eurofins | Product Testing

[1] EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment intended for use in potentially explosive atmospheres**
Directive 2014/34/EU – Annex III

[3] Certificate Number: **EPT 19 ATEX 3323 X** **Issue 1**

[4] Equipment: **EVL Series**
Lighting fixtures

[5] Manufacturer: **CORTEM S.p.A.**

[6] Address: Via Aquileia n° 10, 34070 Villesse (GO) - Italia

[7] This equipment and its accepted variations are specified in the annex to this Certificate.

[8] Eurofins Product Testing Italy S.r.l., Notified Body n. 0477 in accordance with Article 21 of the Directive 2014/34/EU of the European Parliament and of the Council of 26th 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 of the Directive. The examination and test results are recorded in the confidential Report N° **EPT.19.REL.01/56852**

[9] Compliance with the essential health and safety requirements is assured through the verification of them and by compliance with the standard:

EN 60079-0:2018; EN 60079-1:2014; EN 60079-7:2015; EN 60079-28:2015; EN 60079-31:2014

[10] If the sign "X" is placed after the Certificate number, it indicates that the equipment is subject to the special conditions for safe use specified in the annex to this Certificate.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, the exam and the tests of the specified equipment.
Further requirements of the Directive 2014/34/EU apply to the manufacture and supply of this equipment. These requirements are not object of this Certificate.

[12] The equipment shall include the sign Ex and the following strings:

Ex db eb op is IIC T4 / T5 / T6 Gb, or	*or*	*Ambient temperature range*
		-60 °C ≤ Ta ≤ +60 °C *or*
Ex db eb op is IIB + H_2 T4 / T5 / T6 Gb and	*and*	**-40 °C ≤ Ta ≤ +60 °C** *or*
Ex tb op is IIIC T135 °C / T100 °C / T85 °C Db		**-20 °C ≤ Ta ≤ +60 °C**

NOTE: Temperature classes and maximum surface temperatures are detailed in table A.2
The minimum ambient temperature permitted is related to the mechanical configuration of glass window and it's detailed in the equipment description section.

CE

Place and date of issue:
Torino, 2019-09-26

Dionisio Bucchieri
Directive Responsible

Paolo Trisoglio
Managing Director

Eurofins Product Testing Italy
eurofins
Notified Body N. 0477

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

PRD N° 119B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This Certificate has 7 pages and it is reproducible only in its entirety. Conditions of validity are reported below.

[13] ANNEX
[14] EU-TYPE EXAMINATION CERTIFICATE N. EPT 19 ATEX 3323 X issue 1

[15] **Equipment description**

The luminaires series EVL are electrical equipment protected by Ex d, Ex e, Ex t enclosures, designed in compliance with Ex op is requirements and suitable for use in presence of gas or dust explosive atmospheres.

The luminaries are composed of a flameproof enclosure with a window manufactured in tempered glass, plane or semispherical, secured to a threaded metallic ring by a cemented joint.

The glass window is assembled to main body of the luminaire by a threaded joint.

An increased safety terminal box is present and separated from the flameproof enclosure by means of a cemented bushing.

The metallic parts of Ex d enclosure and terminal box are manufactured in aluminum alloy.

The flameproof enclosure contains the LED board or a LED array and the electronic supply circuit; into the increased safety enclosure only the connection terminals are present.

The luminaries model type EVL-060 and EVL-070, manufactured with a plane glass window, can be assembled with a supplementary globe made in colored polycarbonate, that have a light filter function.

The permitted maximum power values in relation to the ambient temperature range, the temperature classes and the maximum surface temperatures, of the luminaires assembled with the supplementary polycarbonate globe filter are detailed in Table A.2.

