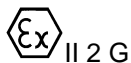




EU Type Examination Certificate CML 17ATEX3243U Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Component **ELLK LED Retrofit Modules**
- 3 Manufacturer **Cooper Electric (Changzhou) Co., Ltd.**
- 4 Address **No. 189 Liuyanghe Road,
Xinbei District, Changzhou,
Jiangsu Province, China**
- 5 The component is specified in the description of this certificate and the documents to which it refers.
- 6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, 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 component 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 The 'U' suffix after the certificate number indicates that the component is subject to a schedule of limitations (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 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 60079-0:2012+A11:2013 EN 60079-7:2015 EN 60079-18:2015
EN 60079-28:2015
- 10 The equipment shall be marked with the following:



II 2 G

Ex eb mb op is IIC Gb

Ambient temperature = -40°C to +65°C

Service temperature = -40°C to +99°C



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11 Description

The ELLK LED Retrofit modules incorporate LEDs that are fitted to printed circuit boards which in turn, are mounted onto an aluminium heat sync. The LED boards are encapsulated and situated within an enclosure that consists of a transparent cover fitted with two end caps that house encapsulated PCBs. Separately certified increased safety nipple connectors are used to connect the wiring.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	10 Oct 2017	R2335A/00	Issue of prime certificate

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. Each unit manufactured shall be subjected to an electric strength test in accordance with EN 60079-18 clause 9.2. For the ELLK-2 module it shall be carried out either at 500 V for 60 seconds or at 1.2 times this test voltage for at least 100 ms. For the ELLK-4, it shall be carried out at 1500 V for 60 seconds or at 1.2 times this test voltage for at least 100 ms.
- ii. All encapsulated parts shall be subjected to a visual inspection at the point of manufacturer. No damage should be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking inadmissible shrinkage, decomposition, failure of adhesion) separation of any adhered parts or softening in accordance with EN 60079-18 clause 9.1.

14 Schedule of Limitations

The following conditions relate to safe installation and/or use of the equipment.

- i. The LED Module shall be connected to a suitably rated constant current power supply that delivers a supply not exceeding 340 mA.
- ii. The ELLK module must be installed within an enclosure that conforms to the requirements of a recognised type of protection as specified in EN 60079-0 and meet the requirements for degree of protection (IP) by enclosures of at least IP54.
- iii. The modules shall be situated in a position in the enclosure so as not to be affected by impact to the equipment.
- iv. The modules shall be installed into enclosures to ensure the creepage and clearances between the terminals and other live or earthed parts shall comply with the requirements of 4.3 and 4.4 and Table 2 of EN 60079-7.



Certificate Annex

Certificate Number CML 17ATEX3243U
Equipment ELLK LED Retrofit Modules
Manufacturer Cooper Electric (Changzhou) Co., Ltd.

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
CHKAS1206	1 to 5	1	10 Oct 2017	ELLK LED Retrofit Certification Drawing



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