



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX EXV 19.0001X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-09-13

Applicant: **Wolf Safety Lamp Co. Limited**
Saxon Road Works
Sheffield, S8 0YA
United Kingdom

Equipment: **LMX series Luminaires**

Optional accessory:

Type of Protection: **Increased Safety, Encapsulation, Dust**

Marking: Ex eb mb IIC T4 Gb
Ex tb IIIC T80°C...T90°C Db

Approved for issue on behalf of the IECEx
Certification Body:

Sean Clarke CEng MSc FIET

Position:

Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom





IECEX Certificate of Conformity

Certificate No.: **IECEX EXV 19.0001X**

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Date of issue: 2021-09-13

Issue No: 0

Manufacturer: **Wolf Safety Lamp Co. Limited**
Saxon Road Works
Sheffield, S8 0YA
United Kingdom

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[GB/EXV/ExTR19.0001/00](#)

Quality Assessment Report:

[GB/BAS/QAR06.0017/10](#)



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Issue No: 0

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The LMX Luminaire is an LED luminaire for gas Group IIC and dust Group IIIC dust and gas hazardous

atmospheres. The equipment comprises of a powder coated aluminium enclosure with two M20 x 1.5 threaded gland entries and wiring connection covers at both ends, with a single glass lens for the LMX2 variants and two lenses for the LMX4.

Internally, the luminaire contains LED drivers, LED modules, linear optics, and terminal blocks for user connections. Feed through terminals are provided for ease of connection and chain linking of multiple units.

The luminaires can be supplied in four distinct model types, the standard version with an ambient range of -50°C to +50°C, the 'high temp' versions which employ specific LED drivers to permit an ambient range of -50°C to +60°C and the 'emergency' versions, which employ an additional LED driver and a battery pack and are suitable for an ambient range of -40°C to +50°C. The combined 'emergency & 'high temp'' versions are suitable for an ambient range of -40°C to +55°C. See the Annex attached to this certificate for all model types covered by this approval.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Cable entries into the equipment shall utilise suitably certified cable glands and shall provide a minimum degree of protection of IP66 or IP67 (dependent on the installation environment).
2. Unused cable entry apertures shall be closed with suitably certified blanking plugs which provide a minimum degree of protection of IP66 or IP67 (dependent on the installation environment).
3. When used in potentially hazardous dust atmospheres, the equipment shall be installed so as to minimize the risk from electrostatic discharge. In particular, the equipment shall not be installed where there is a likelihood of there being a static generating mechanism, such as steam generation or fast moving particles over the surface of the equipment.
4. The equipment shall only be used with a power source having a prospective short circuit current which does not exceed 1500A.
5. The battery pack must not be replaced in or transported through hazardous areas (unless the area is shown to be non-hazardous).

Annex:

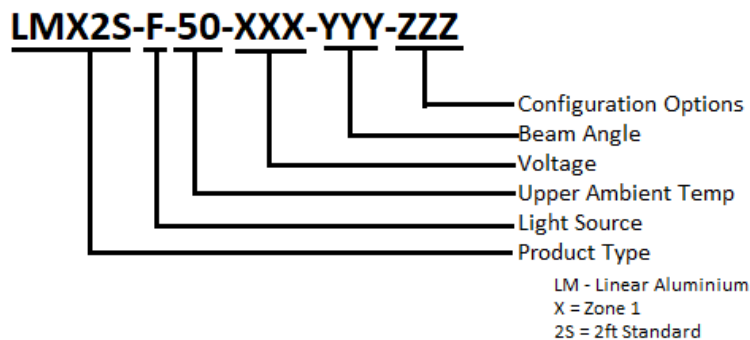
[IECEX EXV 19.0001X Annex 0.pdf](#)

Model numbers:

LMX LINEAR OPTIC (LO) PART NUMBERS						
Type	Voltage	Frequency	Current	Ambient Temperature Limits	Gas Temperature Class	Dust Surface Temperature
LMX2S-L-50-110	88 - 140 V	50 - 60 Hz	0.35 A	-50 °C to 50 °C	T4	T80 °C
LMX2E-L-50-110	100 - 140 V	50 - 60 Hz	0.4 A	-40 °C to 50 °C	T4	T80 °C
LMX4S-L-50-110	88 - 140 V	50 - 60 Hz	0.7 A	-50 °C to 50 °C	T4	T80 °C
LMX4E-L-50-110	100 - 140 V	50 - 60 Hz	0.75 A	-40 °C to 50 °C	T4	T80 °C
LMX2S-L-50-230	180 - 277 V	50 - 60 Hz	0.15 A	-50 °C to 50 °C	T4	T80 °C
LMX2E-L-50-230	200 - 277 V	50 - 60 Hz	0.17 A	-40 °C to 50 °C	T4	T80 °C
LMX4S-L-50-230	180 - 277 V	50 - 60 Hz	0.3 A	-50 °C to 50 °C	T4	T80 °C
LMX4E-L-50-230	200 - 277 V	50 - 60 Hz	0.32 A	-40 °C to 50 °C	T4	T80 °C
LMX2S-L-60-110	88 - 140 V	50 - 60 Hz	0.35 A	-50 °C to 60 °C	T4	T90 °C
LMX2E-L-55-110	100 - 140 V	50 - 60 Hz	0.4 A	-40 °C to 55 °C	T4	T90 °C
LMX4S-L-60-110	88 - 140 V	50 - 60 Hz	0.7 A	-50 °C to 60 °C	T4	T90 °C
LMX4E-L-55-110	100 - 140 V	50 - 60 Hz	0.75 A	-40 °C to 55 °C	T4	T90 °C
LMX2S-L-60-230	180 - 277 V	50 - 60 Hz	0.15 A	-50 °C to 60 °C	T4	T90 °C
LMX2E-L-55-230	200 - 277 V	50 - 60 Hz	0.17 A	-40 °C to 55 °C	T4	T90 °C
LMX4S-L-60-230	180 - 277 V	50 - 60 Hz	0.3 A	-50 °C to 60 °C	T4	T90 °C
LMX4E-L-55-230	200 - 277 V	50 - 60 Hz	0.32 A	-40 °C to 55 °C	T4	T90 °C

