

Entry / ECO

Standard / STD

Professional / PRO

ODM & OEM

Intelligent / INT



LED Ceiling Light

AL96 Series



0-10V Dimmable



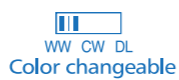
DALI Dimmable



Triac Dimmable



Adjustable power



Color changeable



Emergency



Sensor





Introduction

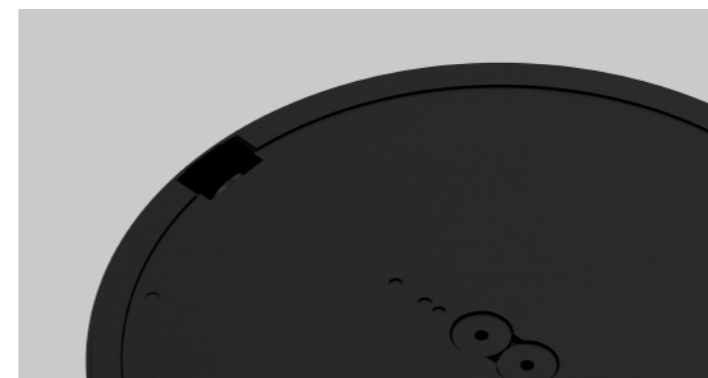
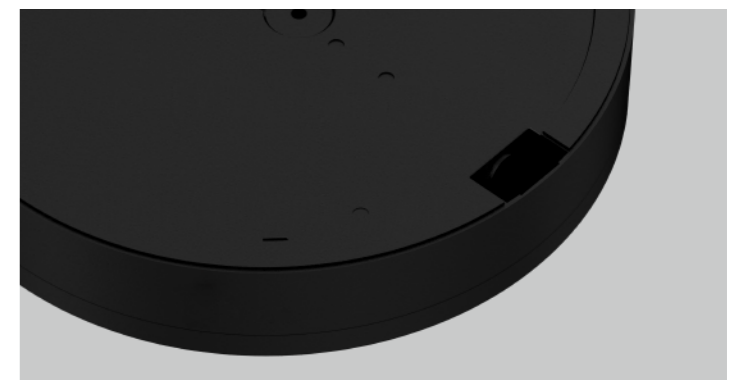
AL96 is a new design ceiling light. Adopt high lumen SMD LED and lighter weight fire-rated material to ensure better heat resistance and corrosion resistance. Wall mounted and surface mounted available. The base and shade are detachable which make easier maintenance and installation.

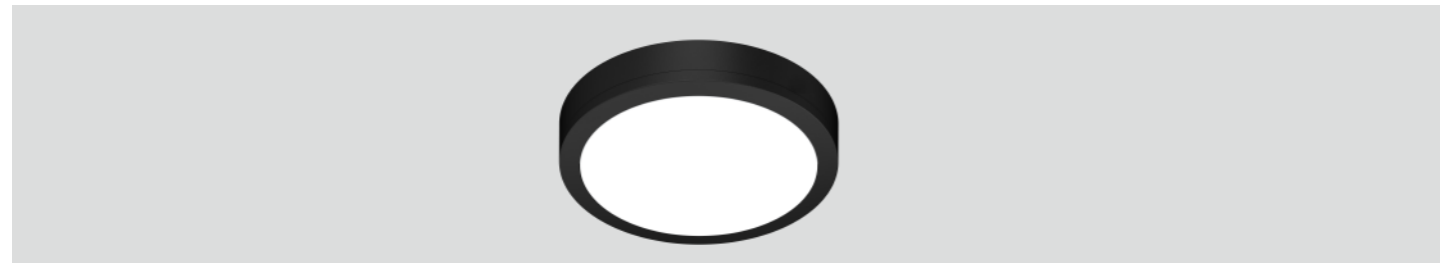
Features

- High lumen efficiency, 100lm/W.
- Interchangeable CCT(3000/4000/5700k) with slide switch.
- Interchangeable wattage for round shape only.
- IP65, IK10.
- Triac/ DALI/ 0-10V Dimmable.
- Multiple functions : adjustable sensor, Emergency, adjustable power.

