

LW50 Ex LED Area Light




Products description and application:

- Suitable for offshore oil platforms, oil tankers, petrochemical plants, storage tanks, etc .
- Certified to explosive gas atmosphere zone 1 and 2.
- Certified to explosive gas atmosphere II A / II B / II C area.
- Certified to combustible dust atmosphere zone 21 and zone 22.
- Suitable for T1-T5 temperature class.

Features:

- Suitable for harsh industrial environment: solid aluminum alloy shell, special surface treatment technology anti-corrosion grade C4-M, protection grade IP66.
- Accurate light distribution: With independent optical design team and technology, the light type is defined for various use environments, and optical components are used to make optical components with high transparent and weather resistant composite materials, so that the illumination effect is more uniform and the light source utilization rate is improved.
- Professional lampshade design, using composite materials, operation temperature can be -25°C, with 4J shock resistance, hot and cold upheaval resistance features.
- LED light source, using professional thermal analysis software, working temperature below 100 °C, ensure the life of LED particles and stable light output.
- Constant current design, durable and reliable.
- Can uses the PWM or RS485(0-100)to be stepless dimming.

General Specifications:

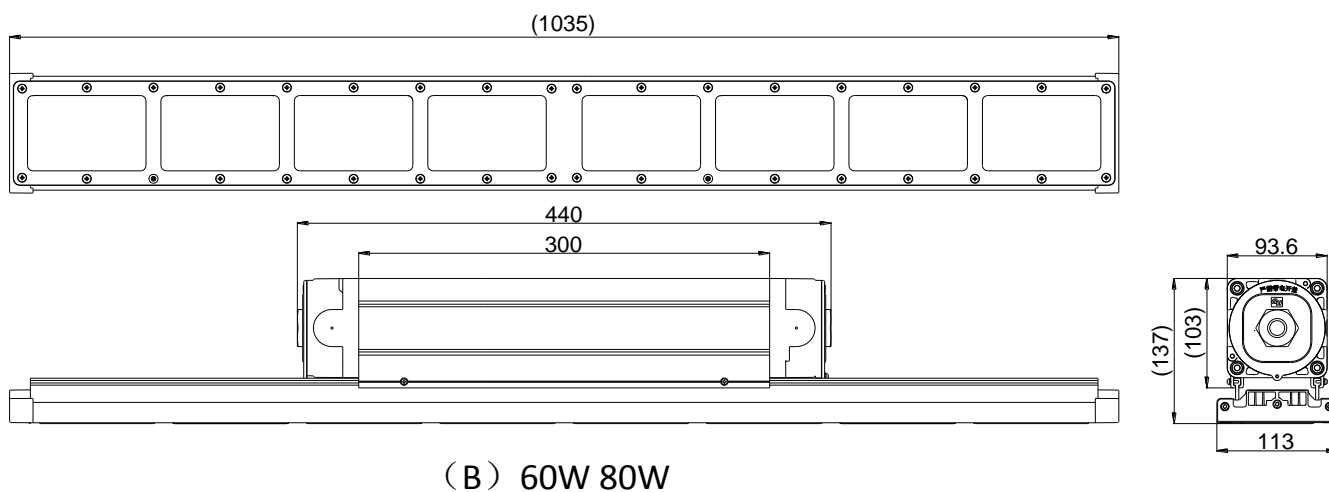
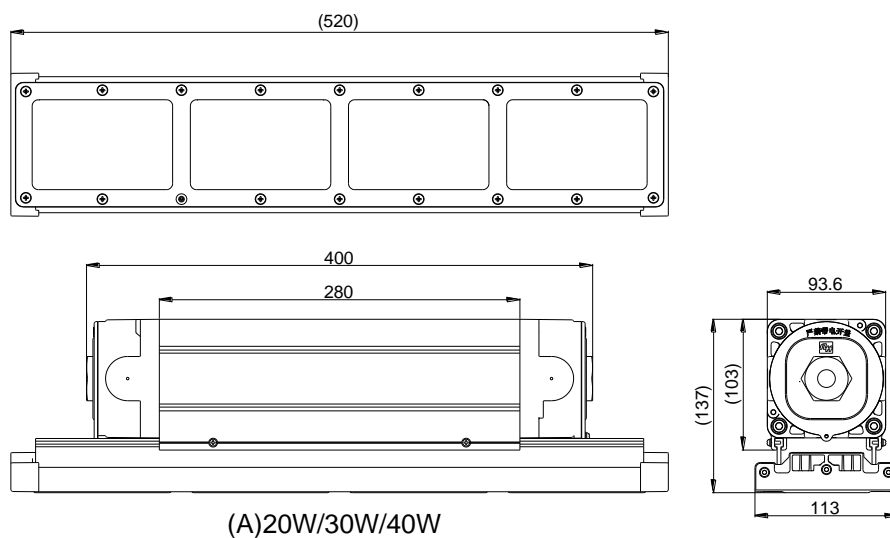
Certificate Issued by Certification No		IECEX TPS 19.0036X (Pending)	TPS 19 ATEX 092047 0001 X(Pending)
Standard	GB3836.1-2010 GB3836.2-2010 GB3836.9-2014 GB/T 3836.22-2017 GB 12476.1-2010 GB 12476.5-2010	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-7:2017 IEC 60079-18:2017 IEC 60079-28:2015 IEC 60079-31:2013	EN 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015+A1:2017 EN 60079-18:2015+A1:2017 EN 60079-28:2015 EN 60079-31:2014
EX Marking	Ex d e m op is IIC T5 Gb Ex op is tD IIIC T95°C Db IP66	Ex op is tb IIIC T95°C Db IP66 Ex db eb mb op is IIC T5 Gb	 II 2G Ex db eb mb op is IIC T5 Gb II 2D Ex op is tb IIIC T95°C Db IP66
Electrical		Mechanical	
Rated voltage	AC100V~240V for LW50E AC200~240V for LY50E	material	Housing :Aluminum Alloy Cover : PC
Rated power	20W/30W/40W/60W/80W 40W for LY50E	Operating temperature	Ta -25°C ~ +50°C for LW50E Ta 0°C ~ +50°C for LY50E
Frequency	50Hz~60Hz	IP rate	IEC60529 IP66 《C4/WF1/WF2》
Surge	IEC 61000-4-5 ±2K Level 3	Anti-vibration	IEC60528 1G
ESD	IEC 61000-4-2 ±8KV Level 4	Anti-corrosion	ISO9227 720H / C4-M
EFT	IEC 61000-4-4 ±2KV Level 3	Body color	Yellow (RAL1003)
EMC	EN55015	Emergency time	≥60min
Emergency power	3W	Weight	40W/6KG; 80W/7.5KG

