



# 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](http://www.iecex.com)

Certificate No.: **IECEX CML 20.0008X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-05-06

Applicant: **CORTEM S.p.A.**  
Via Aquileia 10  
34070 Villesse  
Gorizia  
Italy

Equipment: **Increased safety lighting fixtures LifEx series**

Optional accessory:

Type of Protection: **flameproof, increased safety, encapsulation, dustproof**

Marking:	LifEx-ME	LifEx-MN	LifEx-MT
	Ex db eb mb IIC T.. Gb Ex tb IIIC T...°C Db IP66	Ex ec IIC T... Gc Ex tb IIIC T...°C Db IP66	Ex tb IIIC T...°C Db IP66


Approved for issue on behalf of the IECEx Certification Body:

**A C Smith**

Position:

**Technical Operations Director**

Signature:  
(for printed version)

  
2020-05-06

Date:

1. This certificate and schedule may only be reproduced in full.
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Certificate issued by:

**Eurofins E&E CML Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





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Manufacturer: **CORTEM S.p.A.**  
Via Aquileia 10  
34070 Villesse  
Gorizia  
Italy

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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
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/CML/ExTR20.0012/00](#)

Quality Assessment Report:

[IT/CES/QAR06.0002/13](#)



# IECEX Certificate of Conformity

Certificate No.: **IECEX CML 20.0008X**

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Date of issue: 2020-05-06

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**EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

See Annex for full description

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

See Annex for Specific Conditions of Use

**Annex:**

[Certificate Annex IECEx 20.0008X\\_1.pdf](#)

**Annexe to:** IECEx CML 20.0008X issue 1  
**Applicant:** Cortem S.p.A.  
**Apparatus:** LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures



## Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

### LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

### LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

### LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

## Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:





	<b>With glass lens and with/without polycarbonate diffuser</b>	<b>With Polycarbonate lens and with/without polycarbonate diffuser</b>	<b>Without lens polycarbonate diffuser only</b>
LifEx-M... 0310	+60°C	+60°C	+60°C
LifEx-M... 0315	+60°C	+60°C	+60°C
LifEx-M... 0615	+60°C	+60°C	+60°C
LifEx-M... 0630	+60°C	+50°C	+60°C
LifEx-M... 0645	+57°C	+47°C	+60°C
LifEx-M... 0660	+47°C	Configuration not available	+58°C
LifEx-M... 1230	+60°C	+60°C	+60°C
LifEx-M... 1260	+60°C	+50°C	+60°C
LifEx-M... 1290	+60°C	+40°C	+60°C
LifEx-M... 12120	+54°C	Configuration not available	+60°C
LifEx-M... 1590	+60°C	+40°C	+60°C

**Table 1: Maximum Ambient Temperatures**

The following tables provide the Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table  
(For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)



	<b>Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db)</b>													
	<b>Based on ambient temperature</b>													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

**Table 2: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser**

	<b>Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db)</b>													
	<b>Based on ambient temperature</b>													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

**Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser**

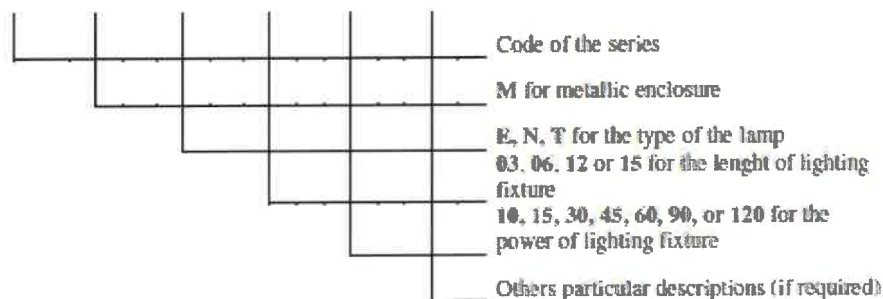
	<b>Temperature Class (EPL Gc only) and Maximum Surface Temperature (EPL Db)</b>													
	<b>Based on ambient temperature</b>													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T6	T71°C	T6	T74°C	T6	T78°C	T6	T81°C	T5	T84°C	T5
LifEx-M...0645	T72°C	T6	T72°C	T6	T74°C	T6	T77°C	T6	T81°C	T5	T84°C	T5	T87°C	T5
LifEx-M...0660	T77°C	T6	T77°C	T6	T79°C	T6	T82°C	T5	T86°C	T5	T89°C	T5	T92°C	T5
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T6	T69°C	T6	T72°C	T6	T76°C	T6	T79°C	T6	T82°C	T5
LifEx-M...1290	T72°C	T6	T72°C	T6	T74°C	T6	T77°C	T6	T81°C	T5	T84°C	T5	T87°C	T5
LifEx-M...12120	T75°C	T6	T75°C	T6	T77°C	T6	T80°C	T6	T84°C	T5	T87°C	T5	T90°C	T5
LifEx-M...1590	T72°C	T6	T72°C	T6	T74°C	T6	T77°C	T6	T81°C	T5	T84°C	T5	T87°C	T5

**Table 4: Temperature Class (EPL Gc only) and Maximum Surface Temperature (EPL Db) for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser**

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:

LifEx- M   -      





## Conditions of Manufacture

- 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 Increased safety lighting fixtures LifEx series is to be designed in accordance with general electrical safety standards.
- iii. The routine dielectric test on the Ex de luminaries with applied voltage shall be performed at  $2U + 1000V$  with a minimum value of  $1560V$  ( $U =$  rated voltage of the lamp)
- iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

## Specific Conditions of Use

- i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are used with the cable gland to maintain IP66.
- ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.
- iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger.
- iv. The temperature at the entry point may reach up to  $75^{\circ}C$ . Suitably rated cable glands must be used.

## Components covered by Ex Certificates issued to older editions of Standards

Certificate number	Standards (incl Ed)	Assessment result
IECEX CML 17.0061U	IEC 60079-0 (Ed.6.0) (2011)	No applicable technical differences
IECEX CES 11.0008U	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-0 (Ed 5.0) (2017)	No applicable technical differences
IECEX CES 11.0007U	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-0 (Ed 5.0) (2017)	No applicable technical differences
IECEX CES 11.0030U	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-7 (Ed.5.0) (2015)	No applicable technical differences
IECEX CES 14.0030U	IEC 60079-0 (Ed.6.0) (2011)	No applicable technical differences





<b>Certificate number</b>	<b>Standards (Incl Ed)</b>	<b>Assessment result</b>
IECEx CES 11.0031	IEC 60079-0 (Ed.5) (2007-10) IEC 60079-1 (Ed.6) (2007-04) IEC 60079-7 (Ed.4) (2006-07)	No applicable technical differences