Application Areas

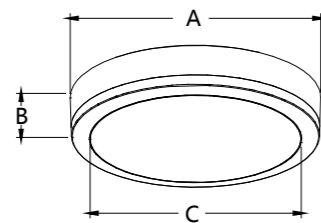
It is designed for general lighting applications in office, supermarket, shop, school, hotel, etc. It is also widely used for public areas, such as stairway, lobby, reception, corridors etc.





Technical Data Sheet (1)

Code No.	8"		11"			14"		
	AL96-8-12W	AL96-11-12W	AL96-11-18W	AL96-11-25W	AL96-14-25W	AL96-14-30W		
Dimension(mm)	Ø200*60		Ø275*60			Ø350*60		
Cutout (mm)	-		-			-		
Watt(W)	12W	12W	18W	25W	25W	30W		
Rated Input Voltage(V)	AC100-240V AC230V							
Input Voltage(V)	AC85-265V AC200-240V							
LED Module Input	-							
Light Source	SMD							
SDCM	<6 (@3000K 4000K 5000K)							
CCT(K)	1-CCT: 3000K/4000K/5000K/5700K 3-CCT: 3000K + 4000K + 5700K							
CCT Selection DIP Switch	YES							
Luminous Flux (lm) ±5%	Non-DIM	1-CCT	1000~1200	1100~1300	1650~1950	2300~2580	2400~2800	2660~3100
	DIM		950~1150	1050~1250	1600~1900	2250~2550	2350~2750	2600~3000
	Non-DIM	3-CCT	1000~1250	1100~1350	1650~2000	2300~2650	2400~2850	2660~3150
	DIM		950~1200	1050~1300	1600~1950	2250~2600	2350~2800	2600~3000
CRI	≥80							
Beam Angle (°)	110°							
UGR	-							
LED Driver	Built-in							
Dimming Option	Triac/ DALI/ 0-10V							
Sensor	adjustable sensor							
Emergency Kits	YES							
Electrical Class	Class II							
Ingress Protection (IP Rating)	IP65							
Impact Resistance (IK Rating)	IK10							
Product Finishing(Base)	BLACK RAL 9005 / WHITE RAL9016							
Materials of Optics	PC							
Materials of Housing	PC							
Lifetime (hr)	50,000h							
Glow wire test (°C)	750°C (Cover) 850°C (Lamp Base)							
Operating Temp. (°C)	-20°C ~45°C							
Storage Temp. (°C)	-20°C ~65°C							
Installation	Surface mount							



Measurement

Code	Dimension(mm)				Size(mm)	Product Weight (Kg)		Package weight (Kg)		Carton Size(cm)	Qty/CTN	20GP (pcs)	40HQ (pcs)
	A	B	C	D		N.W/PC	G.W/PC	N.W/CTN	G.W/CTN				
8"	Ø200	60	159	-	Ø200*60	0.48	0.58	5.76	8	43.5*43.5*23	12PCS	7800	19440
11"	Ø275	60	231	-	Ø275*60	0.85	0.98	10.2	13	58.5*44*30	12PCS	4728	11016
14"	Ø350	60	306	-	Ø350*60	1.38	1.54	8.3	10.5	44*37.5*37.5	6PCS	2940	7104

Technical Data Sheet (2)

Code No.	AL96-11-23W-AC3			AL96-14-28W-AC3		
Dimension(mm)	Ø275*60			Ø350*60		
Watt(W)	9W/14W/18W/23W			14W/18W/23W/28W		
Rated Input Voltage(V)	AC230V					
Input Voltage(V)	AC200-240V					
Light Source	SMD					
SDCM	<6 (@3000K 4000K 5000K)					
CCT(K)	1-CCT: 3000K/4000K/5000K/5700K 3-CCT: 3000K + 4000K + 5700K					
CCT Selection DIP Switch	YES					
Luminous Flux (lm) ±5%	Non-DIM	1-CCT	-	-		
	DIM		-	-		
	Non-DIM	3-CCT	9W: 900~1100 14W: 1350~1600 18W: 1650~1950 23W: 2100~2530	14W: 1350~1600 18W: 1700~2050 23W: 2250~2680 28W: 2600~3000		
	DIM		-	-		
CRI	≥80					
Beam Angle (°)	110°					
UGR	-					
LED Driver	Built-in					
Dimming Option	-					
Sensor	adjustable sensor					
Emergency Kits	YES					
Electrical Class	Class II					
Ingress Protection (IP Rating)	IP65					
Impact Resistance (IK Rating)	IK10					
Product Finishing(Base)	BLACK RAL 9005 / WHITE RAL9016					
Materials of Optics	PC					
Materials of Housing	PC					
Lifetime (hr)	50,000h					
Glow wire test (°C)	750°C (Cover) 850°C (Lamp Base)					
Operating Temp. (°C)	-20°C ~45°C					
Storage Temp. (°C)	-20°C ~65°C					
Installation	Surface mount					