LW50 Ex LED Area Light



Connect	M25*1.5 / NPT 3/4" cable entry, suitable for supply cable $\varnothing 10 \sim \varnothing 14$ mm, and $\sphericalangle 2.5\text{mm}^2$ lead wire reliable connected		
Mount	Tubular mount, Lifting ring mount, Ceiling mount, Angle adjustable mount (0-180°), guardrail mount, flange mount.		
Photometric			
LEDs lifetime	$\geq 50000\text{h}$	Vertical beam angle	30° 60°90°120°
Color temperature	Cold white:5500-6000K warm white: 2700K	Color rendering index	Ra ≥ 70
LED light effect	120lm/W		

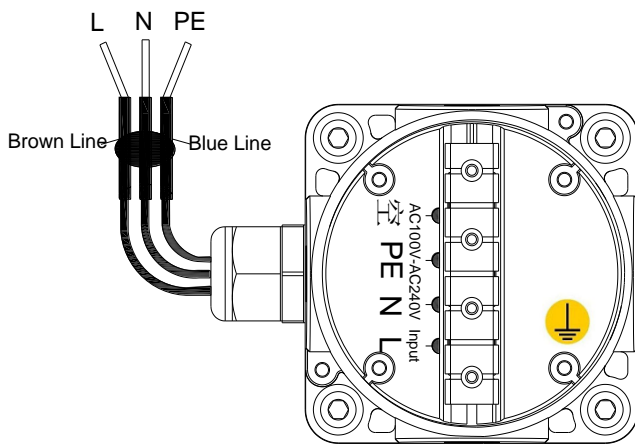
Mounting dimensions(mm):



