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 18.0047X**

Page 1 of 4

Certificate history:
Issue 0 (2018-11-28)

Status: **Current**

Issue No: 1

Date of Issue: 2020-12-16

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

Equipment: **LED Luminaires**

Optional accessory:

Type of Protection: **Restricted Breathing "nR", Dust Ignition Protection by Enclosure "tb"**

Marking: Ex nR IIC T4…T5…T6 Gc

Ex tb IIIC T110°C…T100°C…T85°C Db

-20°C ≤ Ta ≤ +40°C (for DC LED module type only)

-20°C ≤ Ta ≤ +50°C (for AC LED module type only)

Approved for issue on behalf of the IECEx Certification Body: **Katy A. Holdredge**

Position: **Senior Staff Engineer**

Signature: (for printed version)

Date: 2020-12-16

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 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-15:2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

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 Reports:

US/UL/ExTR18.0055/00 US/UL/ExTR18.0055/01

Quality Assessment Report:

DE/TUR/QAR13.0016/03

IECEx Certificate of Conformity

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

The Model L1733N Series of LED luminaires are suitable for use in hazardous location classified as Zone 2 and Zone 21. This luminaire consists of one “nR”/”tb” LED array chamber.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The luminaire shall not be opened.
- Potential electrostatic charging hazard – see instructions.
- The luminaire does not have a test port fitted.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1: Revises L1733N series LED luminaires; addition of DC SMD LED modules; addition and revision of Drawings.

Annex:

Annex to IECEx UL 18.0047X Issue 1.pdf

IECEx Certificate of Conformity

Certificate No.: IECEx UL 18.0047X

Issue No.: 1

TYPE DESIGNATION

Nomenclature for Luminaires:

The complete luminaire catalogue number example is as follows:

Cat. No.	THT	H	1733	A	N	A	C	9	S0
	1	2	3	4	5	6	7	8	9

1 – Brand name
THT = Top Hi-Tech Co., Ltd.

2 – Category of product
H = HazLoc LED lighting

3 – Model name
1733 = Model L1733N series

4 – Designates power type of light source
A = AC LED module (Mfr. Everlight)
B = DC LED module (Mfr. Alder)
C = DC LED module (30° beam angle lens)
D = DC LED module (60° beam angle lens)
E = DC LED module (90° beam angle lens)
F = DC LED module (150° beam angle lens)
G = DC LED module (15° x 155° beam angle lens)
H = DC LED module (60° x 145° beam angle lens)
J = DC LED module (70° x 140° beam angle lens)
K = DC LED module (85° x 155° beam angle lens)
L = DC LED module (150° x 50° beam angle lens)
M = DC LED module (65° x 145° beam angle lens)
N = DC LED module (65° x 150° beam angle lens)

5 – Designates type of Top Cover
N = No top cover

6 – Designates type of LED module
A = DOB type (For AC LED module only)
K = SMD type (For AC/DC LED module)

7 – Designates CCT of LED
C = Cool white
W = Warm white

8 – Designates voltage
1 = 110 Vac (For AC LED module type only)
2 = 220 Vac (For AC LED module type only)
9 = 277 Vac (For AC LED module type only)
H = 100-277 Vac (For DC LED module type only)

9 – Designates wattage of LED luminaire

G0 = 70 W (For DC and SMD LED module type only)
J5 = 105W (For DC and SMD LED module type only)
K0 = 110 W (For DC and SMD LED module type only)
L0 = 120 W (For AC and DOB/SMD LED module type)
M0 = 130 W (For DC and SMD LED module type only)
N0 = 140 W (For AC and DOB/SMD LED module type)
P0 = 150 W (For AC/DC and SMD LED module type)
Q0 = 160 W (For AC and DOB LED module type only)
S0 = 180 W (For AC and DOB LED module type only)

PARAMETERS RELATING TO THE SAFETY

Models covered are as follows:

