 Sep 18	Tail Cap
SF301PT013	1 of 1	0101	04 Sep 18	Vent Cover
DF200101PT009	1 of 1	0101	04 Sep 18	Handle
DF200101RU010	1 of 1	0101	04 Sep 18	Button
DF200101PT013	1 of 1	0101	04 Sep 18	Button Bracket
DF200101RU012	1 of 1	0101	04 Sep 18	Handle Right Grip
DF200101RU011	1 of 1	0101	04 Sep 18	Handle Left Grip
R01. DF2001 Body Rear View	1 of 1	0201	04 Sep 18	Body Rear View

Issue 1

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Description
DF2001 CCL	1 to 2	0102	31 Jan 19	DF2001 Critical Component List
L01. DF2001 Label	1 of 1	0102	13 Feb 19	Nameplate

The following drawing is to be removed from 'Descriptive Documents'.

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Description
DF2001 sector diagram	1 of 1	001	Not required as a removal.	Sector Diagram

Issue 2. No new drawings were introduced

Issue 3

Drawing	Sheets	Rev.	Date (Stamp)	Title
LRB-PS-CY2600-M26	1 to 11	3	19 Apr 22	Alternate Lithium cell: LG Chem / INR18650 M26
GP-HN01-03	1 to 10	A	19 Apr 22	Alternate Lithium cell: Great Power / INR18650-2500

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Applicant: Day Sun Technology Ltd.

Drawing	Sheets	Rev.	Date (Stamp)	Title
EX01.DF2001_Explode	1 of 1	0102	16 May 22	Exploded view chart with divergent light source exception declaration
L01. DF2001 Label	1 of 1	0103	19 May 22	Marking Label

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