



## Introduction to the Cartesian Square range,

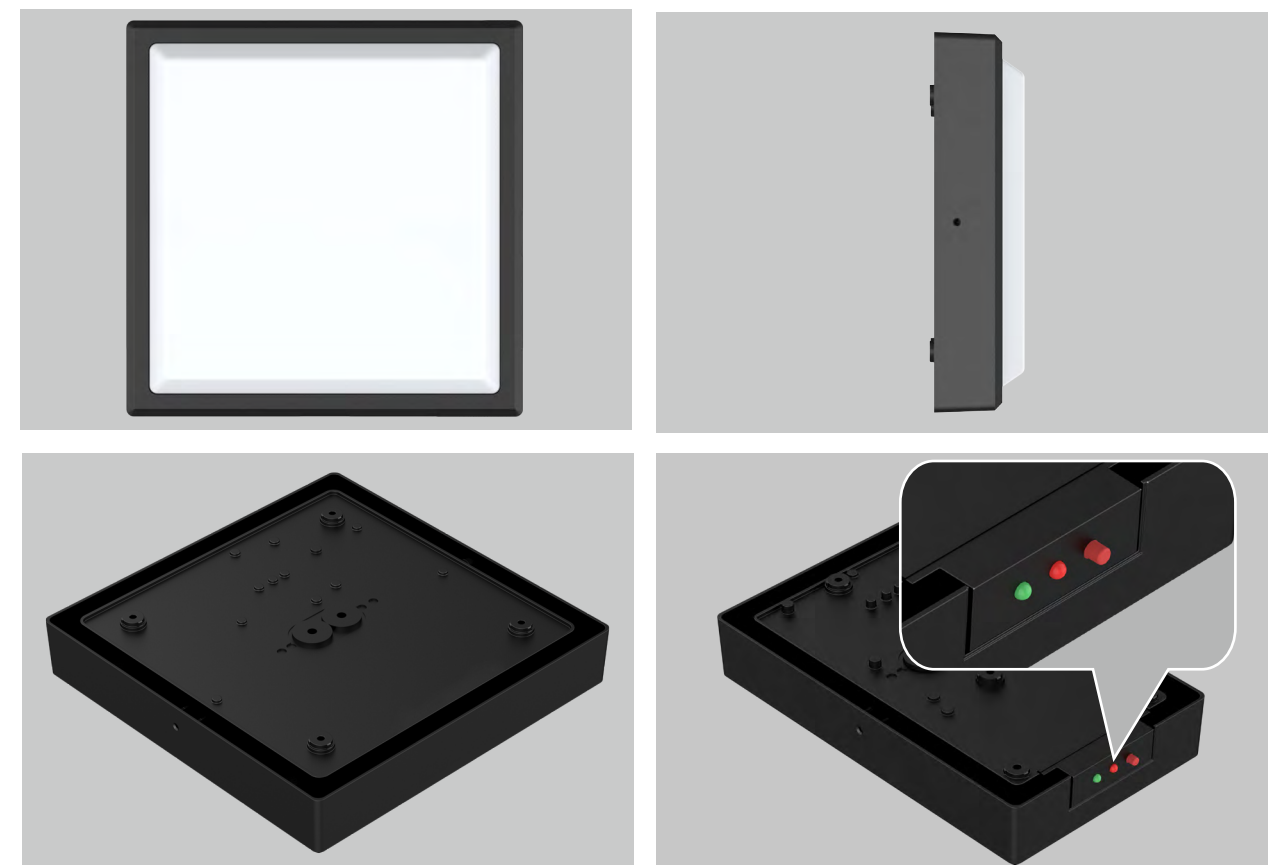
This range has three frames for options, which sit on top of the PC diffuser. The diffuser itself has a high transmittance but uniform balance across the diffuser. It also has a IK10 rating. Available in different colour temperatures from 3000k to 5700k and is also dimmable. Integral emergency with easy to view led indicators. Easy to install: labour saving with fast connector. High waterproof level with multiple functions.

## Features

- Vandal-proof design
- Four types of design: Rectangle, Square, Rectangle(cross), Square(cross)
- High protection level, IK10, IP65.
- High lumen efficiency, 120lm/W.
- Interchangeable CCT(3000K+4000K+5700K)with slide switch.
- Function: Adjustable sensor, interchangeable CCT, emergency.
- Dimming way: Triac dimming, DALI dimming, 0-10V dimming.

