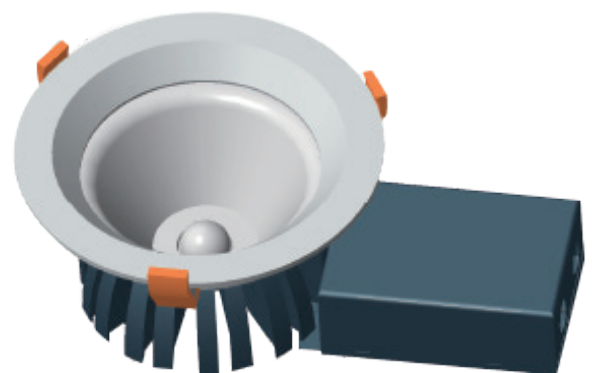




Thermal Solution LED Downlight IP54

CITIZEN COB

CITILED®
The Light Engine

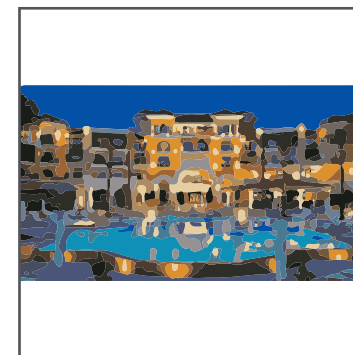


The A⁺ Group

www.the-agroup.com.hk



Thermal Solution Design For Standard & Dimmable Applications



Hotels



Clubs