Driver Datasheet (Non-dimmable)

Total load wattage		12W	18W	25W	30W
Output	Output Voltage range	DC60-80V	DC60-80V	DC60-75V	DC60-75V
	Rated output current	150mA	230mA	325mA	380mA
	Line Regulation	±5%			
	Setup, Rise Time	<1S			
	Flickering Index	-			
Input	Input Voltage	AC85-265V			
	Rated Input Voltage(V)	AC100-240V			
	Frequency	50/60Hz			
	Input Current	≤0.16A	≤0.24A	≤0.33A	≤0.4A
	Rated Input Current	≤0.14A	≤0.2A	≤0.28A	≤0.34A
	Power Factor	0.9			
	THD	-	<20% @230V		
	Efficiency	≥88%			
	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)		IEC61000-4-5(L-N:1KV)	
	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		12W	18W	25W	30W
Output	Output Voltage range	DC65-75V	DC65-75V	DC65-75V	DC65-75V
	Rated output current	150mA	230mA	320mA	390mA
	Line Regulation	±5%			
	Setup, Rise Time	<1S			
	Flickering Index	-			
Input	Input Voltage	AC200-240V			
	Rated Input Voltage(V)	AC230V			
	Frequency	50Hz			
	Input Current	≤0.07A	≤0.1A	≤0.14A	≤0.17A
	Rated Input Current	≤0.06A	≤0.09A	≤0.13A	≤0.15A
	Power Factor	0.9			
	THD	-	<20% @230V		
	Efficiency	≥83%		≥86%	
	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)		IEC61000-4-5(L-N:1KV)	
	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		18W	25W
Output	Output Voltage range	DC27-40V	DC27-40V
	Rated output current	400mA	600mA
	Line Regulation	±5%	
	Setup, Rise Time	<1S	
	Flickering Index	-	
Input	Input Voltage	AC200-240V	
	Rated Input Voltage(V)	AC230V	
	Frequency	50Hz	
	Input Current	≤0.1A	≤0.14A
	Rated Input Current	0.09A	0.13A
	Power Factor	0.9	
	THD	<20% @230V	
	Efficiency	≥81%	
	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:1KV)	
	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		18W	25W
Output	Output Voltage range	DC27-40V	DC27-40V
	Rated output current	400mA	600mA
	Line Regulation	±5%	
	Setup, Rise Time	<1S	
	Flickering Index	-	
Input	Input Voltage	AC200-240V	
	Rated Input Voltage(V)	AC230V	
	Frequency	50Hz	
	Input Current	≤0.1A	≤0.14A
	Rated Input Current	0.09A	0.13A
	Power Factor	0.9	
	THD	<20% @230V	
	Efficiency	≥81%	
	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:1KV)	
	EMC Emission	EN55015, EN61000-3-2	
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61547	

