



# 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](http://www.iecex.com)

Certificate No.: **IECEx NEP 20.0022X**

Page 1 of 4

Certificate history:

Status: **Current**

Issue No: 4

Issue 3 (2022-04-12)

Issue 2 (2022-03-28)

Issue 1 (2021-03-20)

Issue 0 (2020-07-13)

Date of Issue: 2023-01-20

Applicant: **Cooper Electric (Changzhou) Co., Ltd.**  
No 189 Liuyanghe Road, Xinbei District, Changzhou, Jiangsu  
213031  
**China**

Equipment: **HPL Series LED Explosion protected luminaire, Model HPL-\*-\*-\*-\*.\***

Optional accessory:

Type of Protection: **Ex db, eb, ec, mb, tb**

Marking: Zone 1 version : Ex db eb mb IIC T6 Gb, Ex tb IIIC T80°C Db IP66  
Zone 2 version : Ex db ec IIC T6 Gc, Ex tb IIIC T80°C Db IP66  
Ta: -40°C~+40°C/45°C/50°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Guo Aihua**

Position:

**General Manager**

Signature:  
(for printed version)

Date:  
(for printed version)

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Certificate issued by:

**Shanghai Inspection and Testing Institute of Instruments  
and Automatic Systems Co., Ltd. (SITIIS)/  
National Supervision and Inspection Center for Explosion  
Protection and Safety of Instrumentation (NEPSI)  
103 Cao Bao Road  
Shanghai 200233  
China**



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Page 2 of 4

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Manufacturer: **Cooper Electric (Changzhou) Co., Ltd.**  
No 189 Liuyanghe Road, Xinbei District, Changzhou, Jiangsu  
213031  
China

Manufacturing locations: **Cooper Electric (Changzhou) Co., Ltd.**  
No 189 Liuyanghe Road, Xinbei District, Changzhou, Jiangsu  
213031  
China

**Eaton Electrical (Australia) Pty Ltd**  
10 Kent Road  
Mascot, NSW, 2020  
Australia

**EATON ELECTRIC (SINGAPORE) PTE. LTD.**  
100G Pasir Panjang Road  
#07-08 & 02-09  
Interlocal centre  
Singapore 118523  
Singapore

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 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-18:2014** Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"  
Edition:4.0

**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 Reports:

CN/CQM/ExTR15.0071/00  
CN/NEP/ExTR20.0025/00  
CN/NEP/ExTR20.0025/03

CN/CQM/ExTR15.0071/01  
CN/NEP/ExTR20.0025/01

CN/CQM/ExTR15.0071/02  
CN/NEP/ExTR20.0025/02

### Quality Assessment Reports:

AU/TSA/QAR06.0020/13

GB/BAS/QAR07.0041/11

GB/BAS/QAR11.0007/08



# IECEx Certificate of Conformity

Certificate No.: **IECEx NEP 20.0022X**

Page 3 of 4

Date of issue: 2023-01-20

Issue No: 4

## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

This luminaire has two sizes including Normal version and Emergency version. Sheet 1 is Indirect entry and Sheet 2 is Direct entry. This series of luminaire is suitable for use in hazardous location classified as Zone 1, Zone 2, Zone 21, Zone22(Zone 1 version) or Zone 2, Zone 21, Zone22(Zone 2 version). The luminaire consists of an Exm (for Zone 1 version) lamp housing or an Ex ec (for Zone 2 version) lamp housing and an Exd driver/inverter chamber with an Exe terminal chamber on the side of the main housing. Inside the Lamp housing, the LED arrays are encapsulated by lens using sealing compound for Zone 1 version, without lens and compound for Zone 2 version. Inside the Driver/ Inverter housing, the LED driver/inverter and battery are installed. Inside the Exe chamber, the Exe terminal block is installed to provide electrical connection. Enclosure material is casting aluminium alloy. Lighting globe is made of tempered glass. Electric power should be fed in via certified cable glands. Unused entries should be sealed with suitable plugs. The luminaire can make vertical adjust from 90° before vertical to 60° past vertical. The product uses gasket made of Silicone (SE6035/SE6075 or CHN6000 or TSE221) to guarantee the IP66 class. The sizes of cable entry holes are listed in instruction manual.