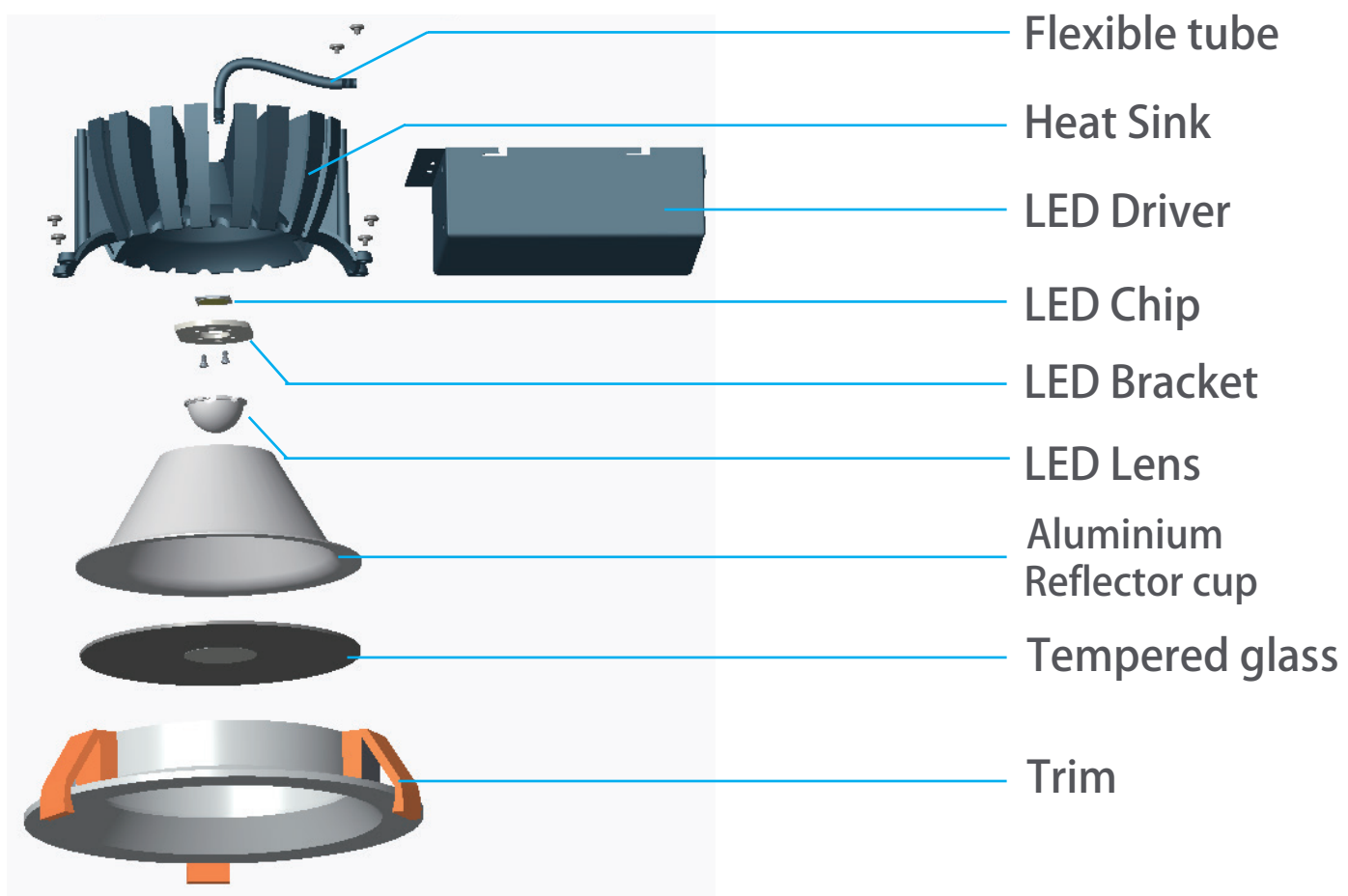
Villas



Shopping Malls



Product Explosion Diagram

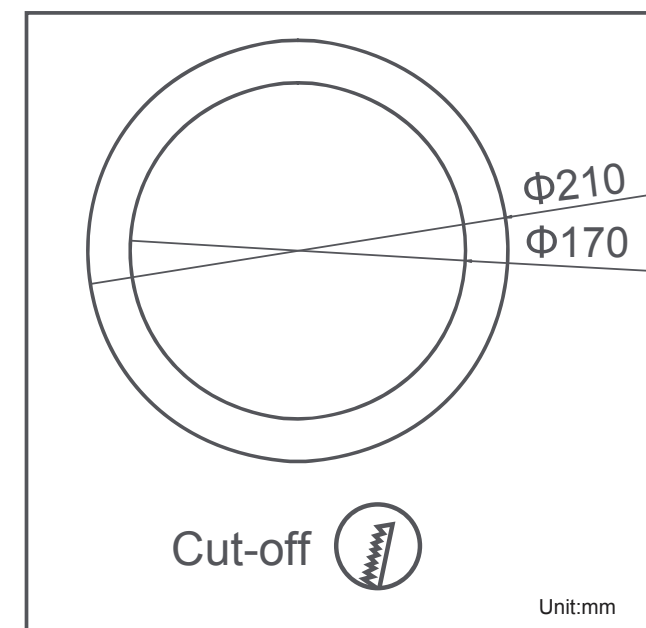


Replaceable and Changeable Parts

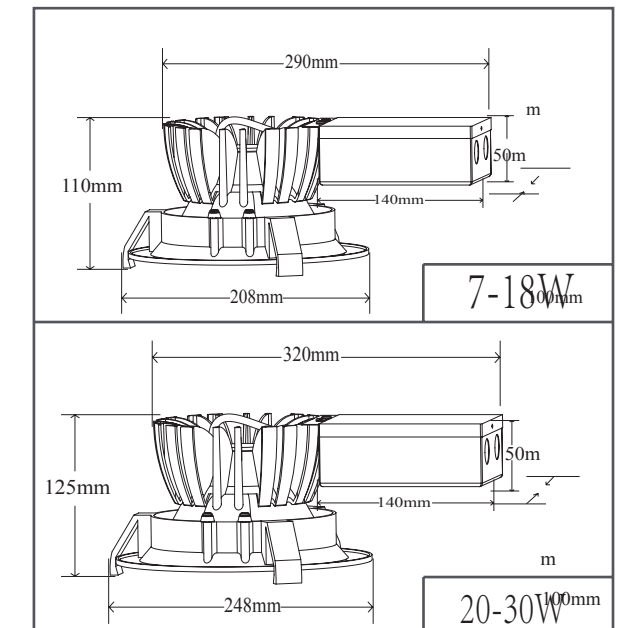
- (1) LED Chip
- (2) Reflector
- (3) LED Driver
- (4) Tempered Glass
- (5) Clips