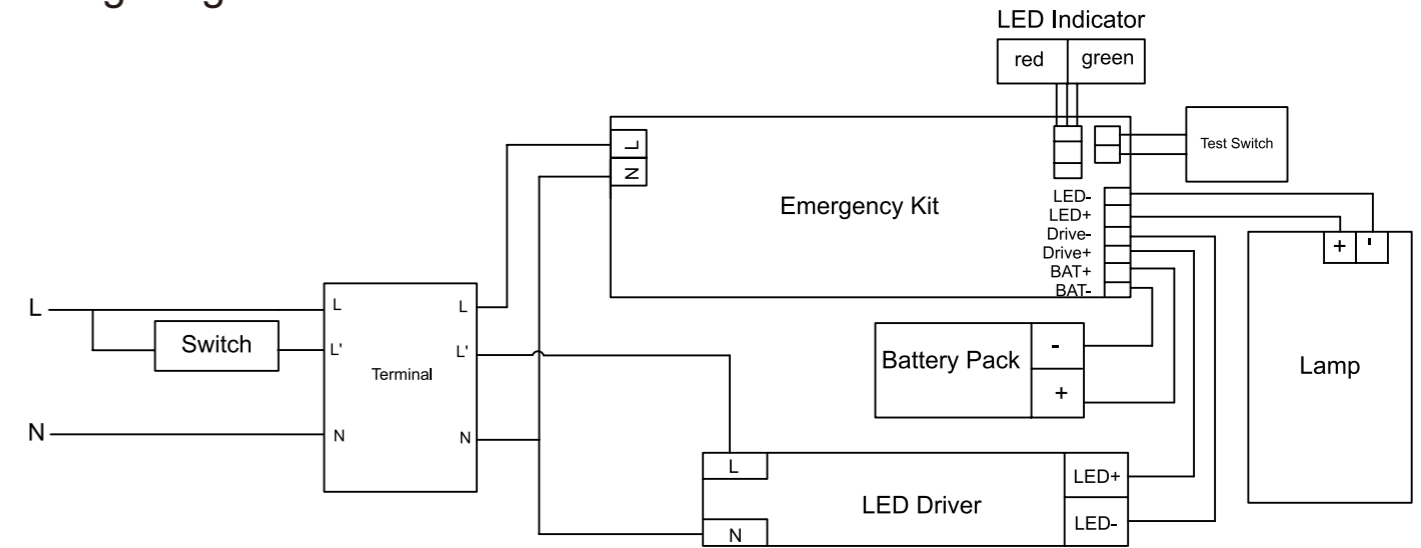
Driver Datasheet (Adjustable power)

Total load wattage		9W/14W/18W/23W	14W/18W/24W/28W
Output	Output Voltage range	DC23-40V	
	Rated output current	230/350/450/580mA	350/450/600/700mA
	Line Regulation	±5%	
	Setup, Rise Time	<1S	
	Flickering Index	10%	
Input	Input Voltage	AC200-240V	
	Rated Input Voltage(V)	AC230V	
	Frequency	50/60Hz	
	Input Current	≤0.14A	≤0.17A
	Rated Input Current	0.13A	0.16A
	Power Factor	0.9	
	THD	<20% @230V	
	Efficiency	≥83%	
	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:1KV)	
	EMC Emission	EN55015, EN61000-3-2	
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61547	

Driver Datasheet (Emergency)

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:



Instructions for automatic test option

- Once the unit is powered up it will automatically initiate a self test and diagnostics as follows:
 - Every 4seconds: Check for battery disconnection, charger board fault, lamp failure and transformer failure.
 - Every month: Perform a 3minute duration test.
 - Every year: Perform a 1 Hour or 3 Hours duration test.
 All test functions are factory preset and do not need field adjustment.

2. Dual Colour Indicator LED Status Mesnings

- Green Solid On Ready/Normal Operation
- Red Requires Service

•	One flash, 4 second pause	Battery not connected
• •	Two flashes, 4 second pause	Battery short or low battery voltage
• • •	Three flashes, 4 second pause	Charger board fault
• • • •	Four flashes, 4 second pause	Transformer fault
• • • • •	Five flashes, 4 second pause	LED lamp fault

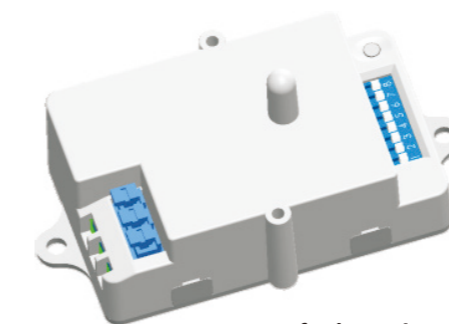
NOTE: After repairing a service fault, press and hold the test button for 2 seconds to reset the flashing indicator light to green.

3. Manual Test

Press test button once	30 second duration test
Press test button twice within 2 seconds	3 minute duration test
Press test button 3 times within 2 seconds	30 minutes duration test
Press test button 4 times within 2 seconds	1 or 3 hours duration test

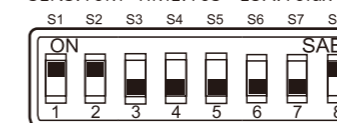
Note: DALI & 0-10V driver specification, please refer to individual driver datasheet.

