

EU-TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

EU-Type Examination Certificate Number: **UL 22 ATEX 2815X Rev. 0**

Product: **LED Luminaires, Models L1102D Series – Models THT-2LA*d5**1102 and THT-2KA*d5**1102 Series**

Manufacturer: **Top Hi-Tech Co., Ltd.**

Address: **9F, No. 1, Zhongshan Rd, Tucheng District, New Taipei City 236, Taiwan (R.O.C)**

This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **US/UL/ExTR22.0064/00.**

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-1:2014

EN 60079-31:2014

If the sign "X" is placed after the certificate number, it indicates that the product is subject to special conditions for safe use specified in the schedule to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

The marking of the product shall include the following:

II 2 G Ex db IIC T4...T5 Gb

II 2 D Ex tb IIIC T105°C...T95°C Db

Certification Manager
Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2023-02-17

Notified Body

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Schedule

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Description of Product

The Model L1102D 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 part is made of tempered glass. The gasket is used to maintain the IP rating. The entry for wiring through integral cable gland maintains the degree of protection.

Nomenclature for Luminaires:

The complete luminaire catalogue number example is as follows:

Cat.	THT	-	2L	A	100	d	5	2	C	1102
No.	1		2	3	4	5	6	7	8	9

1 – Brand name

THT = Top Hi-Tech Co., Ltd.

2 – Designates type of LED module

2L = COB type

2K = SMD type

3 – Designates type of material

A = ADC 12

4 – Designates wattage of luminaire

30W = 30W (For COB type LED module only)

40W = 40W (For COB and SMD type LED module)

50W = 50W (For COB and SMD type LED module)

60W = 60W (For COB and SMD type LED module)

65W = 65W (For SMD type LED module only)

70W = 70W (For COB type LED module only)

75W = 75W (For SMD type LED module only)

80W = 80W (For COB type LED module only)

90W = 90W (For COB type LED module only)

95W = 95W (For SMD type LED module only)

100 = 100W (For COB type LED module only)

5 – Designates type of protection type

d = Ex d

6 – Sub-series designation

5 = Screw lock

7 – Designates voltage of luminaire

3 = 24 Vac (For COB type LED module only)

4 = 100 Vac (For COB type LED module only)

1 = 110 Vac (For COB and SMD type LED module)

6 = 120 Vac (For COB and SMD type LED module)

5 = 200 Vac (For COB type LED module only)

2 = 220 Vac (For COB and SMD type LED module)

D = 230 Vac (For COB and SMD type LED module)

9 = 277 Vac (For COB and SMD type LED module)

C = 480 Vac (For COB and SMD type LED module)

8 – Designates CCT of LED

C = Cool white

W = Warm white

9 – Model name

1102 = Model L1102D Series

Models covered are as follows:

Models	Ambient Temperature range	Gas Temperature Code	Dust Temperature Rating
THT-2LAXd5yz1102	-20°C to +40°C	T5	T95°C
	-20°C to +50°C	T4	T105°C
THT-2KAXd5yyz1102	-20°C to +40°C	T5	T95°C
	-20°C to +50°C	T4	T105°C

x can be 30W, 40W, 50W, 60W, 70W, 80W, 90W or 100; y can 3, 4, 1, 6, 5, 2, D, 9 or C; z can be C or W;
xx can be 40W, 50W, 60W, 65W, 75W or 95W; yy can be 1, 6, 2, D, 9 or C;

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The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is not covered in this certificate.

Electrical data

Models	Frequency (Hz)	Voltage (Vac)	Wattage (W)
THT-2LA30Wd5yz1102	50/60	24/100/110/120/200/220/230/277/480	30 W
THT-2LA40Wd5yz1102	50/60	24/100/110/120/200/220/230/277/480	40 W
THT-2LA50Wd5yz1102	50/60	24/100/110/120/200/220/230/277/480	50 W
THT-2LA60Wd5yz1102	50/60	24/100/110/120/200/220/230/277/480	60 W
THT-2LA70Wd5yz1102	50/60	24/100/110/120/200/220/230/277/480	70 W
THT-2LA80Wd5yz1102	50/60	24/100/110/120/200/220/230/277/480	80 W
THT-2LA90Wd5yz1102	50/60	24/100/110/120/200/220/230/277/480	90 W
THT-2LA100d5yz1102	50/60	24/100/110/120/200/220/230/277/480	100 W
THT-2KA40Wd5yz1102	50/60	110/120/220/230/277/480	40W
THT-2KA50Wd5yz1102	50/60	110/120/220/230/277/480	50W
THT-2KA60Wd5yz1102	50/60	110/120/220/230/277/480	60W
THT-2KA65Wd5yz1102	50/60	110/120/220/230/277/480	65W
THT-2KA75Wd5yz1102	50/60	110/120/220/230/277/480	75W
THT-2KA95Wd5yz1102	50/60	110/120/220/230/277/480	95W
y can be 3, 4, 1, 6, 5, 2, D, 9 or C; z can be C or W; yy can be 1, 6, 2, D, 9 or C;			

Routine tests

Routine overpressure tests in accordance with EN 60079-1:2014 shall be conducted on all units in accordance with clause 15.2.3.2, at a pressure of 10.76 bar (156 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.

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Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

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Specific conditions of use:

- Do not open when an explosive atmosphere is present.
- Do not open when energized.
- The flameproof joints are not intended to be disassembled or repaired.
- Potential electrostatic charging hazard and cable rating– see instructions.
- The special fastener shall have a property class of A2-70.

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Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

The Model L1102D Series has in addition passed the tests for Ingress Protection to IP67 in accordance with EN60529:1991+A1:2000+A2:2013.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

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