



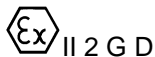
EU Type Examination Certificate CML 23ATEX1091X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **ES01 Explosion-proof Luminaires**
- 3 Manufacturer **Dongguan Pan American Electronics Co., Ltd**
- 4 Address **Building 6, Building 3 Room 103,
Building 3 Floor 8/9/10/11,
Tian 'an Digital City,
No.88 Jinyuan Road, Zhongtang
Town, Dongguan City,
523227 Guangdong, China**
- 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 67386717, 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 60079-1:2014	EN 60079-5:2015
EN IEC 60079-7:2015	EN IEC 60079-18:2015+A1:2017	EN 60079-31:2014

- 10 The equipment shall be marked with the following:



II 2 G D

Ex db eb mb q IIC T5/T4 Gb

Ex tb IIIC T80°C/T90°C Db

Ta= -20°C to +35°C (T5/T80°C)

Ta = -20°C to +45°C (T4/T90°C)





**CML 23ATEX1091X
Issue 0**

11 Description

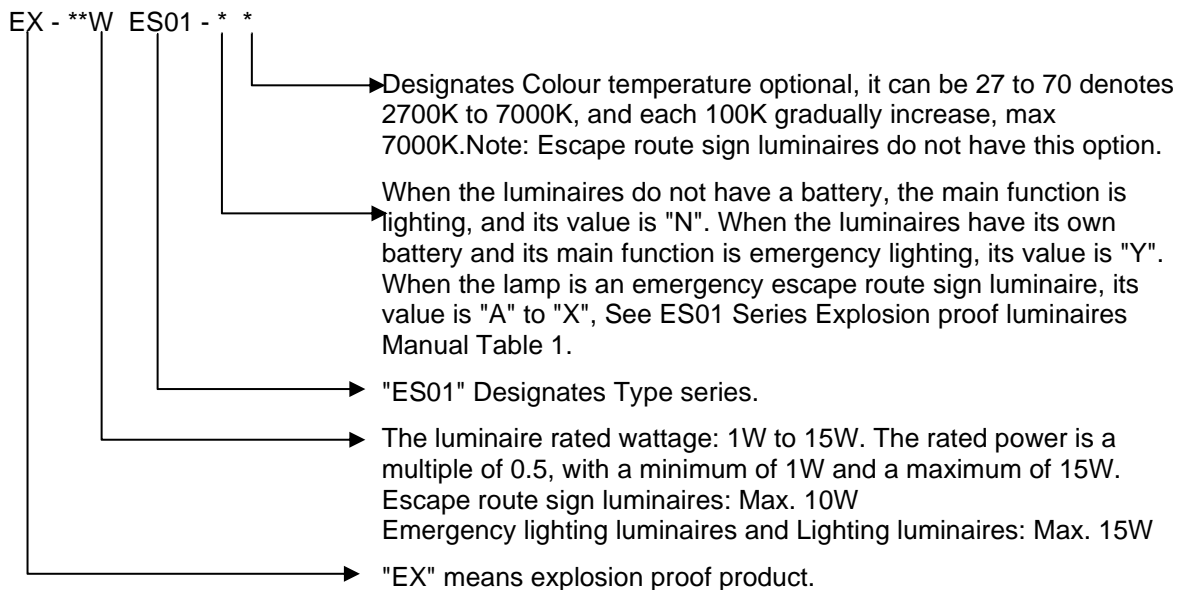
The EX-**W ES01-** series Explosionproof luminaires is comprising of a plastic shell body, Polycarbonate lens, controller, lamp board, entry head, battery module, indicator and button switch. Lamps mainly include the following parts:

The main body of the luminaires shell is "Ex eb", the built-in controller is "Ex q", the lamp board is "Ex mb", the button switch is "Ex db", the wiring terminal is "Ex eb", the indicator is "Ex mb" and the sealing battery module.

There are two cable entries are at each side wall of body which are used to install M25 or M20 certified cable glands or stopping plugs with suitable IP code.

The LED sources are encapsulated by compound material on the light board.

The ambient temperature range is -20°C to +35°C (T5/T80°C) / -20°C to +45°C (T4/T90°C). The equipment has an ingress protection rating IP66.



12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	02 Nov 2023	R16029A/00	The issue of prime certificate.

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. Dielectric test for filling material according to clause 5.2.2 IEC 60079-5:2015.
- ii. 50kPa overpressure for quartz sand container and the permanent deformation shall no exceed 0.5mm in any of its dimensions.
- iii. Dielectric test with voltage no less 1554V AC for at least 60s or 1.2 times this voltage for at least 100ms.
- iv. The LED board of the equipment shall be subjected to a dielectric strength test at 500 Vac for least 1 s, without dielectric breakdown occurring between input terminal of light board and the earthing. Alternatively, the test may be completed at 1.2 times this voltage for at least 100ms.
- v. A visual Inspection of the encapsulation parts in accordance with EN/IEC 60079-18, clause 9.1.
- vi. An over pressure test for button switch shall be conducted in accordance to clause 16 in IEC 60079-1: 2014 at 1Mpa and maintained for period of 10 seconds.
- vii. All separately certified parts shall be suitably ATEX and IECEx certified.

14 Specific Conditions of Use (Special Conditions)

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

- i. The relation between the applicable ambient temperature, temperature class and maximum surface temperature are as below:

Ambient temperature	Explosive gas atmospheres	Explosive dust atmospheres
	Temperature class	Maximum surface temperature
-20°C to 35°C	T5	T80°C
-20°C to 45°C	T4	T90°C

- ii. The enclosure of the product shall not be opened when explosive gas or combustible dust is present.
- iii. The flameproof joints shall only be maintained by the manufacturer.
- iv. Potential electrostatic charging hazard – see instructions.
- v. Do not replace the battery in an explosive atmosphere.
- vi. Do not open when energized.
- vii. Observe the marking on the “Ex q” built-in controller “This container has been permanently sealed and cannot be repaired.

Certificate Annex

Certificate Number CML 23ATEX1091X
Equipment ES01 Explosionproof Luminaire
Manufacturer Dongguan Pan American Electronics Co., Ltd



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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
EX-XW ES01-27	1 of 1	A0	01 Nov 2023	ES01 Nameplate
EX-15W ES01-0	1 of 1	L0	01 Nov 2023	Lighting luminaires emergency lighting luminaires assembly
EX-3W ES01-0	1 of 1	L0	01 Nov 2023	ES01 escape route sign assembly
EX-3W ES01-01	1 of 1	L0	01 Nov 2023	ES01 Control Assembly
EX-EX01-15W	1 to 5	A3	01 Nov 2023	Controller board
EX-ES01-15W	1 to 5	A0	01 Nov 2023	ES01 LED Board
EX-ES01-15W	1 to 5	A0	01 Nov 2023	LED Indicator Board
EX-03W ES01	1 of 1	-	01 Nov 2023	ES01 Power
EX-15W ES01	1 of 1	-	01 Nov 2023	ES01 Power
EX-ES01-15W	1 of 1	A0	01 Nov 2023	LED2835 10P3S
EX-ES01-15W	1 of 1	A0	01 Nov 2023	EX-ES01-15W Indicator