

# (1) EC TYPE-EXAMINATION CERTIFICATE



- (2) Equipment and Protective Systems intended for use in  
Potentially Explosive Atmosphere - **Directive 94/9/EC**
- (3) EC Type-Examination Certificate Number

## TÜV 14 ATEX 7493 X

(4) **Equipment:** **Universal Explosion Proof LED Lighting**  
**Type: THT-EX1219\*\*\*\*\*.\***

(5) **Manufacturer:** **TOP HI-TECH CO.,LTD.**  
(6) **Address:** **5F,NO.113,Zhongcheng Rd,**  
**Tucheng Dist, New Taipei City 236,**  
**Taiwan (R.O.C)**

- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV Rheinland Zertifizierungsstelle for ex-protected products of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report 557/Ex493.00/14

- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

**EN 60079-0: 2012**

**EN 60079-1: 2007**

**EN 60079-31: 2009**

except the requirements, which are listed under item (18).

- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-Type-Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.
- (12) The marking of the equipment shall include the following:



**II 2 G Ex d IIB+H2 T6...T4 Gb**



**II 2 D Ex tb IIIC T55°C...T105°C Db**

TÜV Rheinland ExNB for explosion protected equipment

Cologne, 2016-01-19

Dipl.-Ing. Klauspeter Graffi

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TÜV Rheinland Notified Body of TÜV Rheinland Industrie Service GmbH, Am Grauen Stein 51105 Köln  
Tel. +49 (0) 221 806-0 Fax. + 49 (0) 221 806 114

(13)

Annex to

(14)

## EC-Type Examination Certificate

### TÜV 14 ATEX 7493 X

(15)

#### Description of equipment

##### 15.1 Equipment and type:

Universal Explosion Proof LED Lighting type THT-EX1219\*\*\*\*\*-\*

The description of type code:

For model L1219A(LED carrier is Short Cylinder):

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
THT-EX	1219	*	*	S	*	1	*	-*

(1) Brand name.

(2) Series designation, 1219=L1219 series.

(3) C.C.T., C=Cool white, W=Warm white, R=Red light, G=Green light.

(4) Voltage, A=24Vac, B=100Vac, C=110Vac, D=200Vac, E=220Vac, F=120Vac, G=208Vac.

(5) Type of LED carrier, S=Short Cylinder.

(6) Type of Top Cover, A=Tall type (L1105T), B=Short type (L1105S).

(7) LED quantity, 1=1 LED.

(8) LED watts choose, 1=10W, 2=20W, 3=33W.

(9) Mounting type. W25=Wall mounting 25°; W90= Wall mounting 90°; H25=Hanging mounting 25°; H90= Hanging mounting 90°; C90=Ceiling mounting 90°; S25=Stanchion mounting 25°; S90=Stanchion mounting 90°; P30=Pendant mounting.

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**Remarks:**

- 1.33W for Green and Red LED light source is not available.
- 2.24V Cool white and Warm white LED light source can be used with 20watt model only.
- 3.Green Light and Red Light LED source can be used with 10W and 20W under work voltage 220V only.

**For model L1219B(LED carrier is Cylinder):**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
THT-EX	1219	*	*	C	*	5	*	-*

- (1) Brand name
- (2) Series designation, 1219=L1219 series.
- (3) C.C.T., C=Cool white, W=Warm white.
- (4) Voltage, B=100Vac, C=110Vac, D=200Vac, E=220Vac, F=120Vac, G=208Vac.
- (5) Type of LED carrier, C=Cylinder.
- (6) Type of Top Cover, A=Tall type (L1105T), B=Short type (L1105S).
- (7) LED quantity, 5=5 LEDs.
- (8) LED watts choose, 1=10W, A=10W+20W, B=10W+33W, D=10W+20W+33W.
- (9) Mounting type. W25=Wall mounting 25°; W90= Wall mounting 90°; H25=Hanging mounting 25°; H90= Hanging mounting 90°; C90=Ceiling mounting 90°; S25=Stanchion mounting 25°; S90=Stanchion mounting 90°; P30=Pendant mounting.