LMX FORWARD-FACING ARRAY (FFA) PART NUMBERS						
Type	Voltage	Frequency	Current	Ambient Temperature Limits	Gas Temperature Class	Dust Surface Temperature
LMX2S-F-50-110	88 - 140 V	50 - 60 Hz	0.35 A	-50 °C to 50 °C	T4	T80 °C
LMX2E-F-50-110	100 - 140 V	50 - 60 Hz	0.4 A	-40 °C to 50 °C	T4	T80 °C
LMX4S-F-50-110	88 - 140 V	50 - 60 Hz	0.7 A	-50 °C to 50 °C	T4	T80 °C
LMX4E-F-50-110	100 - 140 V	50 - 60 Hz	0.75 A	-40 °C to 50 °C	T4	T80 °C
LMX2S-F-50-230	180 - 277 V	50 - 60 Hz	0.15 A	-50 °C to 50 °C	T4	T80 °C
LMX2E-F-50-230	200 - 277 V	50 - 60 Hz	0.17 A	-40 °C to 50 °C	T4	T80 °C
LMX4S-F-50-230	180 - 277 V	50 - 60 Hz	0.3 A	-50 °C to 50 °C	T4	T80 °C
LMX4E-F-50-230	200 - 277 V	50 - 60 Hz	0.32 A	-40 °C to 50 °C	T4	T80 °C
LMX2S-F-60-110	88 - 140 V	50 - 60 Hz	0.35 A	-50 °C to 60 °C	T4	T90 °C
LMX2E-F-55-110	100 - 140 V	50 - 60 Hz	0.4 A	-40 °C to 55 °C	T4	T90 °C
LMX4S-F-60-110	88 - 140 V	50 - 60 Hz	0.7 A	-50 °C to 60 °C	T4	T90 °C
LMX4E-F-55-110	100 - 140 V	50 - 60 Hz	0.75 A	-40 °C to 55 °C	T4	T90 °C
LMX2S-F-60-230	180 - 277 V	50 - 60 Hz	0.15 A	-50 °C to 60 °C	T4	T90 °C
LMX2E-F-55-230	200 - 277 V	50 - 60 Hz	0.17 A	-40 °C to 55 °C	T4	T90 °C
LMX4S-F-60-230	180 - 277 V	50 - 60 Hz	0.3 A	-50 °C to 60 °C	T4	T90 °C
LMX4E-F-55-230	200 - 277 V	50 - 60 Hz	0.32 A	-40 °C to 55 °C	T4	T90 °C

The product part numbers convention is as shown below:



Routine Tests:

1. 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.
2. The equipment shall be subjected to an electric strength test in accordance with EN 60079-7 Clause 6.1 using a test voltage of:
 - For models LMX2/230 and LMX4/230, 1554Vac applied between supply connections and frame, for a period of 60 secs.
 - For models LMX2/110 and LMX4/110, 1500Vac applied between supply connections and frame, for a period of 60 secs.

Alternatively, a test voltage of 20% higher may be applied for 0.1 seconds. A DC test voltage is allowed as an alternative to the AC test voltage and shall be 140% of the specified AC r.m.s. test voltage.

Manufacturer's documents:

Title:	Drawing No.:	Rev	Sheets	Date:
LMX Certification Label	LD-0221	05	2	19/01/2021
LMX Enclosure Construction	LD-0222	04	3	07/09/2021
LMX Wiring and Layout	LD-0223	04	2	25/02/2021
LMX LO Lamp Module General Assembly	LD-0229	04	2	14/02/2021
LMX2 General Assembly	LD-0230	03	2	25/02/2021
LMX4 General Assembly	LD-0231	03	2	25/02/2021
LA0076 - LMX Wiring Cover General Assembly	LD-0232	03	1	19/01/2021
LMX Linear Technical Manual	LD-0233	03	13	06/09/2021
LE0041 - Linear LED FFA Schematic	LD0282	1	1	07/04/2021
LMX FFA Light Engine Construction	LD-0283	01	1	25/02/2021
LMX FFA Lamp Module General Assembly	LD-0284	02	1	28/02/2021
LMX FFA Array PCB Layout	LD0285	1	1	12/03/2021