



EU Type Examination Certificate CML 18ATEX3371X Issue 2

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **LX-XXX LinkEx LED Luminaires**
- 3 Manufacturer **Wolf Safety Lamp Company Limited**
- 4 Address **Saxon Road Works,
Sheffield, S8 0YA,
England, United Kingdom**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout The Netherlands, Notified Body Number 2776, 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 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 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (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 equipment or 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 IEC 60079-0:2018 EN IEC 60079-7:2015+A1:2018 EN 60079-18:2015+A1:2017
EN 60079-31:2014

- 10 The equipment shall be marked with the following:

Without IS switch



II 2 GD

Ex eb mb IIC T3¹/T4² Gb

Ex tb IIIC T170¹/T135²°C Db IP6X^{**}

Ta: -20°C to +40¹/45³/55²°C

With IS switch



II 2 GD

Ex eb ib mb IIC T4 Gb

Ex ib tb IIIC T135°C Db IP6X^{**}

Ta: -20°C to +45³/55²°C

¹ MK1 drivers

² MK2 drivers

³ With protective cover

^{**}This coding may be omitted



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11 Description

The LX-XXX LinkEx LED Luminaires are suitable for temporary lighting installations. The luminaires comprise a clear, tubular, polycarbonate lamp envelope with two polycarbonate or aluminium end mouldings. The lamp envelope is all treated with a clear anti-static coating to safely dissipate any static electricity. The end mouldings are secured to the tube via the internal gear tray, which is fabricated from steel or aluminium, two M5 and two M6 screws and bonded seals are used to secure each end cap. A silicone gasket is fitted within a groove on each end cap, thus maintaining the IP64 (as applicable) ratings. The luminaires have additionally been independently tested according to the requirements of EN/IEC 60529 to meet IP67, with no sockets fitted, and IP66 when sockets are fitted.

The luminaires are fitted with replaceable bump ring clamped between the seal ring and end plate, giving additional protection to the luminaire.

180° variant – These comprise a main gear tray, with the driver and terminal connection blocks on the underside with two encapsulated LED strips fitted to the upper, distributing the light through 180°.

360° variant – These comprise two gear trays and two narrow channels, with the driver and terminal connection blocks fitted along with two encapsulated LED strips, one fitted to each side, distributing the light through 360°.

Luminaires can be supplied with sockets fitted to the end caps with bolts, nuts and sealing washers and/or various lengths of cable with plugs fitted.

The luminaires can be fitted with an intrinsically safe switch.

The luminaires may be marked T3/T170°C or T4/T135°C (dependent upon the type of driver fitted). LX-XXE models incorporate a battery for emergency operation in the event of power failure.

The T3 marked luminaires are designed for use with an electrical supply of either 85 Vac to 264 Vac, 50/60 Hz or 19 Vdc/ac, rms to 28 Vdc/ac, rms.

The T4 marked luminaires are designed for use with an electrical supply of either 0 Vac to 264 Vac 50/60 Hz or 0 V to 50 V ac/dc, 50/60 Hz.

The luminaires may be mounted in any attitude and are suitable for use with accessories.

Variation 1

The following changes were introduced:

- i. Addition of the option to include an intrinsically safe switch certified under SEV 13ATEX0170 and IECEx SEV 13.0011.
- ii. Removal of battery pack thermal fuses for standard charging options
- iii. Option for the inclusion of a metallic adapter plate or metallic end cap for use with suitably certified socket arrangements.



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Variation 2

The following changes were introduced:

- i. Marking updated to remove op is and include UKCA.
- ii. Additional tube material added
- iii. Material changes for end cap (Aluminium)

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	23 Jan 2020	R12067D/00	Issue of Prime Certificate
1	06 Mar 2020	R12257A/00	Introduction of Variation 1
2	23 Oct 2021	R13361A/00	Introduction of Variation 2

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. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. The encapsulated parts of the apparatus shall be subjected to a visual inspection. No visible damage of the compound shall be evident, such as cracks, exposure of the encapsulated parts, flaking, impermissible shrinkage, discoloration, swelling decomposition or softening, as required by EN/IEC 60079-18:2015 Clause 9.1.
- iii. For equipment rated in excess of 90 V peak, an electric strength test of $2U+1000$ V (where U is the supply voltage) with a minimum of 1500 V ac, shall be applied between circuit and casing for at least 1 minute, as required by EN/IEC 60079-7:2015, Clause 6.1. No breakdown shall occur. Alternatively, a test at 1.2 times the test voltage may be applied for at least 100 ms. The test is also permitted to be conducted at a dc voltage of 140% of the specified ac r.m.s. test voltage.
- iv. For equipment rated less than 90 V peak, and electric strength test of 500 V r.m.s. shall be applied between the circuit and the casing for at least 1 minute, as required by EN/IEC 60079-7:2015, Clause 6.1. No breakdown shall occur. Alternatively, a test at 1.2 times the test voltage may be applied for at least 100 ms. The test is also permitted to be conducted at a dc voltage of 140% of the specified ac r.m.s. test voltage.
- v. The manufacturer shall ensure that any alternative, component certified socket fitted to the equipment shall be suitably certified, have a service temperature range of at least -20°C to $+55^{\circ}\text{C}$, be used within its electrical ratings, and provide a minimum degree of protection of
 - IP64 (for models labelled as suitable for use in explosive dusts)
 - IP54 (for models not labelled as suitable for use in explosive dusts)or that shown on the label, whichever is the higher. Additionally, the manufacturer shall comply with all the requirements of the schedule of limitations of such components.
- vi. The manufacturer shall ensure that any equipment certified socket fitted to the equipment shall be suitably certified, have an operating temperature range of at least -20°C to $+55^{\circ}\text{C}$, temperature class of T4 or better, be used within its electrical ratings, and provide a minimum degree of protection of