LW50 Ex LED Area Light



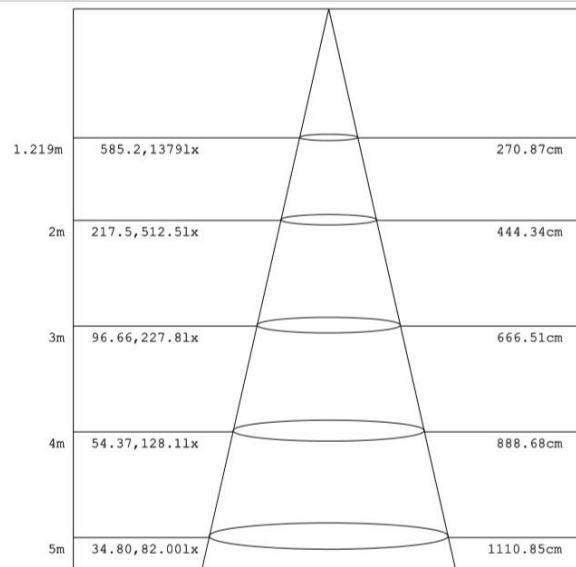
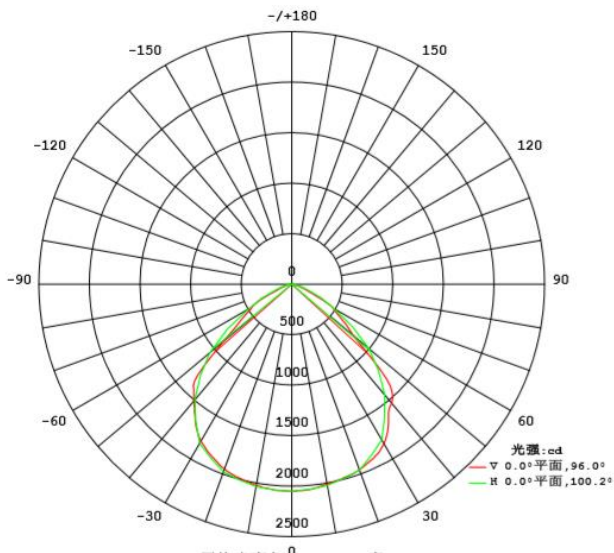
Wiring diagram:



Notice

1. It is normal phenomenon that the lighting surface temperature rising while it is operating.
2. Ensure that the supply voltage matches the rated voltage of the fixture.
3. Do not open the product while it is operating to prevent danger.
4. Turn off the power when repair or maintain the product, all wiring should be done by a licensed electrician.
5. Do not cover the product with any objects
6. External ground: M4*14 screws fixing screw material A2-70 or above ground wire diameter of at least 4 square mm, Installation torque 6 ~ 8 kgf / cm. isopropyl alcohol, carbon tetrachloride, cyclohexanone, etc., otherwise it will be eroded and cracked.
7. This product is a sealed structure, non-professional maintenance personnel is not allowed to disassemble. Once found, the warranty will be ineffective.

Light distribution pattern:



Equipment Classification rules:

	Explosive gas atmosphere	Explosive dust atmosphere	EX marking	Zone
0	IIC	-----	Ex db eb mb op is IIC T5 Gb	1 、 2
1	-----	IIIC	Ex op is tb IIIC T95°C Db IP66	21 、 22

Model definition:

