EU Type Examination Certificate CML 16ATEX1337X Issue 0

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **CZ0878d Series Explosion-proof floodlight light fittings**

3 Manufacturer **CZ Explosion-proof Electric Appliances Co. Ltd.**

4 Address No. 1 Qixing Road, Qixing
Town, Nanhu District, Jiaxing,
Zhejiang, 314002, China

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, 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 60079-0:2012:A11:2013, Corr3 | EN 60079-1:2014 | EN 60079-7:2015
EN 60079-31:2013 | EN 60079-28:2015

10 The equipment shall be marked with the following:

II 2 G D

Ex db eb op is IIB T* Gb

Ex tb op is IIIC T*°C Db

-20°C ≤ Ta ≤ +40°C/+55°C

H M Amos MIET
Technical Manager

11 Description

The CZ0878d Series Explosion-proof floodlight light fittings are a range of flameproof and dust tight luminaires for use in IIA and IIB Zone 1 and Zone 2 explosive gas atmospheres, and Zone 21 and Zone 22 ignitable dust atmospheres.

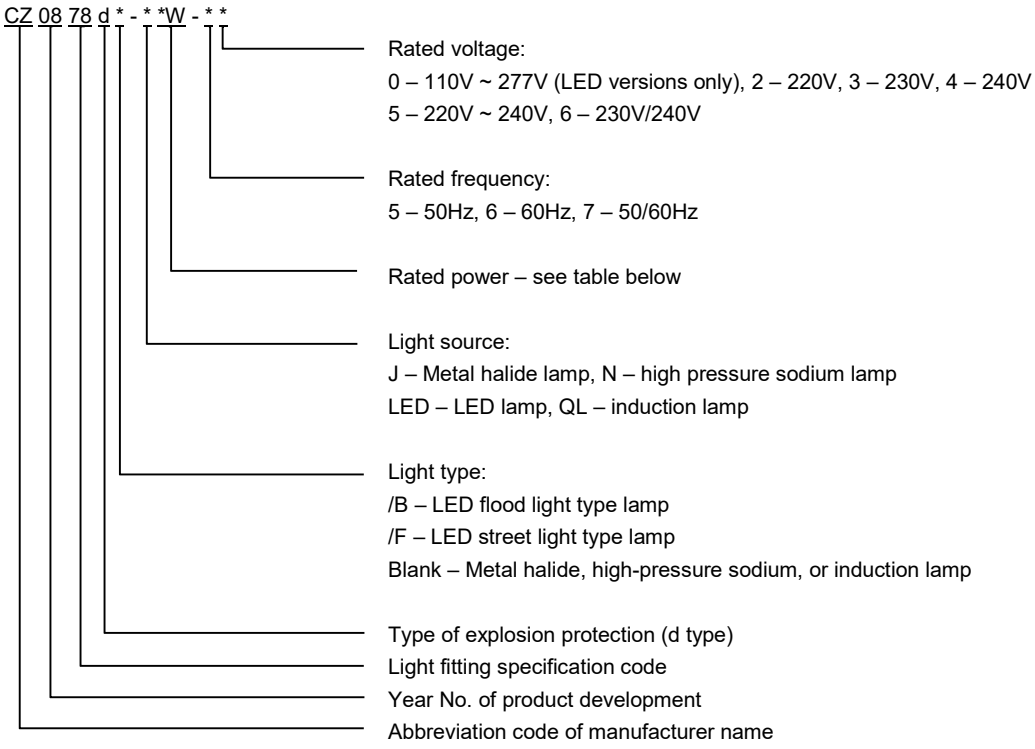
There are two types of enclosure. The first type houses metal halide, high pressure sodium, or electromagnetic energy saving lamps. The second type houses an LED array. Both types are manufactured from cast aluminium alloy (ADC12) and comprise a lamp body with integral increased safety terminal chamber and cover, lamp cover with cemented window, and in the first type of enclosure, a removable side cover designed to facilitate easy lamp replacement.

The main enclosure chamber houses the lamp, reflector, ballast, and other electrical components. A bushing assembly is installed between the main chamber and the terminal chamber which houses a previously certified terminal block. The terminal chamber has two threaded holes for the fitting of appropriately certified cable glands.

All covers are fitted with sealing gaskets to maintain the necessary ingress protection.

LED versions may either be supplied for use with a mounting bracket for floodlight operation, or for use with a pole for street lamp operation.

The various lamp and power options are defined by the part number as follows:



The following power ratings are available:

Lamp type	Power (W)
J – Metal halide	250
	400
N – high pressure sodium	250
	400
QL – induction lamp	85
LED – LED	120
	160
	200

The temperature class and ambient temperature range of each model is given by the following table:

Product type code	Explosive gas atmosphere		Explosive dust atmosphere	
	Temperature class		Maximum surface temperature (°C)	
	$-20°C \leq T_a \leq +40°C$	$-20°C \leq T_a \leq +55°C$	$-20°C \leq T_a \leq +40°C$	$-20°C \leq T_a \leq +55°C$
CZ0878d-J250W-**	T3	T3	150	165
CZ0878d-J400W-**	T3	n/a	195	n/a
CZ0878d-N250W-**	T3	T3	150	165
CZ0878d-N400W-**	T3	n/a	185	n/a
CZ0878d-QL85W-**	T5	T4	85	100
CZ0878d*-LED120W-**	T5	T4	90	105
CZ0878d*-LED160W-**	T5	T4	90	105
CZ0878d*-LED200W-**	T5	T4	90	105

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	01/11/2016	R1377A/00	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.