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- IP64 (for models labelled as suitable for use in explosive dusts)
 - IP54 (for models not labelled as suitable for use in explosive dusts)
- or that shown on the label, whichever is the higher.
Additionally, the manufacturer shall comply with all the conditions of use of such sockets.
- vii. When the luminaire is fitted with a socket that has associated special conditions for safe use, the manufacturer shall take all reasonable steps to ensure that the user/installer complies with these conditions.
- viii. The manufacturer shall select suitable materials for accessories as defined on certified drawings LX-702 & LX-703.
- ix. The battery packs for fast charging options shall be fitted with appropriate thermal fuses.

14 Specific Conditions of Use (Special Conditions)

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

- i. The user/installer shall ensure that, when the luminaire is fitted with a previously certified plug or socket that has associated specific conditions of use, they shall take into account any restrictions or conditions for safe use that are applicable to these devices.

Certificate Annex

Certificate Number CML 18ATEX3371X
Equipment LX-XXX LinkEx LED Luminaires
Manufacturer Wolf Safety Lamp Company Limited



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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
LX-701	1 of 1	6	23 Jan 2020	GA Mk1
LX-702	1 of 1	5	23 Jan 2020	GA Mk2
LX-703	1 of 1	5	23 Jan 2020	GA LX-400E
LX-711	1 of 1	7	23 Jan 2020	Assembly
LX-720	1 of 1	2	23 Jan 2020	Accessory Clamp
LX-802	1 to 2	3	23 Jan 2020	Mk1 HV Potted Driver
LX-803	1 of 1	6	23 Jan 2020	Mk2 HV Potted Driver
LX-804	1 of 1	6	23 Jan 2020	LED Heatsink Assy
LX-805	1 to 2	2	23 Jan 2020	LV Emergency Potted Driver
LX-806	1 to 2	2	23 Jan 2020	HV Emergency Potted Driver
LX-807	1 of 1	3	23 Jan 2020	Emergency Control PCB
LX-808	1 to 2	3	23 Jan 2020	Battery
LX-810	1 of 1	2	23 Jan 2020	LED Heatsink Assy
LX-824	1 of 1	3	23 Jan 2020	Mk1 Driver potted
LX-825	1 of 1	5	23 Jan 2020	Mk2 Driver potted
LX-875	1 of 1	2	23 Jan 2020	Emergency Temp Sensor
LX-902	1 of 1	2	23 Jan 2020	Schematic HV Mk1
LX-903	1 to 2	5	23 Jan 2020	Schematic HV Mk2
LX-904	1 of 1	3	23 Jan 2020	Schematic 18 to 55V Emer
LX-905	1 of 1	3	23 Jan 2020	Schematic HV Input Emer
LX-906	1 to 5	3	23 Jan 2020	Schematic Batt Chgr
LX-920	1 of 1	5	23 Jan 2020	Potted Fuses
LX-924	1 of 1	3	23 Jan 2020	Schematic Mk1 LV
LX-925	1 to 3	4	23 Jan 2020	Schematic Mk2 LV

Certificate Annex

Certificate Number CML 18ATEX3371X
Equipment LX-XXX LinkEx LED Luminaires
Manufacturer Wolf Safety Lamp Company Limited



Issue 1

Drawing No	Sheets	Rev	Approved date	Title
LX-703	1 of 1	6	06 Mar 2020	LED LinkEx Emergency - GA
LX-711	1 to 2	8	06 Mar 2020	LinkEx Compact 180 Assembly
LX-808	1 to 2	3	06 Mar 2020	LED LinkEx Emergency – Battery Pack
LX-813	1 of 1	1	06 Mar 2020	LX-400E – MV Stage Flyback Transformer
LX-814	1 of 1	1	06 Mar 2020	LX-400E – HV Stage Flyback Transformer
LX-906	1 to 5	4	06 Mar 2020	Battery Charger and LED Driver
LX-925	1 to 3	4	06 Mar 2020	LED LinkEx Compact LV MK2 Schematic Control Cct

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Drawing No	Sheets	Rev	Approved date	Title
LX-703	1 of 1	7	23 Oct 2021	LED LinkEx Emergency - GA
LX-711	1 to 2	9	23 Oct 2021	LinkEx Compact 180 Assembly
LX-701	1 of 1	7	23 Oct 2021	LinkEx Compact GA – MK1 Diver
LX-702	1 of 1	6	23 Oct 2021	LinkEx Compact GA – MK2 Diver
LX-720	1 of 1	3	23 Oct 2021	LED LinkEx Accessory Clamp