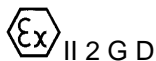


## EU Type Examination Certificate CML 15ATEX3188X Issue 2

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **EXEL Luminaire**
- 3 Manufacturer **CORTEM S.p.A**
- 4 Address Via Aquileia 10,  
34070 Villesse,  
Gorizia,  
Italy
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML B.V., Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, 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:

IEC EN 60079-0:2018	EN 60079-18:2015+A1:2017
EN 60079-1:2014	EN 60079-28:2015
EN 60079-7:2015+A1:2018	EN 60079-31:2014

- 10 The equipment shall be marked with the following:



Ex db eb mb op is IIC T\* Gb  
Ex tb op is IIIC T\*\*°C Db

Ta=-20/-40°C to +40/50/55°C

(See product description in Annex for marking options)



## 11 Description

The EXEL is a luminaire that is comprised of an increased safety enclosure, encapsulated LEDs and a flameproof driver assembly. The increased safety enclosure is comprised of two parts, a GRP base and transparent polycarbonate lid joined by a silicon gasket which provides an IP66 seal.

### Design Options

The luminaire is available with 1 or 2 LED tubes, which are available as 600 mm or 1,200 mm in length.

The luminaire is available as a standard luminaire with mains supply, or for emergency lighting with a 4 Ah or 7 Ah integrated battery, or for standard and emergency lighting with mains supply and 4 Ah or 7 Ah integrated battery.

The luminaire for emergency lighting is available either with 4 Ah or 7 Ah integrated battery or with a 4 Ah or 7 Ah battery in an increased safety enclosure attached to the luminaire.

### Product Type Reference:

The product type is derived from the following options:

EXEL-ABBBCCDE

<b>EXEL-</b>	<b>Product type EXEL-</b>	EXEL Increased safety lighting fixture
<b>A</b>	<b>Tubes</b>	
	1	Single LED Tube
	2	Double LED Tube
<b>BBB</b>	<b>Tubes</b>	
	15L	600mm, 15W LED Tube
	30L	1200mm, 30W LED Tube
<b>CC</b>	<b>Additional Functions (optional code for alternative versions)</b>	
	(No additional code) for standard version	
	EE	Emergency mode operation only
	EF	Normal and emergency mode operation
<b>D</b>	<b>Battery Capacity (Emergency versions only)</b>	
	4	4 Ah Battery
	7	7 Ah Battery
<b>E</b>	<b>Battery Box (Emergency versions only)</b>	
	(No additional code) for integrated battery version	
	E	External battery box version

With a typical type being:

EXEL-215LEE4E

The product carries the following markings:

**Markings Table**

<b>Version</b>	<b>Marking</b>	<b>Ambient Temperature Range</b>
EXEL-115L EXEL-215L EXEL-130L EXEL-230L	Ex db eb mb op is IIC T6 Gb Ex tb op is IIIC T*49°C Db	-40°C to +40°C
EXEL-115LEF.. EXEL-115LEF.. EXEL-215LEE.. EXEL-215LEE.. EXEL-130LEF.. EXEL-130LEE.. EXEL-230LEF.. EXEL-230LEE..	Ex db eb mb op is IIC T6 Gb Ex tb op is IIIC T55°C Db	-20°C to +40°C
EXEL-115LEF.. EXEL-115LEF.. EXEL-215LEE.. EXEL-215LEE.. EXEL-130LEF.. EXEL-130LEE.. EXEL-230LEF.. EXEL-230LEE..	Ex db eb mb op is IIC T5 Gb Ex tb op is IIIC T61°C Db	-20°C to +50°C
EXEL-115LEF..E EXEL-115LEF..E EXEL-215LEE..E EXEL-215LEE..E EXEL-130LEF..E EXEL-130LEE..E EXEL-230LEF..E EXEL-230LEE..E	Ex db eb mb op is IIC T6 Gb Ex tb op is IIIC T*49°C Db	-20°C to +40°C
EXEL-115LEF..E EXEL-115LEF..E EXEL-215LEE..E EXEL-215LEE..E EXEL-130LEF..E EXEL-130LEE..E EXEL-230LEF..E EXEL-230LEE..E	Ex db eb mb op is IIC T5 Gb Ex tb op is IIIC T64°C Db	-20°C to +55°C

The equipment has the following ratings:

**Ratings Table**

<b>Version</b>	<b>Ballast/driver</b>	<b>Input Voltage</b>
Standard Versions EXEL-115L EXEL-215L EXEL-130L EXEL-230L	Type 1	220-240 V a.c. /d.c.
	Type 2	110-277 V a.c. /d.c.
	Type 3	220-240 V a.c. /d.c.
Emergency only versions EXEL-115LEE.. EXEL-215LEE.. EXEL-130LEE.. EXEL-230LEE.. EXEL-115LEE..E EXEL-215LEE..E EXEL-130LEE..E EXEL-230LEE..E	Inverter	110-240 V a.c. /d.c.
Standard versions with emergency EXEL-115LEF.. EXEL-215LEF.. EXEL-130LEF.. EXEL-230LEF.. EXEL-115LEF..E EXEL-215LEF..E EXEL-130LEF..E EXEL-230LEF..E	Type 1	220-240 V a.c. /d.c.
	Type 2	110-277 V a.c. /d.c.
	Type 3	220-240 V a.c. /d.c.
	Inverter	110-240 V a.c. /d.c.