## Application Areas

Corridor, Backyard, Front yard, hotel, house Etc...

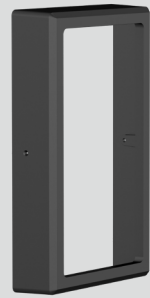




# DIY Design



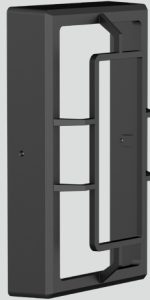
LT104R



Rectangle



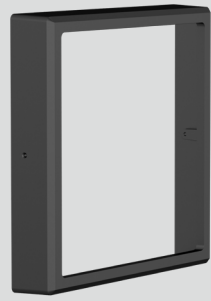
LT104RA



Cross



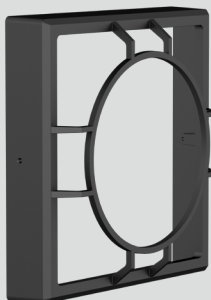
LT104RB



square



LT104SA



Cross



LT104SB

## Measurement

Trim Type	Code	Dimension(mm)			Product Weight (Kg)		Package weight (Kg)		Carton Size(cm)	Qty/CTN	20GP (pcs)	40HQ (pcs)
		A	B	C	N.W/PC	G.W/PC	N.W/CTN	G.W/CTN				
	AL104RA-10	250	150	63	0.9	1.06	9	11.6	50*30*37.5	10	5040	11510
	AL104RB-10	250	150	69	0.97	1.13	11.3	12.3	50*30*37.5	10	5040	11510
	AL104SA-10	250	250	63	1.33	1.5	15	16.2	59*54*29.5	10	2910	7280
	AL104SB-10	250	250	69	1.4	1.6	16	17.2	59*54*29.5	10	2910	7280

## Technical Data Sheet

Code No.	LT104R-10-15W / LT104S-10-15W			
Dimension(mm)	250*150*63MM	250*150*69MM	250*250*63MM	250*250*69MM
Watt(W)	15W			
Rated Input Voltage(V)	AC230V			
Input Voltage(V)	AC200-240V			
Light Source	SMD2835 0.2W			
SDCM	<6			
CCT(K)	1-CCT: 3000K/4000K/5000K/5700K    3-CCT: 3000K + 4000K + 5700K			
CCT Selection DIP Switch	YES			
Luminous Flux (lm) ±5%				
1-CCT	Non-DIM	1390-1650	1125-1350	1500-1780
	DIM	1350-1580	1080-1280	1420-1720
3-CCT	Non-DIM	1390-1650	1125-1350	1500-1780
	DIM	1350-1580	1080-1280	1420-1720
CRI	≥80			
Beam Angle (°)	120°			
LED Driver	Driver built-in			
Dimming Option	Triac / DALI / 0-10V			
Sensor	YES			
Emergency Kits	YES			
Electrical Class	Class I			
Ingress Protection (IP Rating)	IP65			
Impact Resistance (IK Rating)	IK10			
Product Finishing(Base)	BLACK RAL 9005+WHITE RAL 9016			
Materials of Optics	Polycarbonate opal diffuser			
Materials of Housing	Die-casting			
Lifetime (hr)	50,000hours at 25°C			
Glow wire test (°C)	850°C			
Operating Temp. (°C)	-20°C ~45°C			
Storage Temp. (°C)	-20°C ~65°C			
Installation	Wall mount / Surface mount			



## Driver Datasheet (Non-dimmable )

Total load wattage		15W
Output	Output Voltage range	DC60-75V
	Rated output current	180mA±5%
	Line Regulation	±5%
	Setup, Rise Time	<0.5S
	Flickering Index	≤3%(NO RISK)
Input	Input Voltage	AC200-240V
	Rated Input Voltage(V)	AC230V
	Frequency	50/60Hz
	Input Current	0.09A
	Rated Input Current	0.08A
	Power Factor	≥0.9
	THD	-
	Efficiency	≥86%
	No load wattage	≤0.5W
Protection	Short circuit protection	Pass
	Over voltage protection	Pass
	Over temperature protection	Pass
Safety &EMC	Withstand voltage	I/P-O/P:3.75KVac, <5mA 60S
	Isolation Resistance	I/P-O/P: 500VDC, ≥100M Ω
	Surge	IEC61000-4-5(L-N:0.5KV,)
	EMC Emission	EN55015, EN61000-3-2
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61547

