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 TUR 21.0040X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2022-09-20

Applicant: **TOP HI-TECH CO., LTD**
9F, No. 1, Zhongshan Road
Tucheng Dist.
New Taipei City, 23680
Taiwan

Equipment: **Explosion-proof LED Tower Lamp / THTH1920 Series**

Optional accessory:

Type of Protection: **Equipment protection by increased safety "ec" and Equipment dust ignition protection by enclosure "tb"**

Marking: Ex ec IIC T4 Gc
Ex tb IIIC T80°C Db
(-20°C≤Ta≤+40°C)

Approved for issue on behalf of the IECEx Certification Body: **Dipl.-Ing. Yang Wang**

Position: **Assigned Certifier**

Signature: (for printed version)

Date: 2022-09-20
(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:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

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Certificate No.: **IECEx TUR 21.0040X**

Date of issue: 2022-09-20 Issue No: 0

Manufacturer: **TOP HI-TECH CO., LTD**
9F, No. 1, Zhongshan Road
Tucheng Dist.
New Taipei City, 23680
Taiwan

Manufacturing locations: **TOP HI-TECH CO., LTD**
9F, No. 1, Zhongshan Road
Tucheng Dist.
New Taipei City, 23680
Taiwan

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 60079-31:2013 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:

DE/TUR/ExTR21.0040/00

Quality Assessment Report:

DE/TUR/QAR13.0016/04

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Explosion-proof LED Tower Lamp is composed of a body, a top cover, an adapter, three pillars, a tube, a PC tube, a down cover, two gaskets, a terminal block and a set of tower lamps. The enclosure of Explosion-proof LED Tower Lamp is made of A356.2, with a PC tube of AC385(x)(f1) and the enclosure of Explosion-proof LED Tower Lamp is fixed by three SUS304 pillars. The gaskets and the O-ring are made of RBB-6300-70 silicone rubber. The tube is used as the sealing ring for the cable entry, and the material used is EPDM. The set of tower lamps is the product manufactured by TEND. The Explosion-proof LED Tower Lamp, model THTH1920 Series, is constructed in types of explosion protection 'ec' and 'tb' for use in gas explosive atmospheres (Zone 2) and dust explosion hazard (Zone 21). The Explosion-proof LED Tower Lamp is suitable for fixed installation in indoor and outdoor environments.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Electrostatic charging hazard - Clean only with a damp cloth.
2. Disconnect the tower lamp from the supply circuit before opening.
3. Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
4. If the equipment is used in hazardous zone 2 location, the equipment is intended for installation in an area providing at least pollution degree 2.

Annex:

DE-IECEx_TUR_21.0040X_00_Attachment_2022-09-20.pdf

Attachment to Certificate IECEx TUR 21.0040 X

Device: **Explosion-proof LED Tower Lamp**
Type: THTH1920 Series

Manufacturer: **TOP HI-TECH CO., LTD.**

Address: **9F, No.1, Zhongshan Rd., Tucheng Dist., New Taipei City 23680, Taiwan**

General product information:

The Explosion-proof LED Tower Lamp is composed of a body, a top cover, an adapter, three pillars, a tube, a PC tube, a down cover, two gaskets, a terminal block and a set of tower lamps. The enclosure of Explosion-proof LED Tower Lamp is made of A356.2, with a PC tube of AC385(x)(f1) and the enclosure of Explosion-proof LED Tower Lamp is fixed by three SUS304 pillars. The gaskets and the O-ring are made of RBB-6300-70 silicone rubber. The tube is used as the sealing ring for the cable entry, and the material used is EPDM. The set of tower lamps is the product manufactured by TEND. The Explosion-proof LED Tower Lamp, model THTH1920 Series, is constructed in types of explosion protection 'ec' and 'tb' for use in gas explosive atmospheres (Zone 2) and dust explosion hazard (Zone 21). The Explosion-proof LED Tower Lamp is suitable for fixed installation in indoor and outdoor environments.

Type designation:

Model code									
THT	H	1920	L	N	D	Z	1	3	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

(1) Brand name, THT = Top Hi-Tech Co., Ltd
(2) Category of product, H = Explosion proof lighting fixtures for Zone 2 area use
(3) Model name, 1920 = Model L1920 series
(4) Function, L = Non-Flashing mode
F = Flashing mode
S = Flashing mode with Buzzer
B = Non-Flashing mode with Buzzer
(5) Appearance type, N = Without Terminal Block
C = With Terminal Block
(6) Lamp type, D = Tower Lamp
(7) CCT, Z= Not specify
(8) Voltage, 1 = 110V ,2 = 220V ,3 = 24V ,L = 12V
(9) Section, 1~5
(10) Tower Lamp Source T

Electrical data:
Frequency of Vac: 50/60 Hz

LED Lamp and Buzzer Rate power Rate power (THTH1920xxDZxxT)												
Voltage	12VDC		12VAC		24VDC		24VAC		110VAC		220VAC	
	A	W	A	W	A	W	A	W	A	W	A	W
LED**	0.08	0.96	0.15	1.8	0.05	1.2	0.07	1.68	0.02	2.2	0.02	4.4
Buzzer	0.08	0.96	0.08	0.96	0.02	0.48	0.02	0.48	0.01	1.1	0.01	2.2

**Regardless of Color

Environmental data:

1. Ambient temperature range: -20°C to +40°C
2. Zone 2 and Zone 21
3. Temperature class: T4 for gas explosive atmospheres, T80°C for dust explosion hazard

Routine test at manufacturer:

Routine Test shall be carried out between the enclosure of Explosion-proof LED Tower Lamp and the power input and based on the following conditions in accordance with IEC 60079-7 Clause 7.1.

1. Rated Voltage is not exceeding 90 V peak:
   Dielectric strength 500V r.m.s. for 1 minute, or Dielectric strength 600V r.m.s. for 100 ms.
2. Rated Voltage is exceeding 90 V peak:
   Dielectric strength 1500V r.m.s. for 1 minute, or Dielectric strength 1800V r.m.s. for 100 ms.