Sensor Setting



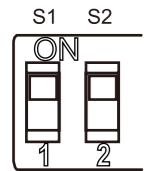
Default setting

SENS:10M TIME:10S LUX:10lux



SK605B	
Operating voltage	220~240Vac, 50/60Hz
Transmission power	<0.2mW
Rated load	1200W/5A, Max, tungsten (cosφ=1) 600W/2.5A, Max, fluorescent (cosφ=0.5)
HF system	5.8GHz CW electric wave, ISM band
Detection angle	360°
Detection range	2m/5m/8m/10m (radii) (adjustable)
Time setting	10sec±3sec/1min±10sec/5min±30sec/ 10min±1min/15min±1min/20min±2min/ 25min±2min/30min±3min (adjustable)
Installation sit	indoors, ceiling mounting
Working temperature	-15°C ~ +70°C
Power consumption	approx. 0.5W

Detection range setting (sensitivity)



SENS: S1, S2

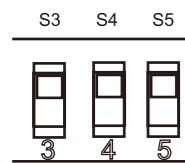
S1	S2	detection range
0	0	2m
0	1	5m
1	0	8m
1	1	10m

Detection range is the term used to describe the radii of the more or less circular detection zone produced on the ground after mounting the sensor loght at a height of 2.5m, pull switch to the ON position as "1", pull switch to the OFF position as "0", switch location and detection range of the corresponding table is as follows:

Note: the above detection range is gained if the detected person is between 1.6m~1.7m tall with middle figure and moves at a speed of 1.0~1.5m/sec. if person's stature, figure and moving speed change, the detection distance will also change.

ATTENTION: When use this product, please adjust the sensitivity to an appropriate position you need, please do not adjust the sensitivity to maximum, in case the product works abnormally because of wrong motion detection, including blowing leaves & curtains small animals, or even power grid & electrical equipment. All the above factors can lead to abnormal work. When the product does not work normally, please try to lower the sensitivity appropriately, and then test it.

Time setting



SENS: S3, S4, S5

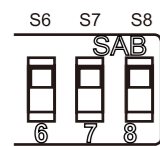
S3	S4	S5	TIME
0	0	0	10s
0	0	1	1min
0	1	0	5min
0	1	1	10min
1	0	0	15min
1	0	1	20min
1	1	0	25min
1	1	1	30min

The light can be set to stay ON for any period of time between approx. 10sec and a maximum of 30min. Any movement detected before this time elapse will re-start the timer. It is recommended to select the shortest time for adjusting the detection zone and for performing the walk test.

Pull switch to the ON position as "1", pull switch to the OFF position as "0", switch location and detection range of the corresponding table is as follows:

NOTE: after the light switches OFF, it takes approx. 4sec before it is able to start detecting movement again. The light will only switch on in response to movement once this period has elapsed.

Light-control setting



LUX: S6, S7, S8

S6	S7	S8	LUX
0	0	0	Disable
0	0	1	10LUX
0	1	0	20LUX
0	1	1	50LUX
1	0	0	100LUX
1	0	1	200LUX
1	1	0	300LUX
1	1	1	500LUX

The chosen light response threshold can be infinitely from approx. 10-500lux, pull switch to the ON position as "1", pull switch to the OFF position as "0", switch location and light-control of the corresponding table is as follows:

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.

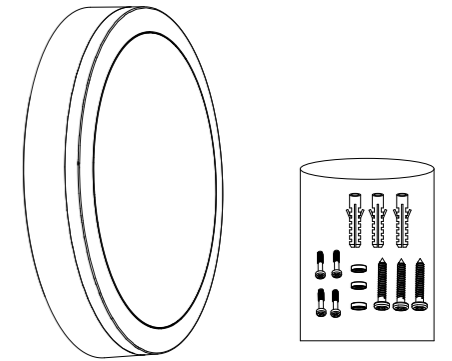


Turn Off power supply before starting any installation. Read instructions & check you have all the tools & accessories to complete the installation correctly.

How to install

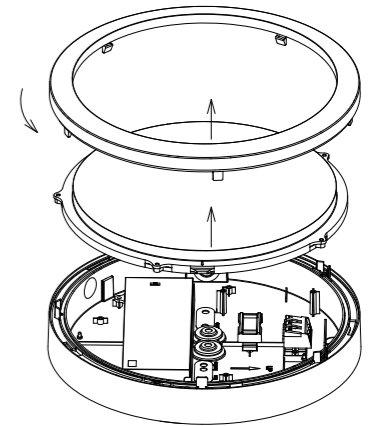
Step 1

Take out the lamp and accessory pack.



