[1] # EC-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **DEMKO 14 ATEX 1354X Rev. 0**

[4] Equipment or Protective System: **Intrinsically Safe Headlamp**

[5] Manufacturer: **Day Sun Technology Ltd.**

[6] Address: **1st Floor 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. **4786590863**

[9] 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.

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

II 1 G Ex ia IIC T4 Ga IP67

Certification Manager
Jan-Erik Storgaard

Notified Body

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: 2014-12-24

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[13] [14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
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[15] Description of Equipment or protective system

The DS-14 is a high power LED headlamp for use in hazardous locations and is powered by three size AAA, 1.5 V alkaline cells connected in series. It has high and low mode operating functions that allows users to operate for high brightness or long duration lighting. The following batteries were considered acceptable for use in the flashlights:

- Model E92, manufactured by Energizer
- Model MN2400, manufactured by Duracell
- Model LR03, manufactured by Panasonic

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.

[16] Report No.

Project Report No.: 4786590863 (Hazardous Location Testing)

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
Model DS-14: Label	L01. DS-14 Label	1.0	2014-07-16
Model DS-14: Label EU	L03. DS-14 Label EU	1.0	2014-07-16
Model DS-14: User Manual	UM01. DS-14 User Manual	1	2014-11-04
Model DS-14: Explosion	EX01. DS-14 Explosion	1.0	2014-04-22
Model DS-14: Body	M02. DS-14 Body	1.0	2014-04-29
Model DS-14: Lens	M01. DS-14 Lens	1.0	2014-04-29
Model DS-14: Vent	M03. DS-14 Vent	1.0	2014-04-29
Model DS-14: O-Ring	M05. DS-14 O-Ring	1.0	2014-06-05
Model DS-14: Battery Holder	M04. DS-14 Battery Holder	1.0	2014-04-29
Model DS-14: Body Cover	M06. DS-14 Body Cover	1.0	2014-04-29
Model DS-14: Wire	M07. DS-14 Wire	1.0	2014-11-04
Model DS-14: Infallible Wire Connection	O01. DS-14 Infallible Wire Connection	1.0	2014-11-04
Model DS-14: Cross Section	A01. DS-14 Cross Section	1.0	2014-08-21
Schematics	ES01. DS-14 Schematics	1.0	2014-12-16
Mechanical Bill Of Material	BM01. DS-14 ME-BOM	1.0	2014-11-04
Electrical Bill of Material	BE01. DS-14 EE-BOM	1.0	2014-12-16
LED Circuit Board Layout	EL01. DS-14 LED PCB	1.0	2014-04-21
Main Circuit Board Layout	EL02. DS-14 Main PCB	1.0	2014-12-22
Encapsulant Installation Process	A02. Vent and Lens Installation	1.0	2014-11-18

[17] 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 E92, Duracell MN2400, or Panasonic LR03.
- 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.

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE No.**

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[18] 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

Model DS-14 has in addition passed the tests for Ingress Protection to IP 67 in accordance with EN60529: 1991/A1 2000.

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

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.