**Remarks:**

- 1.When LED watts choose is "1," it consists of 10W LED, the highest wattage is 50W.
- 2.When LED watts choose is "A," it consists of 10W and 20W LED, the highest wattage is 90W.
- 3.When LED watts choose is "B," it consists of 10W and 33W LED, the highest wattage is 73W.
- 4.When LED watts choose is "D," it consists of 10W, 20W and 33W LED, the highest wattage is 83W.

**For model L1219C(LED carrier is Triangular):**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
THT-EX	1219	*	*	T	*	4	*	-*

- (1) Brand name
- (2) Series designation, 1219=L1219 series.
- (3) C.C.T., C=Cool white, W=Warm white.
- (4) Voltage,  
A=24Vac, B=100Vac, C=110Vac, D=200Vac, E=220Vac, F=120Vac, G=208Vac.
- (5) Type of LED carrier, T=Triangular.
- (6) Type of Top Cover, A=Tall type (L1105T), B=Short type (L1105S).
- (7) LED quantity, 4=4 LEDs.
- (8) LED watts choose, 1=10W, 2=20W, A=10W+20W, B=10W+33W, D=10W+20W+33W.
- (9) Mounting type. W25=Wall mounting 25°; W90= Wall mounting 90°; H25=Hanging mounting 25°; H90= Hanging mounting 90°; C90=Ceiling mounting 90°; S25=Stanchion mounting 25°; S90=Stanchion mounting 90°; P30=Pendant mounting.

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**Remarks:**

1. When LED watts choose is "1," it consists of 10W LED, the highest wattage is 40W.
2. When LED watts choose is "2," it consists of 20W LED, the highest wattage is 80W.
3. When LED watts choose is "A," it consists of 10W and 20W LED, the highest wattage is 70W.
4. When LED watts choose is "B," it consists of 10W and 33W LED, the highest wattage is 63W.
5. When LED watts choose is "D," it consists of 10W, 20W and 33W LED, the highest wattage is 73W.
6. When voltage is 24V, only 80W is available.

**For model L1219D(LED carrier is Warning Light):**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
THT-EX	1219	*	*	W	A	0	1	-*

- (1) Brand name
- (2) Series designation, 1219=L1219 series.
- (3) C.C.T., B=Blue light, Y=Yellow light, R=Red light, G=Green light.
- (4) Voltage, A=24Vac, B=100Vac, C=110Vac, D=200Vac, E=220Vac, F=120Vac, G=208Vac.
- (5) Type of LED carrier, W=Warning Light.
- (6) Type of Top Cover, A=Tall type (L1105T).
- (7) LED quantity, 0=Warning light set.
- (8) LED watts choose, 1=10W.
- (9) Mounting type. W25=Wall mounting 25°; W90= Wall mounting 90°; H25=Hanging mounting 25°; H90= Hanging mounting 90°; C90=Ceiling mounting 90°; S25=Stanchion mounting 25°; S90=Stanchion mounting 90°; P30=Pendant mounting.

## 15.2 Description

### General product information

The lamp Universal Explosion Proof LED Lighting type THT-EX1219\*\*\*\*\*-\* is suitable for hazardous area zone 1, zone 2, zone 21 and zone 22.

The lamp has metallic enclosure (ADC12) with a coating on it (40~80µm).

The lamp including two different top cover (tall and short) and four different lamppost (Short cylinder, Cylinder, Triangular Prism and Warning light).

Mounting type. W25=Wall mounting 25°; W90= Wall mounting 90°; H25=Hanging mounting 25°; H90= Hanging mounting 90°; C90=Ceiling mounting 90°; S25=Stanchion mounting 25°; S90=Stanchion mounting 90°; P30=Pendant mounting.

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### 15.3 Technical Data

#### Parameters

##### Electrical parameters

Rated voltage	24VAC	THT-EX1219*A****-*
	100VAC	THT-EX1219*B****-*
	110VAC	THT-EX1219*C****-*
	120VAC	THT-EX1219*F****-*
	200VAC	THT-EX1219*D****-*
	208VAC	THT-EX1219*G****-*
	220VAC	THT-EX1219*E****-*
Rated power	10W	THT-EX1219**S*11-*
		THT-EX1219**W*01-*
	20W	THT-EX1219**S*12-*
	33W	THT-EX1219C*S*13-*
		THT-EX1219W*S*13-*
	40W	THT-EX1219**T*41-*
	50W	THT-EX1219**C*51-*
	63W	THT-EX1219**T*4B-*
	70W	THT-EX1219**T*4A-*
	73W	THT-EX1219**T*4D-*
		THT-EX1219**C*5B-*
	80W	THT-EX1219**T*42-*
	83W	THT-EX1219**C*5D-*
	90W	THT-EX1219**C*5A-*

