

# EC-TYPE EXAMINATION CERTIFICATE



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## Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

[3]

EC-Type Examination Certificate Number: **DEMKO 14 ATEX 1289X Rev. 0**

[4]

Equipment or Protective System: **Intrinsically Safe Flashlight, Models DS-3 and DS-12**

[5]

Manufacturer: **Daysun Technology Ltd.**

[6]

Address: **1<sup>st</sup> Floor, No. 1 Alley 2 Lane 110, Sec 4 Hsimen Road, North District, Tainan 704 Taiwan**

[7]

This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **4786309676**

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Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2009**

**EN 60079-11:2012**

**EN 60079-26:2007**

[10]

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11]

This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system.

These are not covered by the certificate.

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The marking of the equipment or protective system shall include the following:

 **II 1 G Ex ia IIC T4**



### Certification Manager

Jan-Erik Storgaard

This is to certify that the sample(s) of the Equipment described herein ("Certified Equipment") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Equipment Certification Program Requirements. This certificate and test results obtained apply only to the equipment sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured equipment. UL has not established Follow-Up Service or other surveillance of the equipment. The Manufacturer is solely and fully responsible for conformity of all equipment to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

**Date of issue:** 2014-09-10



### Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
Tel. +45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com)

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## Schedule

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Report: 4786309676

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### Description of Equipment or protective system

The Models DS-3 and DS-12 are portable, hand-held LED flashlights powered by three, size 'C', 1.5V, alkaline batteries connected in series. The models are available in three different color enclosures: yellow, orange, black. The following batteries were considered acceptable for use in the flashlight:

- Model E93, manufactured by Energizer
- Model MN1400, manufactured by Duracell
- Model 814, manufactured by Rayovac
- Model 04914, manufactured by Varta
- Model AL-C, manufactured by Rayovac

### Temperature range

The ambient temperature range is -20 °C to +40 °C.

### Performance Testing

The optical radiation output of the apparatus with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 94/9/EC is not covered in this certificate.

### Routine tests

None.

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### Report No.

Project Report No.: 4786309676 (Hazardous Location Testing)

### Documents:

Description:	Drawing No.:	Rev. Level:	Date:
Model DS-3 Assembly Overview	A01. DS-3 Assembly	1.0	2013-12-26
Model DS-12 Assembly Overview	A01. DS-12 Assembly	1.0	2014-01-02
Model DS-3: Label	L01. DS-3 Label	1.0	2013-11-30
Model DS-12: Label	L01. DS-12 Label	1.0	2014-01-07
Model DS-3: Label ATEX/IECEX	L03. DS-3 Label EU	1.0	2013-11-30
Model DS-12: Label ATEX/IECEX	L03. DS-12 Label EU	1.0	2014-01-07
Model DS-3: Manual	-	1.0	2014-05-07
Model DS-12: Manual	-	1.0	2014-05-07
Model DS-3: Exploded	EX01. DS-3 Explode	1.0	2013-09-26
Model DS-12: Exploded	EX01. DS-12 Explode	1.0	2014-01-02
Battery Bracket of Models DS-3 and DS-12 Exploded	EX01. B004 Explode	1.0	2013-12-26
Model DS-3: Mechanical BOM	DS-3 ME-BOM	1.0	2013-12-26
Model DS-12: Mechanical BOM	DS-12 ME-BOM	1.0	2014-01-02
Battery Bracket of Models DS-3 and DS-12: Mechanical BOM	BM01.B004 ME-BOM	1.0	2013-12-26
Model DS-3: Body	M03. DS-3 Body	1.0	2013-12-26
Model DS-12: Body	M03. DS-12 Body	1.0	2014-01-02
Battery Bracket: Body	M01. B004 Body	1.0	2013-12-26
Model DS-3: Cap Lens	M01. DS-3 Cap Lens	1.0	2013-12-26
Model DS-3: Cap Rubber	M02. DS-3 Cap Rubber	1.0	2013-12-26
Model DS-12: Cap Rubber	M02. DS-12 Cap Rubber	1.0	2014-02-07
Model DS-3: Cross Section	O01. DS-3 Cross Section	1.0	2013-12-26
Model DS-12: Cross Section	O01. DS-12 Cross Section	1.0	2014-01-02
Battery Bracket: Cross Section	O01. B004 Cross Section	1.0	2013-12-26
Vent	M06. DS-3 Vent	1.0	2013-03-19



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## Schedule

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O-ring	M04. DS-3 O-Ring	1.0	2013-12-26
Wire	M05. DS-3 Wire	1.0	2013-11-22
Infalible Wire Connection	O03. DS-3 Infalible Wire Connection	1.0	2014-04-03
PCB Upper Bracket of Battery Bracket	M02. B004 PCB Upper Bracket	1.0	2013-12-26
PCB Lower Bracket of Battery Bracket	M03. B004 PCB Lower Bracket	1.0	2013-12-26
Battery Rank	M04. B004 Battery Bracket	1.0	2013-12-26
Body Lower Cap of Battery Bracket	M05. B004 Body Lower Cap	1.0	2013-12-26
Schematic	ES01. DS-3 Schematics	3.0	2014-08-21
Electrical Bill of Material	BE01. DS-3 EE-BOM	3.0	2014-08-21
LED Circuit Board Layout	EL01. DS-3 LED Board	2.0	2014-02-12
Main Circuit Board Layout	EL02. DS-3 Main Board	2.0	2014-02-12
Switch Circuit Board Layout	EL03. DS-3 SW PCB	2.0	2014-02-12

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#### Specific conditions of use:

- Read manual before use.
- Do not open the enclosure in a hazardous area.
- Replace batteries only in non-hazardous areas.
- Use only battery type Energizer E93, Duracell MN 1400, Rayovac 814, Varta 04914 or Rayovac AL-C.
- To reduce the risk of explosion, do not mix new batteries with used batteries, or mix batteries from different manufacturers or from different types.
- The screw shall be secured tightly after opening and closing the enclosure.
- These devices were tested for IP 68, where IPX8 samples were submerged in water of 3 meters in depth, for 30 minutes.

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#### Essential Health and Safety Requirements

Concerning ESRs this Schedule verifies compliance with the Annex III of ATEX directive only. By placing the product on the market, the manufacturer declares compliance with other relevant Directives, and all other safety related requirements including those of Annex II of this Directive.

#### Additional information

The Models DS-3 and DS-12 have in addition passed the tests for Ingress Protection to IP 68 in accordance with EN60529: 1991/A1 2001.

The Registered Trademark,  **DAYSUN TECHNOLOGY LTD.**,  
 , or  for Daysun Technology Ltd. may be  
used as the company identifier on the marking label.

This certificate was issued as "Accredited by DANAK under registration number 7011 to certification of products".

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