LW(Y)50series

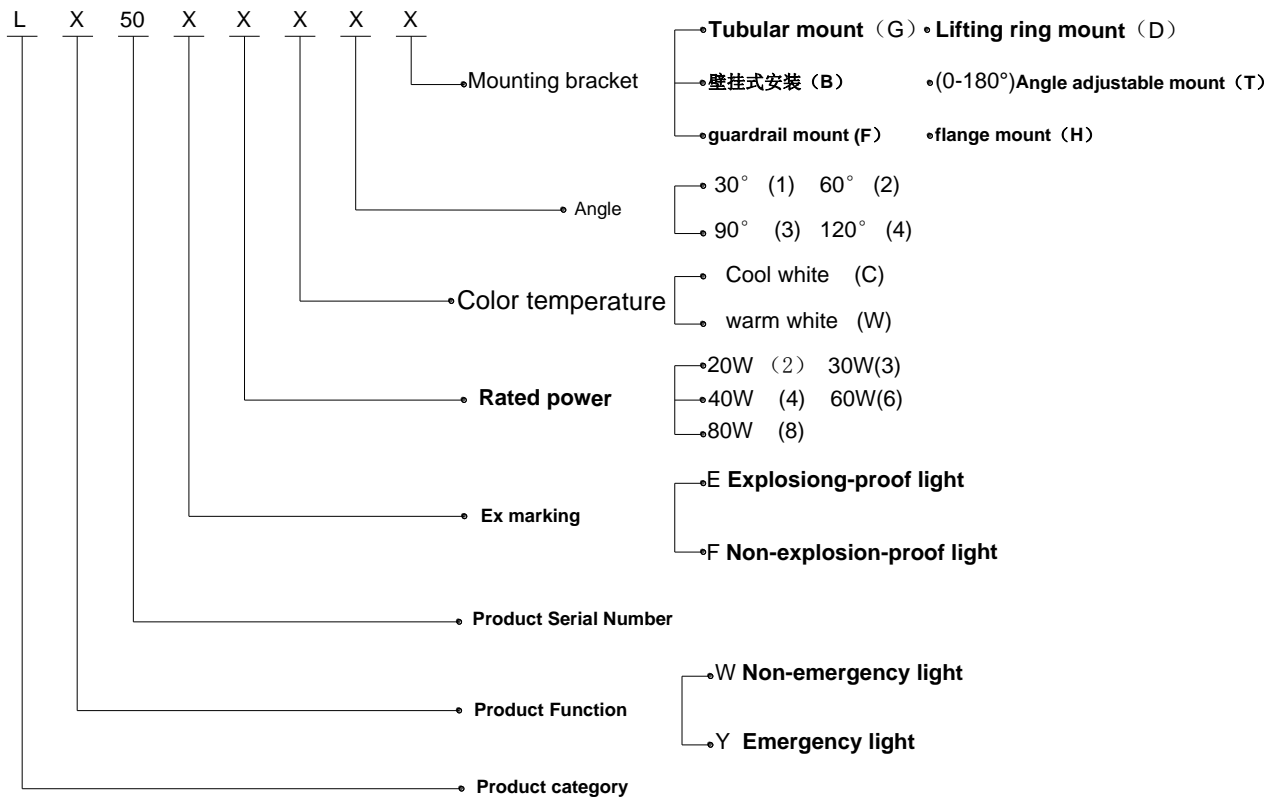
- Product category: L means LED light fixture,
- Product features: Y = emergency W = non-emergency
- Product serial number: 50 indicates the serial number of the LED light fixture.
- Explosion-proof mark: E explosion-proof lamps Y non-explosion-proof lamps
- Rated power: 20W; 30W; 40W; 60W; 80W, 2 means 20W; 3 means 30W;
- 4 means 40W; 6 means 60W; 8 means 80W
- Color temperature: C cool white , W warm white
- Angle. 1 means 30 degree, 2 means 60 degree, 3 means 90 degree, 4 means 120 degree.
- Mounting bracket. G means Tubular mount; D means Lifting ring mount; B means Wall-mounted installation; T means

LW50 Ex LED Area Light



(0-180°) Angle adjustable mount; F means guardrail mount; H means Flange mount.

Model definition



Order instruction: (●) Required item; (○) Option item

Non-contingency explosion-proof LED light	Power			Color temperature		Beam angle				Mount						
	LW50E	2	3	4	C	W	1	2	3	4	G	B	D	F	H	T
●		○			○			○						○		
●		○			○			○						○		

Emergency explosion-proof LED light	Power			Color temperature		Beam angle				Mount						
	LY50E	2	3	4	C	W	1	2	3	4	G	B	D	F	H	T
●		○			○			○						○		
●		○			○			○						○		

Non-contingency explosion-proof LED light	Power			Color temperature		Beam angle				Mount						
	LW50F	2	3	4	C	W	1	2	3	4	G	B	D	F	H	T
●		○			○			○						○		
●		○			○			○						○		

Description:

The LW50E and LY50E series Ex LED Area Lights are used in Zone 1 and Zone 21 explosion atmospheres.

They consist of a power chamber, a connection compartment and a light-transmitting cavity. The enclosure is made of ADC12 die-casting aluminium alloy and 6063 aluminium alloy. The power chamber is designed as frameproof protection “Ex db”. The connection compartment is designed as increased safety protection “Ex eb”. The light-transmitting cavity is designed as encapsulation protection “Ex mb” and increased safety protection

