



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 UL 20.0020X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-10-22

Applicant: **Top Hi-Tech Co. Ltd.**
9F No. 1 Zhongshan Rd.
Tucheng District
New Taipei City, 236
Taiwan

Equipment: **LED Luminaires, Model L1512D Series; Models THTE1512ANB and THTE1512ANK Series**

Optional accessory:

Type of Protection: **Flameproof "db", Dust Ignition Protection by Enclosure "tb"**

Marking: Ex db IIB+H2 T4 Gb
Ex tb IIIC T110°C...T120°C Db
-20°C ≤ Ta ≤ +40°C or -20°C ≤ Ta ≤ +55°C

Approved for issue on behalf of the IECEx
Certification Body:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:

2020-10-22

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:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America





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Manufacturer: **Top Hi-Tech Co. Ltd.**
9F No. 1 Zhongshan Rd.
Tucheng District
New Taipei City, 236
Taiwan

Additional
manufacturing
locations:

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 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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:

[US/UL/ExTR20.0020/00](#)

Quality Assessment Report:

[DE/TUR/QAR13.0016/03](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Model L1512D Series of LED luminaires is suitable for use in hazardous location classified as Zone 1 and Zone 21. This luminaire consists of one "db"/"tb" chamber. The enclosure material is aluminum alloy. The light-transmitting parts are made of tempered flat glass. The gasket is used to maintain the IP rating. The entry for wiring through integral cable gland maintains the degree of protection.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The luminaire shall not be opened.
- The flameproof joints are not intended to be disassembled or repaired.
- Potential electrostatic charging hazard – see instructions.

Annex:

[Annex to IECEx UL 20.0020X Issue 0.pdf](#)



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TYPE DESIGNATION

Nomenclature for Luminaires:

The complete luminaire catalogue number example is as follows:

Cat.	THT	E	1512	A	N	B	C	C	Y0
No.	1	2	3	4	5	6	7	8	9

1 – Brand name

THT = Top Hi-Tech Co., Ltd.

2 – Category of product

E = Explosion proof LED luminaire

3 – Model name

1512 = Model L1512D Series

4 – Designates light source

A = LED light source

5 – Designates type of Top Cover

N = No Top Cover exist

6 – Designates type of LED module

B = DCOB type

K = SMD type

7 – Designates CCT of LED

C = Cool white

W = Warm white

8 – Designates voltage of LED luminaire

4 = 100 Vac (For DCOB type only)

1 = 110 Vac (For DCOB and SMD type only)

6 = 120 Vac (For DCOB and SMD type only)

5 = 200 Vac (For DCOB type only)

7 = 208 Vac (For DCOB type only)

2 = 220 Vac (For DCOB and SMD type only)

D = 230 Vac (For DCOB type only)

8 = 240 Vac (For DCOB type only)

9 = 277 Vac (For DCOB and SMD type only)

F = 347 Vac (For DCOB and SMD type only)

C = 480 Vac (For DCOB and SMD type only)

9 – Designates wattage of LED luminaire

N0 = 140 W (For DCOB type only)

Q0 = 160 W (For DCOB and SMD type only)

S0 = 180 W (For DCOB and SMD type only)

U0 = 200 W (For DCOB and SMD type only)



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W0 = 220 W (For DCOB and SMD type only)
Y0 = 240 W (For DCOB and SMD type only)
25 = 250 W (For SMD type only)

Models covered are as follows:

Models	Ambient Temperature range	Gas Temperature Code	Dust Temperature Rating
THTE1512ANBxyz	-20°C to +40°C	T4	T110°C
THTE1512ANKxyyzz	-20°C to +55°C	T4	T120°C

x can be C or W; y can be 4, 1, 6, 5, 7, 2, D, 8, 9, F and C; z can be N0, Q0, S0, U0, W0 and Y0; yy can be 1, 6, 2, 9, F and C; zz can be Q0, S0, U0, W0, Y0 and 25

PARAMETERS RELATING TO THE SAFETY

Electrical Rating:

Models	Voltage (Vac)	Wattage (W)
THTE1512ANBxyz	100/110/120/200/208/220/230/240/277/347/480	140/160/180/200/220/240
THTE1512ANKxyyzz	110/120/220/277/347/480	160/180/200/220/240/250

x can be C or W; y can be 4, 1, 6, 5, 7, 2, D, 8, 9, F and C; z can be N0, Q0, S0, U0, W0 and Y0; yy can be 1, 6, 2, 9, F and C; zz can be Q0, S0, U0, W0, Y0 and 25

MARKING

Marking has to be readable and indelible; it has to include the following indications:

<p>TOP Hi-TECH CO.,LTD 9F 1 Zhongshan Rd Tucheng District, New Taipei City, 236 Taiwan. THTE1512AN①②③④ V:⑤Vac, P:⑥W, SN:XX①XX②XXX③</p> <p>UL 20 ATEX 2291X CE 0035 II 2 G Ex db IIB+H₂ * Gb CE 0035 III 2 D Ex tb IIIC T*°C Db Ambient Temperature Range : -20°C ≤ Ta ≤ +*°C</p> <p>IECEx UL20.0020X Ex db IIB+H₂ * Gb Ex tb IIIC T*°C Db</p>	<p>WARNING-The luminaire shall not be opened. WARNING-The flameproof joints are not intended to be disassembled or repaired. WARNING-Potential Electrostatic Charging. Hazard-See Instructions.</p>
<p>TOP Hi-TECH CO.,LTD 9F 1 Zhongshan Rd Tucheng District, New Taipei City, 236 Taiwan. THTE1512ANBCCY0 V:480Vac, P:240W, SN:2041-002</p> <p>UL 20 ATEX 2291X CE 0035 II 2 G Ex db IIB+H₂ T4 Gb CE 0035 III 2 D Ex tb IIIC T110°C Db Ambient Temperature Range : -20°C ≤ Ta ≤ +40°C</p> <p>IECEx UL20.0020X Ex db IIB+H₂ T4 Gb Ex tb IIIC T110°C Db</p>	<p>TOP Hi-TECH CO.,LTD 9F 1 Zhongshan Rd Tucheng District, New Taipei City, 236 Taiwan. THTE1512ANKCC25 V:480Vac, P:250W, SN:2041-001</p> <p>UL 20 ATEX 2291X CE 0035 II 2 G Ex db IIB+H₂ T4 Gb CE 0035 III 2 D Ex tb IIIC T120°C Db Ambient Temperature Range : -20°C ≤ Ta ≤ +55°C</p> <p>IECEx UL20.0020X Ex db IIB+H₂ T4 Gb Ex tb IIIC T120°C Db</p>



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Table 1

①	②	③	④	
* B: DCOB Type K: SMD Type	C: Cool white W: Warm white	4: 100V, 1: 110V 6: 120V, 5: 200V 7: 208V, 2: 220V D: 230V, 8: 240V 9: 277V, F: 347V C: 480V	DCOB (30W/20W)	SMD
			N0: 140W Q0: 160W S0: 180W U0: 200W W0: 220W Y0: 240W	Q0: 160W S0: 180W U0: 200W W0: 220W Y0: 240W 25: 250W

NOTE:

1.Material: SUS 304. Thickness:0.3mm

2.M3 Screw Fix.

3.SN number description as show the follow:

-XX1 means year.

-XX2 means twentieth weeks.

-XXX3 means number of product.

Table 2

LED Module	⑤	⑥
DCOB Type	100V / 110V / 120V / 200V / 208V / 220V 230V / 240V / 277V / 347V / 480V	140W / 160W / 180W / 200W / 220W / 240W
SMD Type	110V / 120V / 220V / 277V / 347V / 480V	160W / 180W / 200W / 220W / 240W / 250W

Table 3

Gas Temperature Code	Dust Temperature Code	Maximum Ambient Temperature
T4	110°C	40°C
T4	120°C	55°C

ROUTINE EXAMINATIONS AND TESTS

Routine overpressure tests in accordance with IEC 60079-1:2014 shall be conducted on all units in accordance with clause 15.2.3.2, at a pressure of 7.8546 bar (114 psi) for a duration of not less than 10 seconds. There shall be no sign of damage, deformation or rupture that will invalidate the concept of protection.