**Variation 1**

This variation introduces the following modifications:

- i. An emergency version of the luminaire has been added to the range using the existing enclosure, LEDs and driver. The new model numbers are as follows:

) EXEL-215LE..  
 ) EXEL-230LE..

Where .. refers to options regarding the battery capacity.

**Variation 2**

This variation introduces the following modifications:

- ii. The introduction of the emergency lighting version of the EXEL luminaire. The EXEL-xxxLEE model is similar to the existing EXEL-LEF but with mains supplied LED driver not included.
- iii. The introduction of the emergency lighting version of the EXEL luminaire with external battery box. The EXEL-LEE-E is similar to the EXEL-LEF, but with the mains supplied LED driver not included and a 4 Ah or 7 Ah battery (certified under IECEx CES 13.0006U and

- CESI 00ATEX032U) placed within an increased safety enclosure (certified under IECEx CES 11.0032X), attached to the luminaire enclosure.
- iv. The introduction of the standard/emergency lighting version of the EXEL luminaire with external battery box. EXEL-LEF-E is similar to the existing EXEL-LEF, but with a 4 Ah or 7 Ah battery (certified under IECEx CES 13.0006U and CESI 00ATEX032U) placed within an increased safety enclosure (certified under IECEx CES 11.0032X), external to the luminaire enclosure.
  - v. To permit the use of B-0305/B-0306 Series fuses (certified under IECEx CML 19.0170U and CML 19ATEX5473U) when using the Cortem LTTxxxxE/x type LED tubes is provided without the fuse mounted on the LED module PCB.
  - vi. To permit the use of the EBL4040-2.. and EBL3040-1.. Series of LED drivers and EIL4040-1.. Series Inverters (all certified under IECEx CML 17.0061U and CML 17ATEX1131U) as alternative parts the existing LED driver and inverter used.
  - vii. The introduction of the EXEL-1..L version to the EXEL luminaire range. The EXEL-1..L version is similar to the existing version (EXEL-2..L) but with a single LED tube instead of two LED tubes.
  - viii. Following appropriate reassessment, the standards used in the existing certification have been updated to the latest available editions.
  - ix. To acknowledge the transfer of certification from Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, to Eurofins E&E CML B.V., Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, The Netherlands, Notified Body Number 2776 based on original UK certificate.

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	21 Dec 2015	R546A/00	Release of prime certificate
1	13 Jun 2016	R961A/00	Introduction of Variation 1
2	20 Nov 2019	R12806A/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.

- 13.1 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.
- 13.2 Each luminaire shall be subjected to a routine dielectric strength test of  $2 \times U + 1000V$  rms and a minimum of 1500V for 60 seconds as per EN 60079-7 clause 7.1. Alternatively the test may be carried out at 1.2 times the test voltage, but maintained for 100ms. A DC test voltage may be used but shall be 1.4 X the specified AC rms test voltage. The LED modules and driver may be disconnected for this test.
- 13.3 Each encapsulated LED assembly shall be subjected to a routine dielectric strength test of 500V for 1 second, as per EN 60079-18 clause 9.2. Alternatively the test may be carried out at 1.2 times the test voltage, but maintained for 100ms

- 13.4 The LED modules of each piece of “m” equipment shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion, or softening.
- 13.5 The luminaires shall be marked according to document A4-7443 Revision 0.

#### **14 Specific Conditions of Use (Special Conditions)**

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

- 14.1 For EXEL luminaires with the LED Driver types EBL3040-1 or EBL4040-2 fitted, the flameproof joints of these driver types are not intended to be repaired.

## Certificate Annex

**Certificate Number** CML 15ATEX3188X

**Equipment** EXEL Luminaire

**Manufacturer** CORTEM S.p.A.

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

### Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-6364	1 to 3	0	21 Dec 2015	LED Tube LTT Detail of encapsulation and increased safety
A4-6366	1 to 3	0	21 Dec 2015	TECHNICAL NOTE
A3-6284	1 of 1	1	21 Dec 2015	Striscia LED L=560 versione 1
A4-6464	1 of 1	0	21 Dec 2015	EXEL-2..L TAG DRAWING FOR ATEX CERTIFICATION

### Issue 1

Drawing No	Sheets	Rev	Approved date	Title
A3-6527	1 of 2	0	13 Jun 2016	EXEL-2..L Luminaires Assembly and External Dimensions
A3-6527	2 of 2	0	13 Jun 2016	EXEL-2..L Luminaires Electronic ballast / Circuit diagrams
A4-6526	1 to 3	0	13 Jun 2016	TECHNICAL NOTE

### Issue 2

Drawing No.	Sheets	Rev	Approved date	Title
A3-7442	1 of 2	0	20 Nov 2019	LED Tube LTT without fuse / B0305_B0306
A3-7442	2 of 2	0	20 Nov 2019	New Electronic Ballast / External Battery Box for EXEL-LEE..E
A4-7443	1 to 7	0	20 Nov 2019	Technical Note