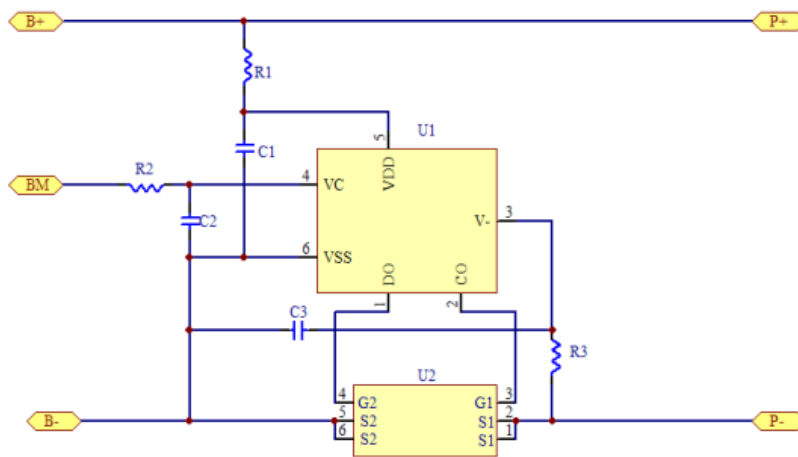
LW50 Ex LED Area Light



“Ex eb”. The light-transmitting cover is made of transparent PC material, surrounded by the metal frame. The LED driver is installed in the power chamber of LW50E series Ex LED Area Light. The LED driver, sealed Lithium-ion battery IFR18650-6.4V, 1.5Ah, 9.6Wh battery and control circuit are installed in the power chamber of LY50E series Ex LED Area Light.

For the LW50E series Ex LED Area Light, the rated powers are 20W, 30W, 40W, 60W and 80W. For the LY50E series Ex LED Area Light, the rated power is 40W.

The sealed Lithium-ion battery IFR18650-6.4V, 1.5Ah, 9.6Wh battery is produced by Shandong Zhongxin Dison Power Supply Co., Ltd. There are 2 cells in series in the Ex d power chamber. There is a protective control circuit to avoid the battery in overcharge and over-discharge condition shown as below.



Model difference:

For the LW50E series LED explosion proof light, the difference is the rated power, the design of the light-transmitting cavity and the length of the power chamber. For the rated power 20W, 30W, 40W and 60W, one LED driver is installed. For the rated power 80W, two LED drivers are installed.

The LY50E series LED explosion proof light has the battery and the control circuit in the power chamber, and the rated voltage is 200 to 240 V AC, these are the difference between LW50E and LY50E series lights.

The LW50E and LY50E series are certified by TÜV SÜD, see the below information.

Certificate no: TPS 19 ATEX 092047 0001 X Rev. 00.

Notify body: TÜV SÜD Product Service GmbH

Address: Ridlerstraße 65, 80339 München, Germany

Warning label:

WARNING – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

WARNING – DO NOT OPEN WHEN ENERGIZED

WARNING – USE FASTENERS WITH YIELD STRESS $\geq 450\text{MPa}$

For the end user, the supply cable shall not be twisted during installation and the light shall be installed firmly. The section area of the conductor to connect the terminal blocks are not greater than 2.5 mm^2 .

The installation of terminal blocks shall ensure that the enough creepage distance and electrical clearance between the conductor and the internal wall of terminal box. The terminals shall be tight well. The factory connection and field connection of terminals are two installation method for this light.

The cable gland shall be installed by the end user or by the manufacturer. The cable gland shall be certified separately and it shall be used in Category 2 as minimum.


Special condition of safe use:

1. The Lithium-ion battery IFR18650-6.4V, 1.5Ah, 9.6Wh battery for the LY50E series LED explosion proof light shall only be replaced by the manufacturer.


LW50 Ex LED Area Light





Nameplate:


LW50 Ex LED Area Light 

Voltage: 100~240VAC Wattage: **W** IP Protection: IP66
Frequency: 50/60Hz Operating temperature: -25~+50°C

Ex-proof grade:  II 2GD Ex db eb mb op is IIC T5 Gb
Ex op is tb IIIC T95°C Db IP66

Certification No: TPS 19 ATEX 092047 0001 X
Production serial No: 0123456
Manufacture date:  0035

 **NANHUA** Nanhua Electronics Co.,Ltd
+86.21.39126868
www.nanhua.com

 **WARNING-SEE USER MANUAL**
Specification of enclosure fastener: M3*8
Material of fastener: Stainless steel 304 (A2-70)

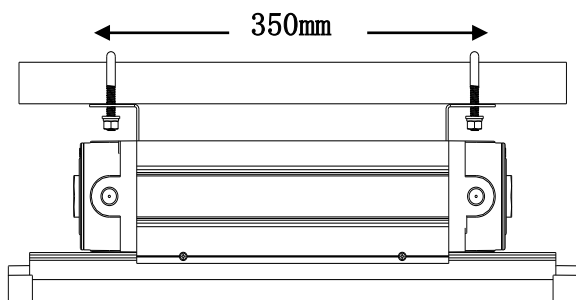
Add: Building 9, No1755, Wenbei Rd, Jiading District, Shanghai