Model	Ambient Temperature range	Gas Temperature Code	Dust Temperature Rating
THTH1733ANA*1L0	-20°C to +50°C	T4	T110°C
THTH1733ANA*1N0	-20°C to +50°C	T4	T110°C
THTH1733ANA*1Q0	-20°C to +50°C	T4	T110°C
THTH1733ANA*1S0	-20°C to +50°C	T4	T110°C
THTH1733ANA*2L0	-20°C to +50°C	T4	T110°C
THTH1733ANA*2N0	-20°C to +50°C	T4	T110°C
THTH1733ANA*2Q0	-20°C to +50°C	T4	T110°C
THTH1733ANA*2S0	-20°C to +50°C	T4	T110°C
THTH1733ANA*9L0	-20°C to +50°C	T4	T110°C
THTH1733ANA*9N0	-20°C to +50°C	T4	T110°C
THTH1733ANA*9Q0	-20°C to +50°C	T4	T110°C
THTH1733ANA*9S0	-20°C to +50°C	T4	T110°C
THTH1733ANK*1L0	-20°C to +50°C	T5	T100°C
THTH1733ANK*1N0	-20°C to +50°C	T5	T100°C
THTH1733ANK*1P0	-20°C to +50°C	T5	T100°C
THTH1733ANK*2L0	-20°C to +50°C	T5	T100°C
THTH1733ANK*2N0	-20°C to +50°C	T5	T100°C
THTH1733ANK*2P0	-20°C to +50°C	T5	T100°C
THTH1733ANK*9L0	-20°C to +50°C	T5	T100°C
THTH1733ANK*9N0	-20°C to +50°C	T5	T100°C
THTH1733ANK*9P0	-20°C to +50°C	T5	T100°C
THTH1733BNK*HK0	-20°C to +40°C	T6	T85°C
THTH1733BNK*HM0	-20°C to +40°C	T6	T85°C
THTH1733BNK*HP0	-20°C to +40°C	T6	T85°C
THTH1733CNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733CNK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733DNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733DNK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733ENK*HG0	-20°C to +40°C	T6	T85°C
THTH1733ENK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733FNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733FNK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733GNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733GNK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733HNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733HNK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733JNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733JNK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733KNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733KNK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733LNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733LNK*HJ5	-20°C to +40°C	T6	T85°C

Model	Ambient Temperature range	Gas Temperature Code	Dust Temperature Rating
THTH1733MNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733MNK*HJ5	-20°C to +40°C	T6	T85°C
THTH1733NNK*HG0	-20°C to +40°C	T6	T85°C
THTH1733NNK*HJ5	-20°C to +40°C	T6	T85°C

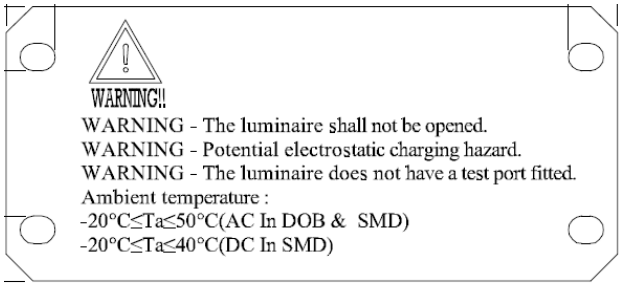
Ratings:

THTH1733ANA*1L0 – 110 Vac, 50/60 Hz, 120 W
THTH1733ANA*1N0 – 110 Vac, 50/60 Hz, 140 W
THTH1733ANA*1Q0 – 110 Vac, 50/60 Hz, 160 W
THTH1733ANA*1S0 – 110 Vac, 50/60 Hz, 180 W
THTH1733ANA*2L0 – 220 Vac, 50/60 Hz, 120 W
THTH1733ANA*2N0 – 220 Vac, 50/60 Hz, 140 W
THTH1733ANA*2Q0 – 220 Vac, 50/60 Hz, 160 W
THTH1733ANA*2S0 – 220 Vac, 50/60 Hz, 180 W
THTH1733ANA*9L0 – 277 Vac, 50/60 Hz, 120 W
THTH1733ANA*9N0 – 277 Vac, 50/60 Hz, 140 W
THTH1733ANA*9Q0 – 277 Vac, 50/60 Hz, 160 W
THTH1733ANA*9S0 – 277 Vac, 50/60 Hz, 180 W
THTH1733ANK*1L0 – 110 Vac, 50/60 Hz, 120 W
THTH1733ANK*1N0 – 110 Vac, 50/60 Hz, 140 W
THTH1733ANK*1P0 – 110 Vac, 50/60 Hz, 150 W
THTH1733ANK*2L0 – 220 Vac, 50/60 Hz, 120 W
THTH1733ANK*2N0 – 220 Vac, 50/60 Hz, 140 W
THTH1733ANK*2P0 – 220 Vac, 50/60 Hz, 150 W
THTH1733ANK*9L0 – 277 Vac, 50/60 Hz, 120 W
THTH1733ANK*9N0 – 277 Vac, 50/60 Hz, 140 W
THTH1733ANK*9P0 – 277 Vac, 50/60 Hz, 150 W
THTH1733BNK*HK0 – 100-277 Vac, 50/60 Hz, 110 W
THTH1733BNK*HM0 – 100-277 Vac, 50/60 Hz, 130 W
THTH1733BNK*HP0 – 100-277 Vac, 50/60 Hz, 150 W
THTH1733CNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733CNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733DNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733DNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733ENK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733ENK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733FNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733FNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733GNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733GNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733HNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733HNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733JNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733JNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733KNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733KNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733LNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733LNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W