100V~240V AC 50/60Hz

108V~250V DC

Rated Power: 25W~75W

## SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1.Repairs of the flameproof joints may only be made by the manufacturer or on behalf of the manufacturer and on his own responsibility. Repair in compliance with the values in tables 1 and 2 of IEC 60079-1 is not accepted.
- 2.The external earth connection facility shall be connected reliably.
- 3.The cable entry holes have to be connected by means of suitable cable entry device with type of protection of Ex e IIC Gb, Ex tb IIIC Db, IP66 for indirect entry and type of protection of Ex d IIC Gb, Ex tb IIC Db for direct entry. The cable entry device is approved in accordance with IEC60079-0, IEC60079-7 and IEC60079-31 for indirect entry and in accordance with IEC60079-0, IEC60079-1 and IEC60079-31 for direct entry, and which are covered by a separate conformity certificate.
- 4.Fasteners related with flameproof joints shall have property class at least A2-70.
- 5.The torque for the screws of the terminal box shall be in the range of 1.5Nm~2.0Nm.
- 6.When installation, use and maintenance, observe following standards IEC 60079-10, IEC60079-14, IEC60079-17 and IEC 60079-19.



# IECEx Certificate of Conformity

Certificate No.: **IECEx NEP 20.0022X**

Page 4 of 4

Date of issue: 2023-01-20

Issue No: 4

## **DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

Issue No. 4:

- 1.Add an additional Ex m part compound.
- 2.Add a new construction of the lens.
- 3.Update the IEC 60079-0 version.

Issue No. 3:

- 1.Add a manufacturing location.

Issue No.2:

- 1.Add Zone 2 version.
- 2.Update the IEC 60079-7 version.

Issue No.1:

- 1.Add new alternative materials for O-ring.

## **Annex:**

[IECEx NEP 20.0022X Annex Issue 4.pdf](#)



### General product information:

This luminaire has two sizes including Normal version and Emergency version. Sheet 1 is Indirect entry and Sheet 2 is Direct entry. This series of luminaire is suitable for use in hazardous location classified as Zone 1, Zone 2, Zone 21, Zone22(Zone 1 version) or Zone 2, Zone 21, Zone22(Zone 2 version).

The complete fixture catalog number is as follows:

Example Cat. No.	HPL	-3L	-W			-1M	-S88	*	*	*	*	EM1	Z1
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

(1). HPL - Indicates basic catalog series designation.

(2). Indicates Total Luminous Flux.

-3L - 3000 Lm; -4L - 4000 Lm; -5L - 5000 Lm; -6L - 6000 Lm; -7L - 7000 Lm;  
-8L - 8000 Lm.

(3). Indicates LED color temperature.

Default - 5700K; -W - 3000K

(4). Indicates Optics type.

Default - Type V optics standard

(5). Indicates ballast voltage.

Default - AC: 100-240V 50/60Hz, DC: 108~250V

(6). Indicates entry type and size.

-1M - M20; -2M - M25; -D1 - M25(only use for Direct entry)

(7). Indicates entry quantity.

Default - One entry; -S886 - Dual entry

(8). Indicates terminal

-T1-Pillar terminal; -T2-MK 6/3; -T3-MK 6/6; -T4-MUT 4(3 pole); -T5-MUT 4(6 pole).

(9). Indicates Glass

Default-Clear Glass; -F-Foggy Glass.

(10). Indicates Entry Acc.

Default-No entry acc; -1P-two entries, with 1 Plug; -2G-all entries, with plastic cable  
gland.

-3G-two entries, with 1 plastic plug, 1 cable gland

(11). Indicates Mounting Type.