##### Thermal parameters

Ambient temperature range  $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$

Temperature class	T6	THT-EX1219**S*1*-*
		THT-EX1219**WA01-*
		THT-EX1219**TA**-*
		THT-EX1219*ATB42-*
	T5	THT-EX1219**CA**-*
		THT-EX1219*BCB**-*
		THT-EX1219CET*42-*
	T4	THT-EX1219CECB5A-*
		THT-EX1219WETB42-*

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Maximum surface temperature[Tmax (°C)]:

Model L1219A is marked with T60°C...T80°C

Model L1219B is marked with T90°C...T105°C

Model L1219C is marked with T65°C...T105°C

Model L1219D is marked with T55°C

See following table for details:

Model L1219A	Tmax marking	Model L1219B	Tmax marking
Type code		Type code	
THT-EX1219CASA12-*	T60°C	THT-EX1219CBCA5A-*	T95°C
THT-EX1219CESA13-*	T70°C	THT-EX1219CECA5A-*	T100°C
THT-EX1219WASA12-*	T60°C	THT-EX1219WBCA5A-*	T90°C
THT-EX1219WESA13-*	T70°C	THT-EX1219WECA5A-*	T100°C
THT-EX1219GESA12-*	T60°C	THT-EX1219CBCB5A-*	T95°C
THT-EX1219RESA12-*	T70°C	THT-EX1219CECB5A-*	T105°C
THT-EX1219CASB12-*	T60°C	THT-EX1219WBCB5A-*	T100°C
THT-EX1219CESB13-*	T70°C	THT-EX1219WECB5A-*	T105°C
THT-EX1219WASB12-*	T60°C	/	
THT-EX1219WESB13-*	T80°C	/	
THT-EX1219GESB12-*	T60°C	/	
THT-EX1219RESB12-*	T60°C	/	
Model L1219C	Tmax marking	Model L1219D	Tmax marking
Type code		Type code	
THT-EX1219CATB42-*	T75°C	THT-EX1219BAWA01-*	T55°C
THT-EX1219WETB42-*	T105°C	THT-EX1219BEWA01-*	T55°C
THT-EX1219CATA42-*	T70°C	THT-EX1219GAWA01-*	T55°C
THT-EX1219CETB42-*	T95°C	THT-EX1219GEWA01-*	T55°C
THT-EX1219CETA42-*	T100°C	THT-EX1219RAWA01-*	T55°C
THT-EX1219WATA42-*	T65°C	THT-EX1219REWA01-*	T55°C
THT-EX1219WETA42-*	T65°C	THT-EX1219YAWA01-*	T55°C
THT-EX1219WATB42-*	T70°C	THT-EX1219YEW A01-*	T55°C

#### List of certified equipment

Equipment	Type	Ex-marking	No. of certificate	IP code
Not Applicable				

(16) **Test-Report No.** 557/Ex493.00/14

Parts of the device, which already fulfill the requirements for the category, were not approved and assessed by TÜV Rheinland Industrie Service.

The applicability and assembly of mechanical and electrical parts and components were assessed and approved by TÜV Rheinland Industrie Service with respect to the requirements of explosion protection.

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The Universal Explosion Proof LED Lighting type THT-EX1219\*\*\*\*\*-\* is evaluated by the standards EN 60079-0:2012, EN 60079-1:2007 and EN 60079-31:2009.  
The lamps can be used in explosion atmosphere of gas and dust.

(17) **Special Conditions for safe use**

1. When G3/4" cable gland will be installed by end user, the rest unused holes shall be blocked by screw plug which comply with the requirements of standards EN 60079-1 and EN 60079-31.
2. The power cable will be installed by end user, and the end user can use the cable which is specified in the user manual only.
3. The end user must install external earthing wire according to user manual before use.
4. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

(18) **Basic Safety and Health Requirements**

Covered by afore mentioned standard

TÜV Rheinland ExNB für explosion protected equipment

Cologne, 2016-01-19

Dipl.-Ing. Klauspeter Graffi



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