## Driver Datasheet (0-10V Dimmable )

Total load wattage		15W
Output	Output Voltage range	30-38V
	Rated output current	400mA
	Line Regulation	±5%
	Setup, Rise Time	≤0.5S
	Flickering Index	<10% (NO RISK)
	Input	Input Voltage
Rated Input Voltage(V)		AC200-240V
Frequency		50/60Hz
Input Current		0.1A
Rated Input Current		0.09A
Power Factor		0.9
THD		<20%
Efficiency		84%
No load wattage		≤1W
Protection	Short circuit protection	Pass
	Over voltage protection	Pass
	Over temperature protection	Pass
Safety &EMC	Withstand voltage	I/P-O/P:3.75KVac, <5mA 60S
	Isolation Resistance	I/P-O/P: 500VDC, ≥100M Ω
	Surge	IEC61000-4-5(L-N:0.5KV,)
	EMC Emission	EN55015, EN61000-3-2
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61547

## Driver Datasheet (Triac Dimmable )

Total load wattage		15W
Output	Output Voltage range	DC60-75V
	Rated output current	180mA
	Line Regulation	±5%
	Setup, Rise Time	≤0.5S
	Flickering Index	≤7%(LOW RISK)
Input	Input Voltage	AC200-240V
	Rated Input Voltage(V)	AC230V
	Frequency	50Hz
	Input Current	≤0.09A
	Rated Input Current	0.08A
	Power Factor	0.9
	THD	-
	Efficiency	> 84%
	No load wattage	≤1W
Protection	Short circuit protection	Pass
	Over voltage protection	Pass
	Over temperature protection	Pass
Safety &EMC	Withstand voltage	-
	Isolation Resistance	-
	Surge	IEC61000-4-5(L-N:0.5KV,)
	EMC Emission	EN55015, EN61000-3-2
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61547

## Driver Datasheet (DALI Dimmable )

Total load wattage		15W
Output	Output Voltage range	30-38V
	Rated output current	400mA
	Line Regulation	±5%
	Setup, Rise Time	≤0.5S
	Flickering Index	<10% (NO RISK)
	Input	Input Voltage
Rated Input Voltage(V)		AC200-240V
Frequency		50/60HZ
Input Current		0.1A
Rated Input Current		0.09A
Power Factor		≥0.9
THD		≤20%
Efficiency		84%
No load wattage		≤1W
Protection	Short circuit protection	Pass
	Over voltage protection	Pass
	Over temperature protection	Pass
Safety &EMC	Withstand voltage	I/P-O/P:3.75KVac, <5mA 60S
	Isolation Resistance	I/P-O/P: 500VDC, ≥100M Ω
	Surge	IEC61000-4-5(L-N:0.5KV,)
	EMC Emission	EN55015, EN61000-3-2
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61547

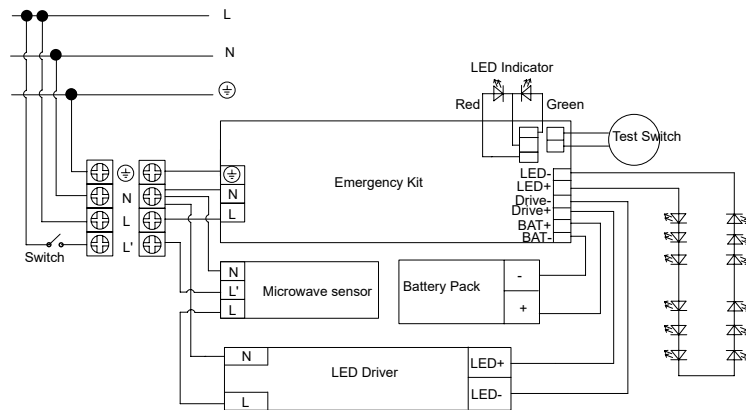
# Driver Datasheet (Sensor)

Sensor datasheet	
Operating Voltage	220-240VAC 50/60Hz
Power consumption	1.5W±0.5W
Microwave frequency	5.8GHz±75MHz, ISM wave band
Transmission power	<0.5mW
Detection angle	140°
Detection Area	4-7M 100%/75%/50%/25% Changeable
Hold time	5S/30S/90S/5Min/20Min/30Min Changeable
Daylight sensor	2lux/10lux/30lux/50lux/Disable Changeable
Stand-by DIM Level	-
Stand-by Period	-
Dimming Range	-
Microwave ON/OFF function	-
Installation Height	Recommended Installation Height: Wall mounted height 1.8m. Ceiling mounted height 3m.
Operating temperature(°C)	-20°C ~60°C