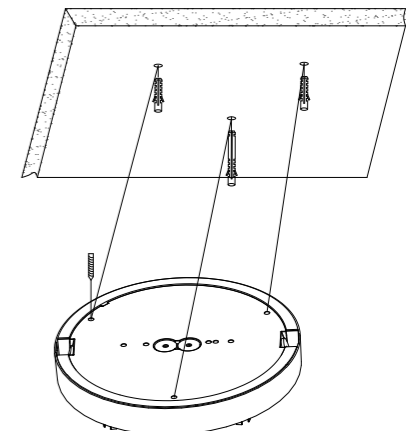
Step 2

Take the lamp cover and lamp shade apart by rotating it in anti-clockwise direction.



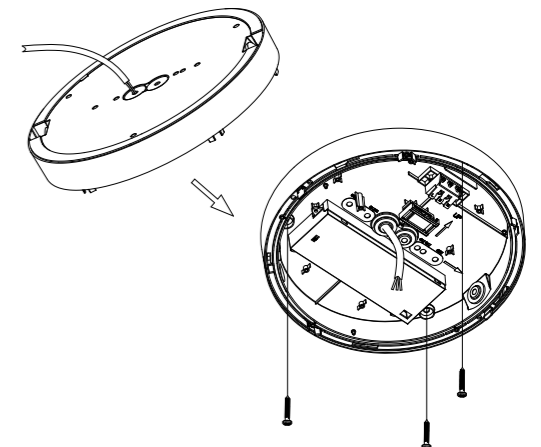
Step 3

Knock-in the plastic anchor into ceiling through the lamp base.

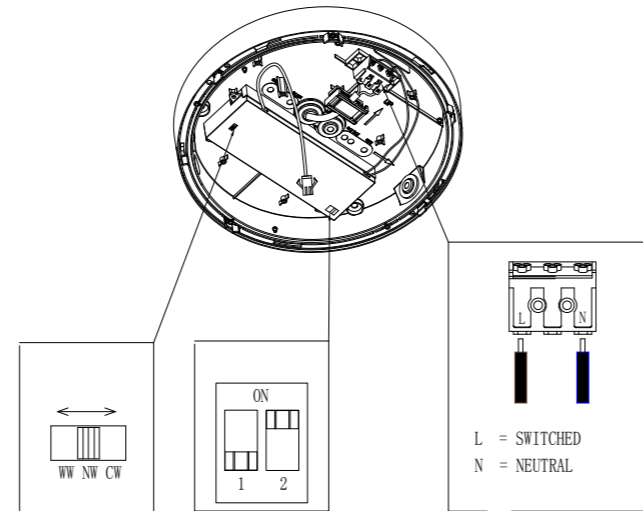


Step 4

Pass wires through the lamp, fix the lamp into ceiling by screws.

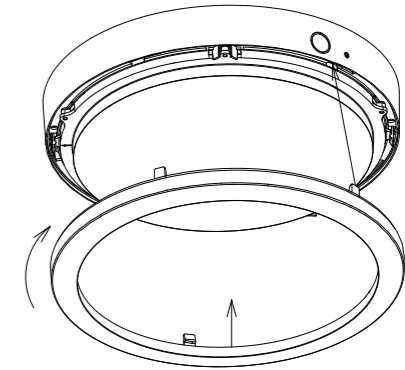


Step 5-1



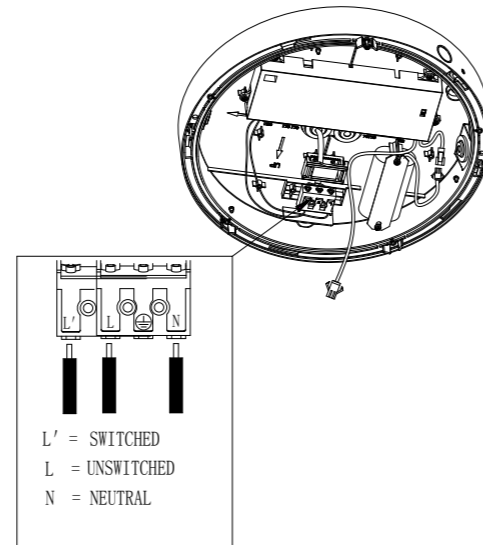
Feed the AC wire into terminal block respectively; If with 3CCT or changeable power function, choose preferred CCT or wattage by slide switch.