Configurations and marking of devices applicable for minimum ambient temperature values and related gas groups

Ex db eb op is IIC T4 / T5 / T6 Gb [1], or

Ex db eb op is IIB + H_2 T4 / T5 / T6 Gb [2] and
Ex tb op is IIIC T135 °C / T100 °C / T85 °C Db

[1] Applicable for models type:

- **EVL 060 / 070** with flat glass and models type **EVL 060 / 070 / 080** and **100** with globe (hemispheric) shaped glass with ambient temperature range **-60 °C ≤ Ta ≤ +60** °C;
- **EVL 080 / 100** with flat glass of **18** mm thickness with ambient temperature range **-40 °C ≤ Ta ≤ +60 °C**;
- **EVL 080 / 100** with flat glass of **15** mm thickness with ambient temperature range **-20 °C ≤ Ta ≤ +60 °C.**

[2] Applicable for models type:

- **EVL 080 / 100** with flat glass of **18** mm thickness with ambient temperature range **-60°C ≤ Ta ≤ +60 °C**;
- **EVL 080 / 100** with flat glass of **15** mm thickness with ambient temperature range **-40 °C ≤ Ta ≤ +60 °C.**

[13] ANNEX
[14] EU-TYPE EXAMINATION CERTIFICATE N. EPT 19 ATEX 3323 X issue 1

[15] **Equipment description**
(continue)

Model Reference

The characteristics of the apparatus are codified according to the following schema:

[a]	[b]	[c]	-	[d]
■■■	■■■	■■■		■ ■ ■ ■

Number of digits (■)

General configuration

[a]	Equipment Type:	EVL	: Explosion proof lighting fixtures
[b]	Luminaires dimension:	060	: Lighting fixtures type 060
		070	: Lighting fixtures type 070
		080	: Lighting fixtures type 080
		100	: Lighting fixtures type 100
[c]	Maximum power supply value	020 ÷ 220	This value is related to the maximum permitted power that can be adsorbed to the lighting fixtures as detailed in table A.1.
[d]	Constructional variants	....	The meaning of this field is detailed in the technical documentation. The information regarding electrical parameters and configurations, defined by this part of key code are present in the marking label of the device.

Power supply details (Table A.1)

Model reference	Maximum permitted power value
EVL-060020...	25 W
EVL-060030...	35 W
EVL-060040...	45 W
EVL-060050...	55 W
EVL-060060...	60 W

[13] ANNEX
[14] EU-TYPE EXAMINATION CERTIFICATE N. EPT 19 ATEX 3323 X issue 1

[15] **Equipment description**
(continue)

Power supply details (Table A.1)
(continue)

Model reference	Maximum permitted power value
EVL-070030...	35 W
EVL-070040...	45 W
EVL-070050...	55 W
EVL-070060...	60 W
EVL-070070...	75 W
EVL-070080...	85 W
EVL-070090...	90 W
EVL-080080...	85 W
EVL-080090...	95 W
EVL-080100...	105 W
EVL-080110...	115 W
EVL-080120...	125 W
EVL-100120...	125 W
EVL-100130...	135 W
EVL-100140...	145 W
EVL-100150...	155 W
EVL-100160...	162 W
EVL-100 170...	175 W
EVL-100 180...	185 W
EVL-100 190...	195 W
EVL-100 200...	205 W
EVL-100 210...	215 W
EVL-100 220...	225 W

[13] ANNEX
[14] EU-TYPE EXAMINATION CERTIFICATE N. EPT 19 ATEX 3323 X issue 1

[15] **Equipment description**
(continue)

Temperature classes and maximum surface temperatures (Table A.2)

Model	Power absorption	Maximum ambient temperature value		
		+40°C	+50°C	+60°C
EVL-060...	P ≤ 45 W [1]	T6 (T85 °C) or T4 (135 °C) [1]	T5 (T100 °C) T4 (135 °C) [1]	T5 (T100 °C) T4 (135 °C) [1]
	45 W < P ≤ 60 W	T5 (T100 °C)	T5 (T100 °C)	T4 (T135 °C)
EVL-070...	P ≤ 45 W [1]	T6 (T85 °C) or T4 (135 °C) [1]	T5 (T100 °C) T4 (135 °C) [1]	T5 (T100 °C) T4 (135 °C) [1]
	45 W < P ≤ 90 W	T5 (T100 °C)	T5 (T100 °C)	T4 (T135 °C)
EVL-080...	P ≤ 90 W	T5 (T100 °C)	T5 (T100 °C)	T4 (T135 °C)
	90 W < P ≤ 125 W	T4 (T135°C)	T4 (T135 °C)	T4 (T135 °C)
EVL-100...	P ≤ 225 W	T4 (T135 °C)	T4 (T135°C)	T4 (T135 °C)

NOTE 1: Maximum power level, temperature class and maximum surface temperature for luminaires assembled with a supplementary globe, made in colored polycarbonate.