## Emergency Kits

Power	3W
Rated Input Voltage(V)	AC230V
Frequency	50/60Hz
Input Voltage	AC200-240V
Total load wattage	3W±0.5W
Rated Input Current	≤0.03A
Battery	6.4V 1500mAh (LiFePO4)
Lifetime	Over 2000 cycles
Battery duration	≥3hrs
Charge Period	≅ 24hrs
Emergency switching time	≅ 1S

## Wiring Diagram:



## Daylight & Microwave Sensor:

### Sensor Setting:

Detection area		
1	2	
ON	ON	100%
-	ON	75%
ON	-	50%
-	-	25%

### Detection area:

Detection area can be reduced by selecting the combination on the DIP switches to fit precisely each application.

Notice 1: The test is based on a height of 3m, the radius is the ground detect distance, which can be selected through the slide switch.

Notice 2: The detective range is measured by human body whose stature is around 1.6-1.7M with medium size and traveling speed is around 1.0-1.5M per second. If the stature, bodily form and traveling speed are changed, then the detective range will be changed accordingly.

Notice 3: Test result will be highly influenced by test environment, the more open environment, the closer detect distance; the narrower environment, the longer detect distance. The detector may do self-excitation in a narrow environment.

Hold time			
3	4	5	
ON	ON	ON	5S
-	ON	ON	30S
ON	-	ON	90S
-	-	ON	5min
ON	ON	-	20min
-	-	-	30min

Daylight sensor			
6	7	8	
ON	ON	ON	2Lux
ON	ON	-	10Lux
-	ON	-	30Lux
ON	-	-	50Lux
-	-	-	Disable

### Hold time:

Refers to the time period the lamp remains at 100% illumination after no motion detected.

Notice 1: The hold time can be selected by the slide switch.

The hold time counting should be started after the sensor is powered on and initialized.

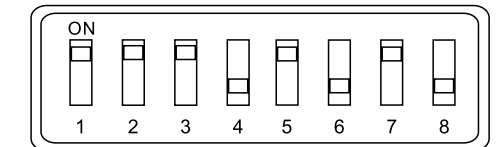
### Daylight sensor:

The sensor can be set to only allow the lamp to illuminate below a defined ambient brightness threshold. When set to Disable mode, the daylight sensor will switch on the lamp when motion is detected regardless of ambient light level.

Notice 1: The light threshold can be selected through the slide switch, it may cause a large deviation in different lamps.

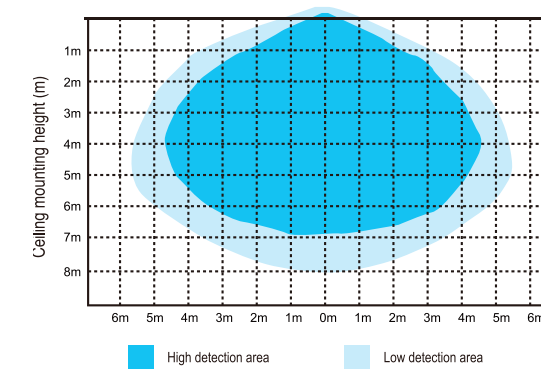
### Factory settings:

Detection Area	Hold Time	Daylight Sensor
100%	90S	30Lux

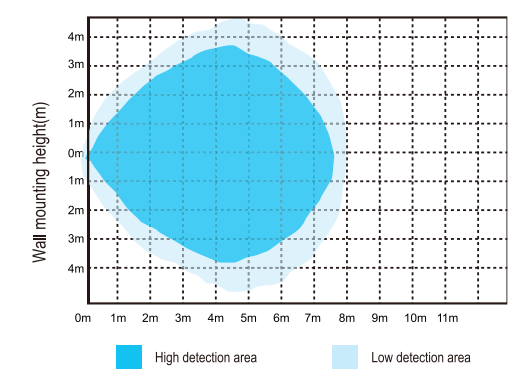


## Induction Range

Ceiling Mounting pattern(Unit: m )



Wall Mounting pattern(Unit: m )



## Installation Procedure

### WARNING

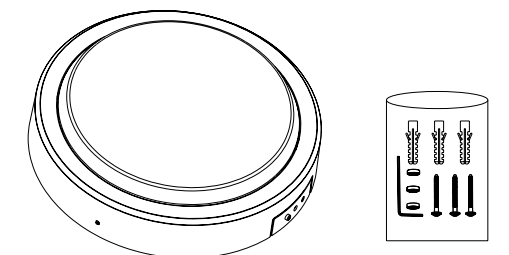
1. Switch off before installation / maintenance.
2. Switch on only after complete installation and examination of the circuit.
3. Professional electrician for installation and maintenance only.