WARNING – DO NOT OPEN WHEN AN
EXPLOSIVE ATMOSPHERE IS PRESENT

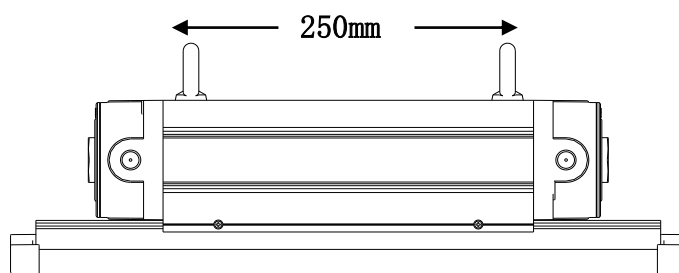
WARNING – DO NOT OPEN WHEN
ENERGIZE

WARNING – USE FASTENERS WITH YIELD
STRESS \geq 450MPa

Installation and dimension:

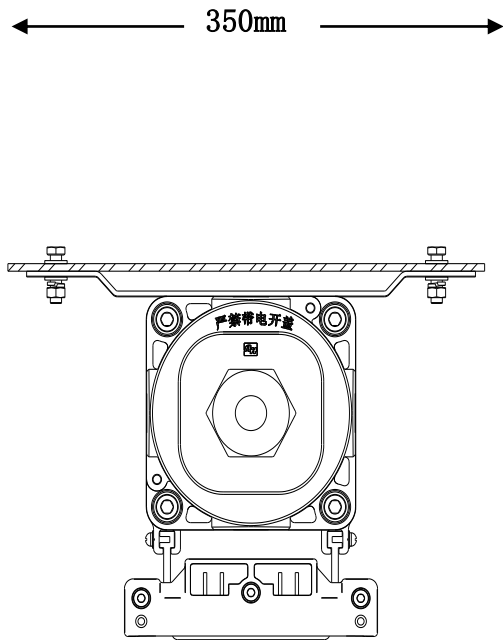


Tubular mount (G)

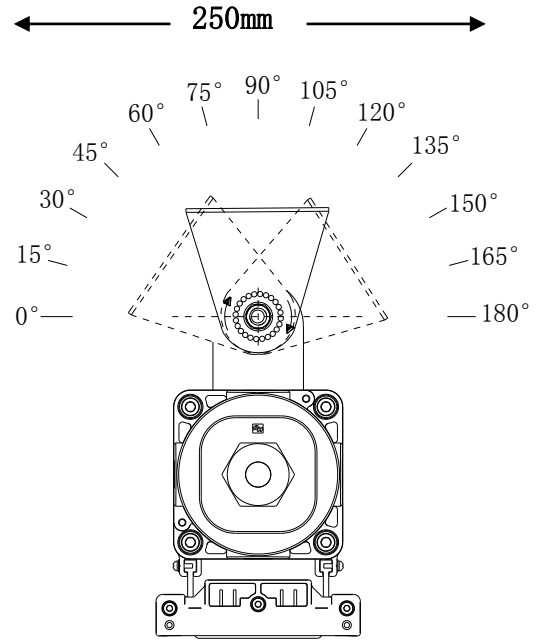


Lifting ring mount (D)

