



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

Certificate No.: **IECEX CSAE 22.0002X** Page 1 of 3 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2022-07-28
Applicant: **Dongguan Pan American Electronics Co., Ltd.**
No.175 BeiWang Road
Zhongtang Town
DongGuan City, GuangDong Province 523227
China
Equipment: **LED High Bay(Series O) luminaire**
Optional accessory:
Type of Protection: **Increased Safety, encapsulation and Dust Protection by Enclosure**
Marking: Ex eb mb IIC T6/T5/T4 Gb
Ex tb IIIC T80°C/T95°C/T130°C Db

IP66

Approved for issue on behalf of the IECEx
Certification Body:

Michelle Halliwell

Position:

Director Operations, UK & Industrial Europe

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom





IECEX Certificate of Conformity

Certificate No.: **IECEX CSAE 22.0002X**

Page 2 of 3

Date of issue: 2022-07-28

Issue No: 0

Manufacturer: **Dongguan Pan American Electronics Co., Ltd.**
No.175 BeiWang Road
Zhongtang Town
DongGuan City, GuangDong Province 523227
China

Manufacturing locations: **Dongguan Pan American Electronics Co., Ltd.**
No.175 BeiWang Road
Zhongtang Town
DongGuan City, GuangDong Province
523227
China

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 60079-18:2017](#) 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/CSAE/ExTR22.0123/00](#)

Quality Assessment Report:

[CN/NEP/QAR19.0007/05](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX CSAE 22.0002X**

Page 3 of 3

Date of issue: 2022-07-28

Issue No: 0

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The LED high bay(Series O) luminaire consists of a glass cover with an aluminium alloy guard, an aluminium alloy housing with painting, the LED sources are encapsulated by K-5312T compound, and the driver circuit is encapsulated by BZ-3900A/B compound. The glass cover with thread is tighten the aluminium alloy housing, and then fixed by a M4 screw, the LED source board are fixed by M3 screw. There is a battery pack and made of three Li-ion cells in series in the luminaire. The light source (LED) board and driver circuit are for "mb" and "tb" protection type which is assessed with luminaire together, and the battery is located in luminaire enclosure with "eb" and "tb" protection type. The maximum power of series EX-XXXW-O is 40W.

There are four cable entries are at side wall of luminaire housing which are used to install M25, M20, NPT 1/2" or NPT 3/4" certified cable glands or stopping plugs with suitable IP code.

Refer to the Annexe for the Model Designation

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth to prevent dust accumulation.
2. The equipment shall be installed such that the supply cable is protected from mechanical damage. The cable shall not be subjected to tension or torque. If the cable is to be terminated within an explosive atmosphere, then the free end shall be terminated in a suitably certified termination facility.
3. Use only VNAS replaceable battery pack "INR18650-2000mAh" with character fixing method for LED high bay(Series O) luminaire.
4. The certified cable gland, stopping plug or conduit fitting with suitable type of protection will be used for final installation The maximum temperature of branch point and cable entry point are 76.1°C and 74.15°C at maximum ambient temperature 60°C.
5. **Refer to the Annexe**

Annex:

[IECEX CSAE 22.0002X Annexe Issue 0.pdf](#)

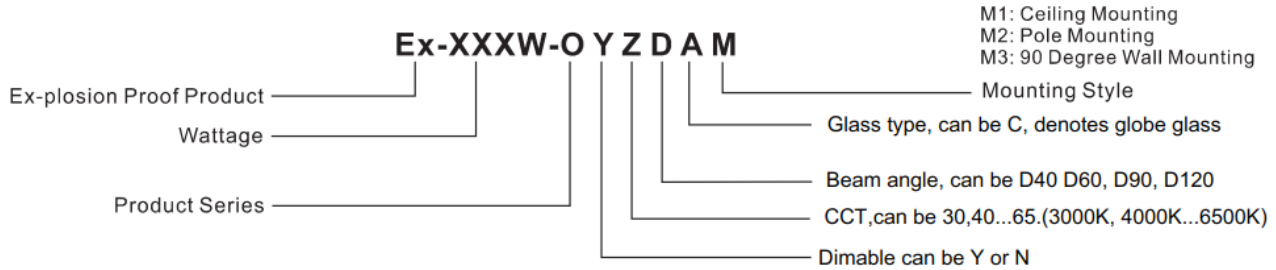
Annexe to: IECEx CSAE 22.0002X Issue 0

Applicant: Dongguan Pan American Electronics Co., Ltd.

Apparatus: LED High Bay(Series O) luminaire



Model Designation of the LED high bay(Series O) luminaire is as follows:



Specific Conditions of Use Continued

5. Temperature code depends on ambient temperature as follows:

Type	T-code	Ambient Temperature
Normal	T6/T80°C	-40°C - +25°C
	T5/T95°C	-40°C - +40°C
	T4/T130°C	-40°C - +60°C
Emergency	T4/T130°C	-10°C to +40°C

Conditions of Manufacture

1. The encapsulated parts of the LED board and driver circuit shall be subjected to a visual inspection. No visible damage of the compound shall be evident, such as cracks, exposure of the encapsulated parts, flaking, impermissible shrinkage, discoloration, swelling decomposition or softening, as required by Clause 9.1 of IEC 60079-18:2017.
2. The LED board of equipment shall be subjected to a dielectric strength test with 500 Vac for least 60 s without dielectric breakdown occurring between input terminal of light board and the earthing. Alternatively, the test may be carried out at 600 Vac for at least 100 ms, 700 Vdc for at least 60 s or 840 Vdc for at least 100 ms. Between input terminal of light board and the earthing. The testing base on clause 9.2 of IEC 60079-18:2017.
3. The equipment shall be subjected to a dielectric strength test at 1554 Vac for at least 60 s without dielectric breakdown occurring between input terminal of luminaire and the earthing, and between circuits and the non-metallic surface of the equipment (either a non-metallic enclosure or the surface of the compound). Alternatively, the test may be carried out at 1865 Vac for at least 100 ms, 2198 Vdc for at least 60 s or 2638 Vdc for at least 100 ms. Between input terminal of luminaire and the earthing, and between circuits and the non-metallic surface of the equipment (either a non-metallic enclosure or the surface of the compound). The testing base on clause 7.1 of IEC 60079-7:2017.