Turn Off power supply before starting any installation. Read instructions & check you have all the tools & accessories to complete the installation correctly.

### How to install

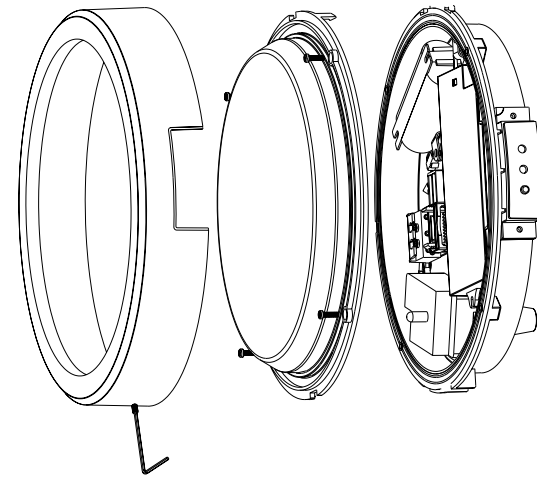
#### Step 1

Take out the lamp and accessory.



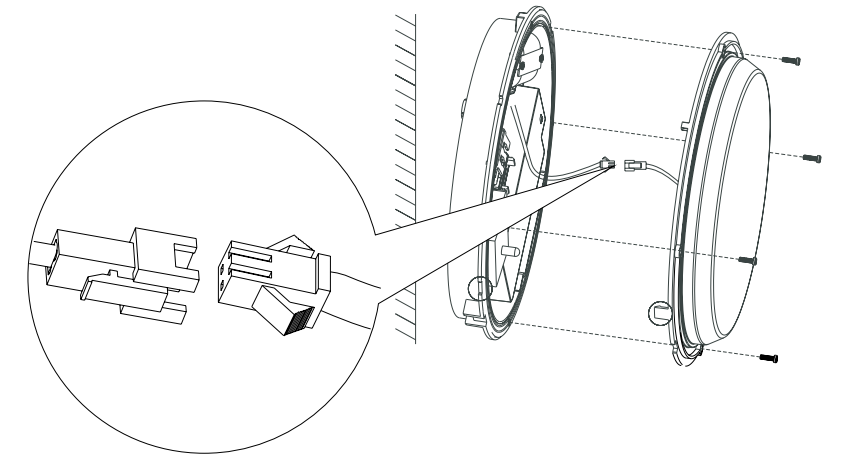
**Step 2**

Separate frame and lamp shade.



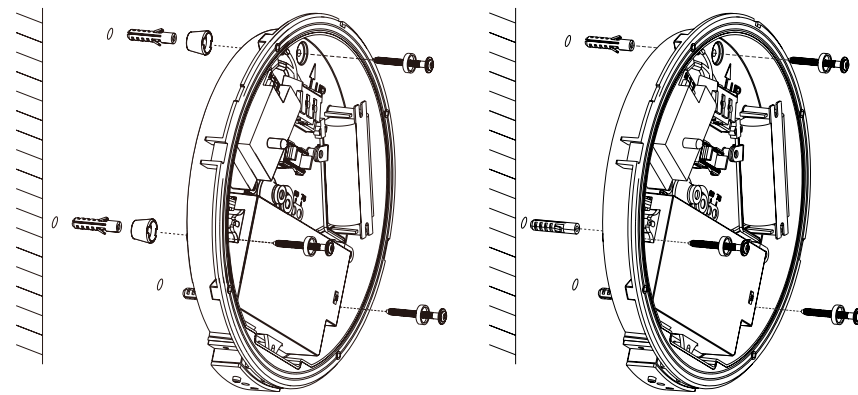
**Step 5**

Connect the DC plugs, put back the cover to the back plate and fix it by screws.