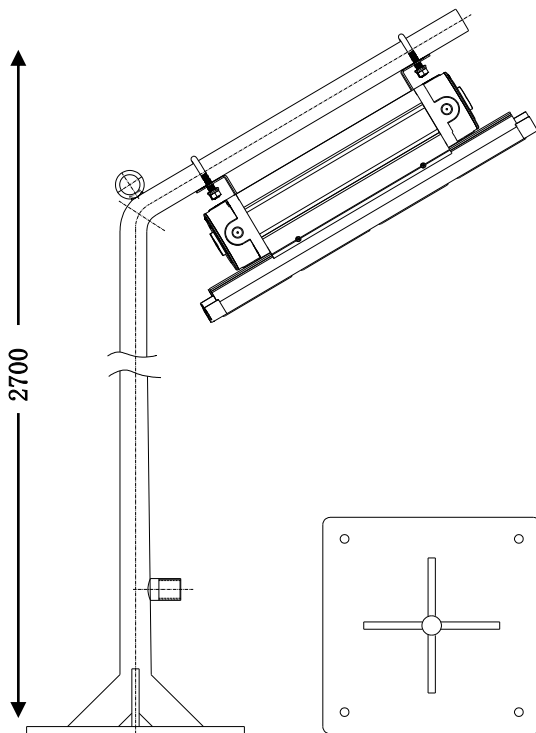
LW50 Ex LED Area Light



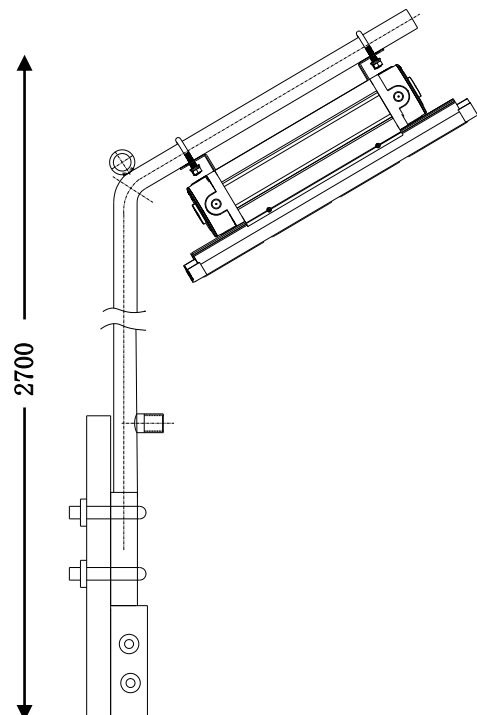
wall mount (B)



Angle adjustable mount (T)



guardrail mount(F)



flange mount (H)





1. Ordering instructions

- a) Please choose the right model based on the model definition, e.g.: 40W, ceiling mounted, IIIC equipment (or suitable for explosive dust environment in Zone 21),
- b) No lead wire is offered, please order it based on the specifications.
- c) After the wire is connected, lock all metal waterproof joints on the bottom of the power box to ensure that all metal waterproof joints are sealed and not filled with water.

2. Repair items

Conditions of Use” for Ex Equipment or “Schedule of Limitations” for Ex Components, if any:

- Special condition for safe use:
- a). Repairs of the flameproof joints may only be made by the manufacturer or on behalf of the manufacturer and on his own responsibility. Repair in compliance with the values in tables 1 and 2 of IEC 60079-1 is not accepted.
- b). The external earth connection facility shall be connected reliably, property class at least A2-70, Installation torque 6 ~ 8 kgf / cm.
- c). The cable entry holes have to be connected by means of suitable cable entry device with type of protection of  II 2 G Ex d IIC Gb,  II 2 D Ex tb IIIC Db, IP66. The cable entry device is approved in accordance with EN 60079-0:2012, EN 60079-1:2007 and EN 60079-31:2009, and which are covered by a separate conformity certificate.
- d). Fasteners related with flameproof joints shall have property class at least A2-70.
- e). When installation, use and maintenance, observe following standards EN 60079-10, EN60079-14, EN60079-17 and EN 60079-19.
- ATEX approval doesn't include accessories required in manual.
- DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT!

3. Precautions

- For high-power lamp, the surface temperature is high, it cannot be covered. And the distance from the object no less than 3m, to avoid burns or fire.
- The part of material of products is PC (like lamp cover and lamp shell), so it cannot direct or indirect touch the organic solvent, such as industrial alcohol, banana oil, isopropyl alcohol, carbon tetrachloride, cyclohexanone and so on, otherwise, the product will be corrosion.
- There will be a temperature rise during work, which is normal.
- When the product working, do not open any part of the lamp body to prevent danger.
- This product is a sealed, non-professional maintenance personnel do not disassemble it. Once found, the Nanhua will not be guaranteed.
- The LED is intended to be connected in a branch panel with prospective short circuit current of 1500A.

Thanks for choosing our products, NANHUA Electronics is the professional brand of signal transmission and high quality industrial lighting which is trusted and loved by global users from various industries. Read and understand these instructions completely and carefully. Wrong installation and operation may lead to fires, electric shock, and others. Due to our continued efforts to improve our products, product specifications are subject to change without notice.

©NANHUA Electronics Co., Ltd. All rights reserved. www.nanhua.com