Step 7



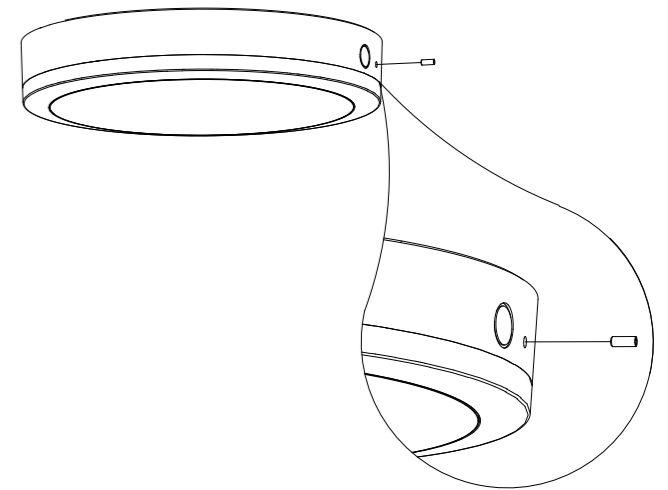
Align the hook of frame to lamp body holes, clip into the lamp body, and then rotate the frame clockwise until they match well, fix frame with screw.

Step 5-2



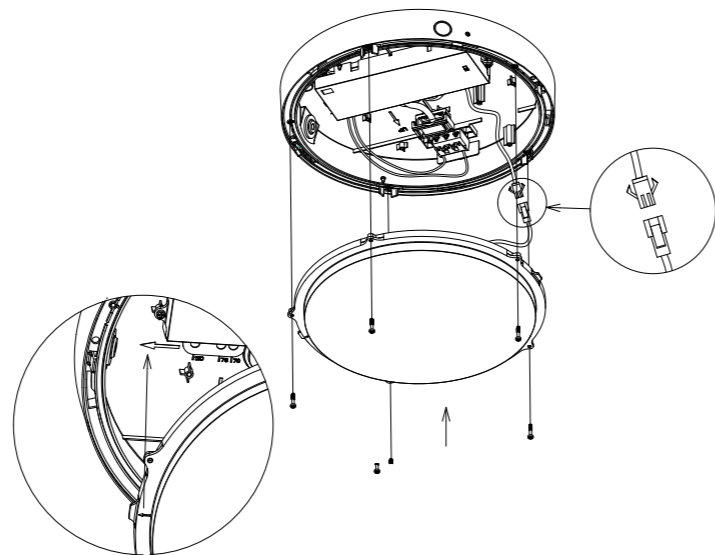
Emergency wire illustration: Connect emergency battery, feed AC wire into connector. Red wire to L', Brown wire to L, Blue wire to N.

Step 8



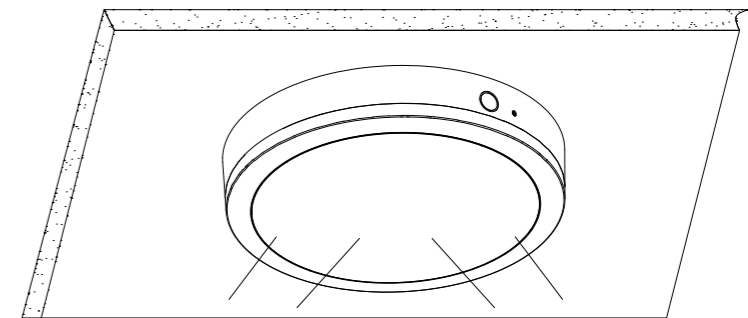
Lock the anti-thief screws on side.

Step 6

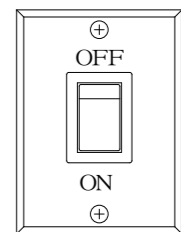


Plug the male and female connector. Align the arrow on the lamp cover with the lamp body arrow, fasten it and then fix the lamp shade with screws.

Step 9



Switch on.



2019
ECO
Specifications

2019
STD
Specifications

2019
PRO
Specifications

2019
ODM
Specifications

2019

INT
Intelligent