Default—G3/4 Pendant mount only

-B1—With Painted bracket mount only

-B2—with 304SST bracket mount only

-B3—with 316SST bracket mount only

-B4—with both Painted bracket mount, also available for G3/4 Pendant mount

-B5—with both 304SST bracket mount, also available for G3/4 Pendant mount

-B6—with both 316SST bracket mount, also available for G3/4 Pendant mount

-B7—G3/4 Pendant mount, also with mounting bracket hole cut, but bracket need to order  
separated.

-B8—only with mounting bracket hole cut, mounting bracket need to be ordered

separated.

(12). Indicates emergency duration.

Default - Normal; EM1 - 1.5H, 30% Lm output; EM2 - 3H, 15% Lm output.



## Annex to IECEx Certificate of Conformity of IECEx NEP 20.0022X Issue No.4

(13). Indicates Zone area.

Default – Zone 1 version; Z2 – Zone 2 version.

The parameters of the product of Zone 1 version are as following,

Fixture Cat.No.	LED Qty.	Wattage (W)	Temperature Rating		Ta	LED parameter		Input Voltage
			Gas	Dust(°C)		Forward Current(I <sub>f</sub> )	Forward Voltage(V <sub>f</sub> )	
HPL-3L*****	3pcs	25	T6	80	-40 °C~-50 °C	700mA	11~12V	AC:100~240V 50/60Hz DC:108~250V
HPL-5L*****	6pcs	50				630mA		
HPL-3L***-F** HPL-4L***-F** HPL-5L***-F**	6pcs Max.	50 Max.	T6	80	-40 °C~-45 °C	630mA		
HPL-3L***** HPL-4L***** HPL-5L***** HPL-3L***-F** HPL-4L***-F**	21pcs Max.	40 Max.	T6	80	-40 °C~-50 °C	700mA	2.75~3.25V	
						630mA		
HPL-6L***** HPL-5L-W**** HPL-7L***** HPL-8L***** HPL-6L-W**** HPL-5L***-F** HPL-6L***-F** HPL-5L-W*-F**	24pcs Max.	50 Max.	T6	80		700mA		
	30pcs Max.	56-75W	T6	80	-40 °C~-50 °C	700mA		
					-40 °C~-45 °C			
			T6	80	-40 °C~-40 °C			
HPL-3L*****EM1 HPL-4L*****EM1 HPL-5L*****EM1 HPL-3L*****EM2 HPL-4L*****EM2 HPL-5L*****EM2	6pcsMax. or 21pcs Max.	25-50W	T6	80	-40 °C~-45 °C	700mA	11~12V or 2.75~3.25V	
			T6	80				

The parameters of the product of Zone 2 version are as following,

Fixture Cat.No.	Temperature Rating			LED Qty.	Wattage (W)	If(A)	Vf(V)	LED chips	Input Voltage
	Ta(°C)	Gas	Dust (°C)						
HPL-3L*****-Z2	-40~+50	T6	80	27pcs max. series connected	65max.	700max.	3.25max.	Seoul: SZ5-M2	AC: 100~240V 50/60Hz DC: 108~250V
HPL-4L*****-Z2									
HPL-5L*****-Z2									
HPL-3L***-F**-Z2									
HPL-4L***-F**-Z2									
HPL-6L*****-Z2									
HPL-5L-W****-Z2	-40~+45	T6	80	30pcs max. series connected	75max.	700max.			
HPL-7L*****-Z2									
HPL-8L*****-Z2									
HPL-6L-W****-Z2	-40~+40	T6	80	21pcs max. series connected	55max.	700max.			
HPL-5L***-F**-Z2									
HPL-6L***-F**-Z2									
HPL-5L-W*-F**-Z2	-40~+45	T6	80	21pcs max. series connected	55max.	700max.			
HPL-3L*****EM*-Z2									
HPL-4L*****EM*-Z2									
HPL-5L*****EM*-Z2									

Details of change (applicable only when revising an existing ExTR package):

1. Add an additional Ex m part compound.
2. Add a new construction of the lens.
3. Update the IEC 60079-0 version.