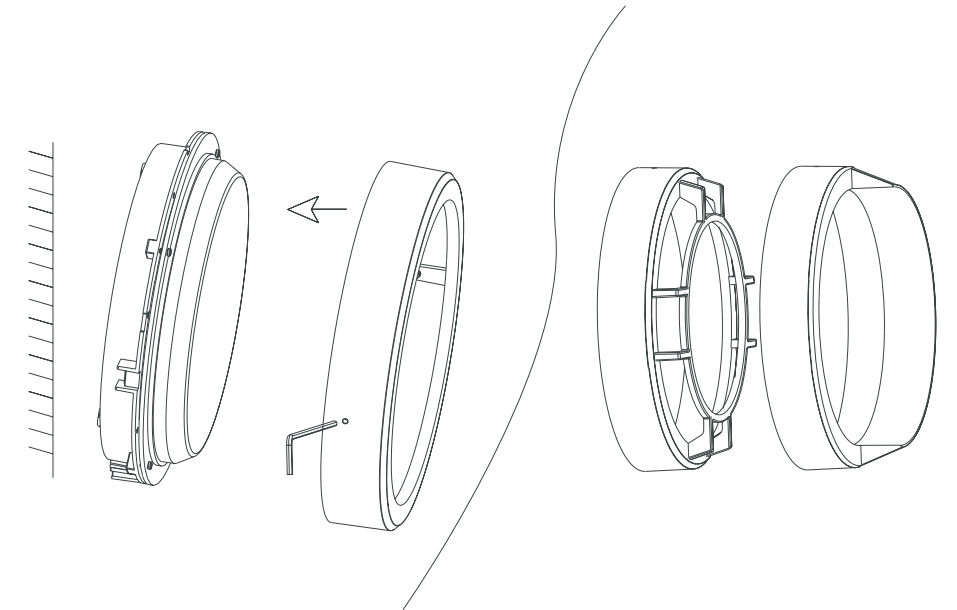
**Step 3**

Fix the back housing on the wall or ceiling by screws. Drill holes in the ceiling, put plastic anchor into the hole, put the silicone pad into the screw, then aim the base wad at the lamp base hole, fix the base wad by screws.



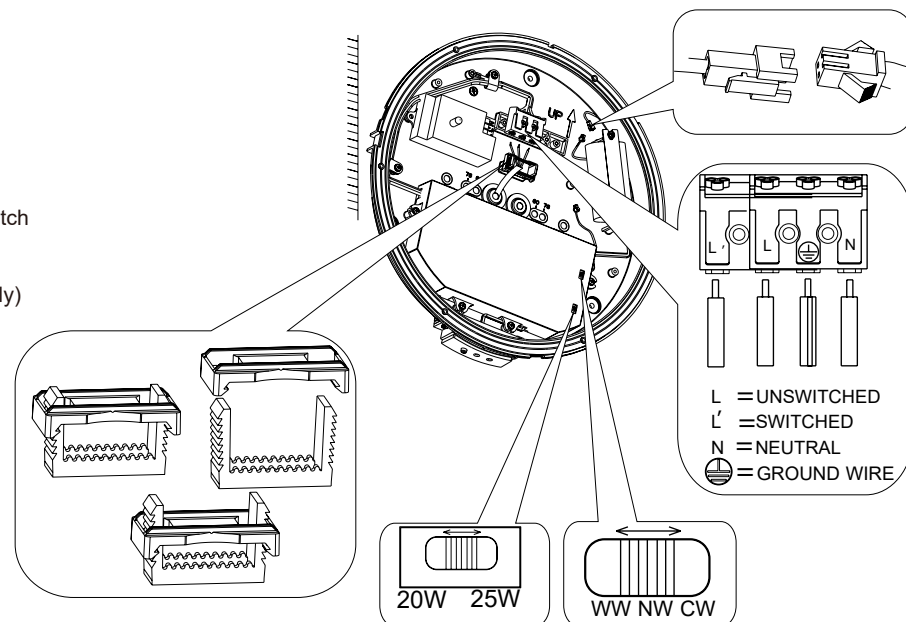
**Step 6**

Buckle the frame back and fix it by proper tools



**Step 4**

- a. Connect the plugs between the battery and driver if with Emergency function.
- b. Choose the color temperature with DIP switch if it's the color changeable version.
- c. Choose the power with DIP switch if it's the wattage changeable version.(for 12 inch only)
- d. Connect the AC wires to the block.



**Step 7**

Installation finished, turn on the switch.