Rated characteristics:

- Supply voltage: 12 ÷ 277 V dc *or* 12 ÷ 277 V ac 50/60 Hz
- Maximum dissipated power: See table A.1

Warning label

- WARNING – "DO NOT OPEN WHEN ENERGIZED"

- WARNING – "DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT"

- WARNING – "POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS"

[13] ANNEX
[14] EU-TYPE EXAMINATION CERTIFICATE N. EPT 19 ATEX 3323 X issue 1

[15] **Equipment description**
(continue)

Routine tests

The equipment shall be submitted to the overpressure routine test as prescribed at § 16.1.2 of the EN 60079-1 standard, for at least 10 s at the pressure value of:

- **1860** kPa, for devices intended for use in minimum ambient temperature of **-60** °C, applicable for models type **EVL 060 / 070** with flat glass and models type **EVL 060 / 070 / 080** and **100** with globe (hemispheric) shaped glass, suitable for use in gas group **IIC**; or

- **1665** kPa, for devices intended for use in minimum ambient temperature of **-40** °C, applicable for models type **EVL 060 / 070** with flat glass and models type **EVL 080 / 100** with flat glass of **18** mm thickness, suitable for use in gas group **IIC**; or

- **1545** kPa, for devices intended for use in minimum ambient temperature of **-60** °C (applicable for models type **EVL 080 / 100** with flat glass of **18** mm thickness, suitable for use in gas group **IIB + H_2**; or

- **1395 kPa** for devices intended for use in minimum ambient temperature of:

- **-20** °C (applicable for models type **EVL 080 / 100** with flat glass of 15 mm thickness, suitable for use in gas group **IIC**);

  and

- **-40** °C (applicable for models type **EVL 080 / 100** with flat glass of **15** mm thickness, suitable for use in gas group **IIB + H_2**).

The equipment shall be submitted to the dielectric test with applied voltage (according to clause 7.1 of the IEC 60079-7) of 2U+1000 V_{ac} with a minimum value of 1500 V_{ac} between the supply terminals and earth.

[16] **Assessment Report n° EPT.19.REL.01/56852**

This EU-Type Examination Certificate is released after the positive result of the conformity assessment of the Council Directive 2014/34/EU and to harmonized technical standards listed in this certificate performed by the Notified Body Eurofins Product Testing Italy S.r.l., and reported in the Assessment Report above cited.

[17] **Specific conditions of use**

- Flameproof joints cannot be repaired;

- Potential electrostatic charging hazard.

[13] ANNEX
[14] EU-TYPE EXAMINATION CERTIFICATE N. EPT 19 ATEX 3323 X issue 1

[18] **Essential Health and Safety Requirements**

Assured by compliance with harmonized standards listed in [9].

[19] **Descriptive documents**

The equipment objects of this Certificate are described by the following scheduled documents; they cannot be modified without the explicit authorization of the Notified Body.

Type of document	Document identification	Rev.	Date
Technical Note	A4-7280	0	2018/10/04
Drawing (Lighting Fixture EVL)	A3-7281	0	2018/10/04
Safety, maintenance and mounting instructions	F-460	0	2018/10/04

[20] **Terms and conditions**

The product liability rests with the Manufacturer, his representative or, in the absence of a representative, with the importer, in accordance with the General Product Safety Directive 2001/95/EC.

The following conditions may render this certificate invalid:

- changes in the design or construction of the product;
- changes or amendments to the Directive;
- changes or amendments in the standards which form the basis for documenting compliance with the essential requirements of the 2014/34/EU Directive.

[21] **History**

Issue	Description	Issue Date
0	First Emission	2019-08-30
1	Added details regarding the minimum ambient temperature permitted in relation to the mechanical configuration and gas group.	2019-09-26

Dionisio Bucchieri
Directive Responsible

End of Certificate