THTH1733MNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733MNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W
THTH1733NNK*HG0 – 100-277 Vac, 50/60 Hz, 70 W
THTH1733NNK*HJ5 – 100-277 Vac, 50/60 Hz, 105 W

MARKING

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



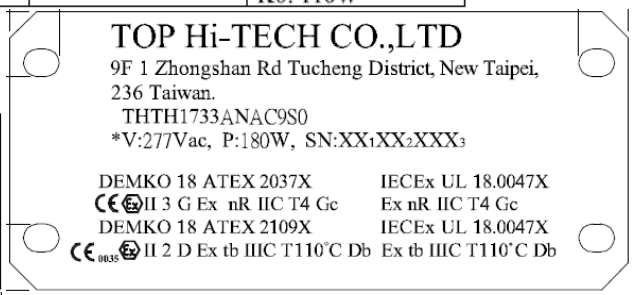
①②③④⑤ See Table 1
* See Table 2

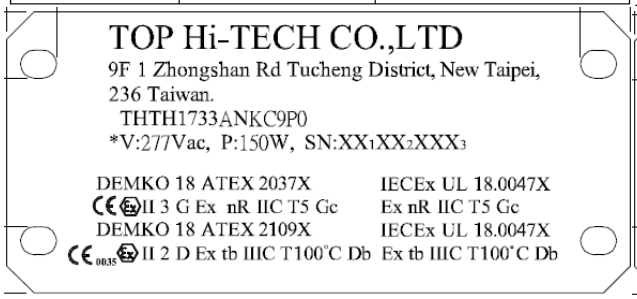
Table 1

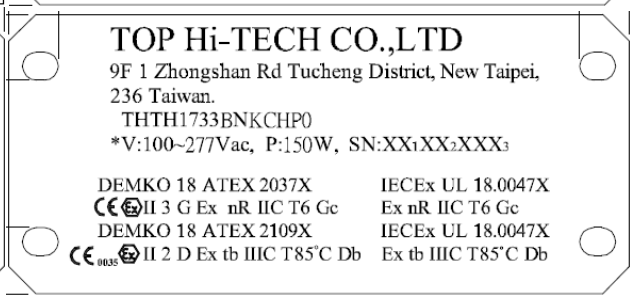
①	②	③	④	⑤
* A: AC In LED B: DC In LED	* A: DOB Type K: SMD Type	C: Cool white W: Warm white	1: 110V 2: 220V 9: 277V H: 100~277V	S0: 180W Q0: 160W P0: 150W N0: 140W M0: 130W L0: 120W K0: 110W

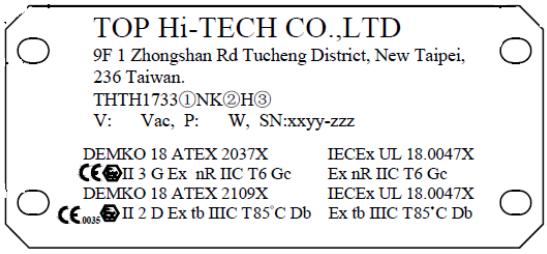
Table 2

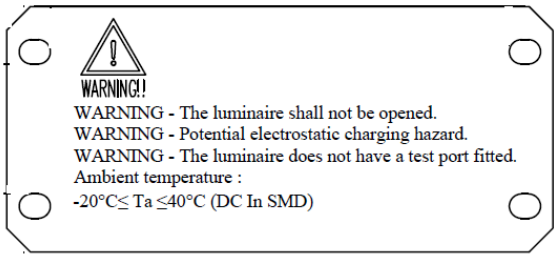
LED Module	Voltage	Wattage
DC In SMD	100~277V	110W / 130W / 150W
AC In SMD	110V / 220V/ 277V	120W / 140W / 150W
AC In DOB	110V / 220V/ 277V	120W / 140W / 160W / 180W











①- Series type, C=DC in LED(30°), D=DC in LED(60°), E=DC in LED(90°), F=DC in LED(150°), G=DC in LED(15°x155°), H=DC in LED(60°x145°), J=DC in LED(70°x140°), K=DC in LED(85°x155°), L=DC in LED(150°x50°), M=DC in LED(65°x145°), N=DC in LED(65°x150°)

②- Designates CCT of LED, C = Cool white, W = Warm white

③- Designates wattage rating of the luminaire, G0=70W；J5=105W

ROUTINE EXAMINATIONS AND TESTS

Routine restricted breathing testing according to clause 23.2.3.2.1.2 of IEC 60079-15 is required.