13.1 The manufacturer shall perform an overpressure test on all units manufactured. The test shall be carried out for at least 10 seconds as required by IEC/EN 60079-1:2014, clause 15.2.3. The enclosure shall be tested at a pressure of 1000kPa. Empty enclosures may be used for the tests, but the bushing shall be in place for testing. There shall be no permanent deformation or damage to the enclosures and no leakage through the bushing cement.

13.2 The manufacturer shall perform a dielectric strength test on all units manufactured in accordance with IEC/EN60079-7:2015, clause 7.1 at the following voltages:

- For LED versions, 1554Vrms (+5%, -0%)
- All other versions 1550Vrms (+5%, -0%)

The test voltage shall be applied for a minimum of 60 seconds and no breakdown shall occur. Alternatively, the test shall be carried out at 1.2 times the test voltage and maintained for a minimum of 100ms.

14 Special Conditions for Safe Use (Conditions of Certification)

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

14.1 The equipment incorporates flamepaths whose length is greater than the minimum stated in Table 2 of IEC/EN 60079-1:2014. As this is the case, the flameproof joints are not intended to be repaired.

14.2 400W versions shall be used in a maximum ambient temperature of +40°C only.

14.3 The internal and external earth connections shall be securely connected. The protective conductor shall have a minimum cross sectional area equal to or greater than that of the phase conductors

14.4 Only cable glands and blanking elements complying with IEC/EN60079-0, IEC/EN60079-7, and IEC/EN60079-31 with type of protection Ex e IIC Gb and Ex tb IIIC Db and ingress protection IP66 shall be used for connecting to the terminal enclosure.

14.5 External cabling may reach a temperature of 16K above ambient for LED versions and 27K above ambient for metal halide and high-pressure sodium types. Appropriate cable and entry devices shall to selected.

14.6 The equipment must be installed in low impact risk locations only.

14.7 The fasteners securing the cover to the enclosure have a property class of A2-70

14.8 Observe the following warnings:

“After de-energizing, delay 30 minutes before opening”, “Do not open when an explosive atmosphere is present”,

Dust applications only - “Potential electrostatic charging hazard – see instructions”.

Certificate Annex

Certificate Number CML 16ATEX1337X

Equipment CZ0878d Series Explosion-proof floodlight light fittings

Manufacturer CZ Explosion-proof Electric Appliances Co. Ltd.

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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
2CZ0878d.001.000	1 of 1	AA	01/11/2016	CZ0878d Explosion-proof floodlight light fittings
2CZ0878d.002.000	1 of 1	AA	01/11/2016	CZ0878d-QL Explosion-proof floodlight light fittings
2CZ0878d/LED.001.000	1 to 2	AA	01/11/2016	CZ0878d-LED Explosion-proof floodlight light fittings
5CZ0878d.001.000	1 of 1	AA	01/11/2016	CZ0878d Series circuit diagram
5CZ0878d.002.000	1 of 1	AA	01/11/2016	CZ0878d Series ballast configuration tables
5CZ0878d.000.003	1 of 1	AA	01/11/2016	CZ0878d Lamp cover suite
8CZ0878d.000.001	1 of 1	AA	01/11/2016	CZ0878d Enclosure of lamp
8CZ0878d/LED.000.001	1 of 1	AA	01/11/2016	CZ0878d Enclosure of lamp
8CZ0878d.000.002	1 of 1	AA	01/11/2016	CZ0878d Lamp cover
8CZ0878d.000.003	1 of 1	AA	01/11/2016	CZ0878d Side cover
8CZ0878d.000.004	1 of 1	AA	01/11/2016	CZ0878d Junction box cover
8CZ0878d.000.005	1 of 1	AA	01/11/2016	CZ0878d Toughened glass
8CZ0878d.000.011	1 of 1	AA	01/11/2016	CZ0878d Side cover sealing ring
8CZ0878d.000.012	1 of 1	AA	01/11/2016	CZ0878d Junction box sealing ring
8CZ0878d.000.017	1 of 1	AA	01/11/2016	CZ0878d Sealing ring
8CZ0878d.000.018	1 of 1	AA	01/11/2016	CZ0878d Nameplate
8CZ0878d/LED.000.010	1 of 1	AA	01/11/2016	CZ0878d Nameplate
8CZ0878d.000.024	1 of 1	AA	01/11/2016	CZ0878d Ø12 x 2 O rings
5CZ0871.000.001 M16	1 of 1	AA	01/11/2016	Transition nut assembly