Product Dimension

Cut Out Dimensions

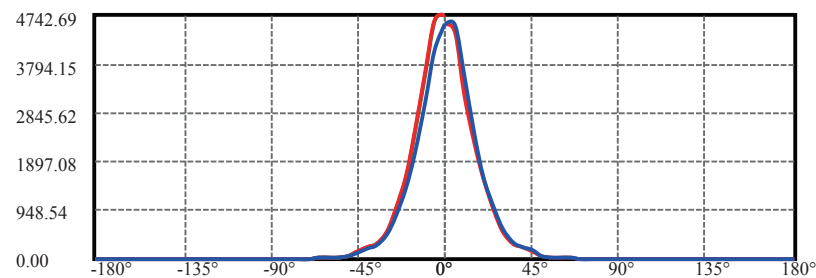
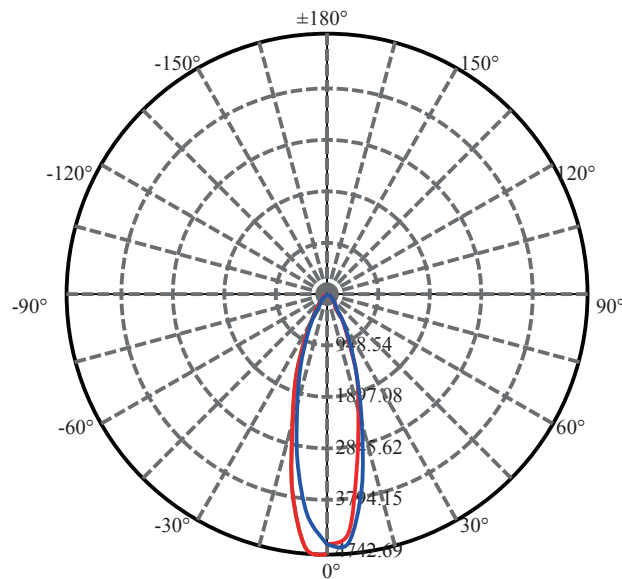


Product Size

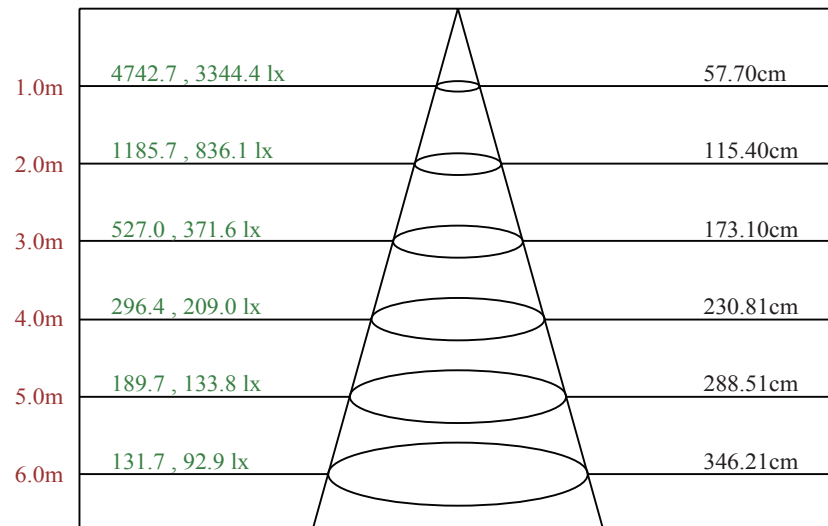


Luminance Intensity Distribution & Cone Lux Diagram

Light Distribution Curve APDWN-30-54-TM [Unit:cd]



C180(Max): — Field angle(10%Imax):C0/180Left:31.3 Right:30.9
 C0/C180: — :C90/270Left:30.0 Right:32.4
 C90/C270: — Beam Angle(50%Imax):C0/180Left:15.7 Right:14.3
 :C90/270Left:13.9 Right:15.8



Max , Ave Beam angle of C180plane32.18

LED Chip LM80 & TM21 Lifetime Prediction Curve

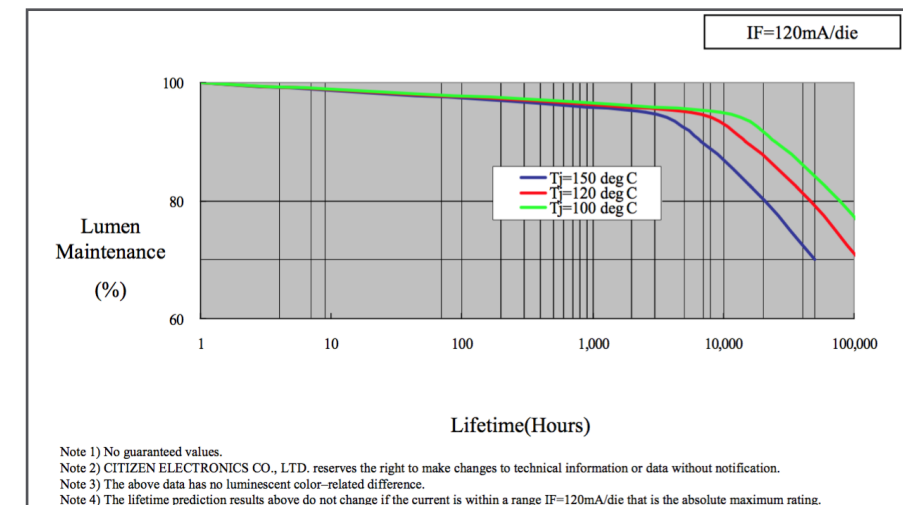
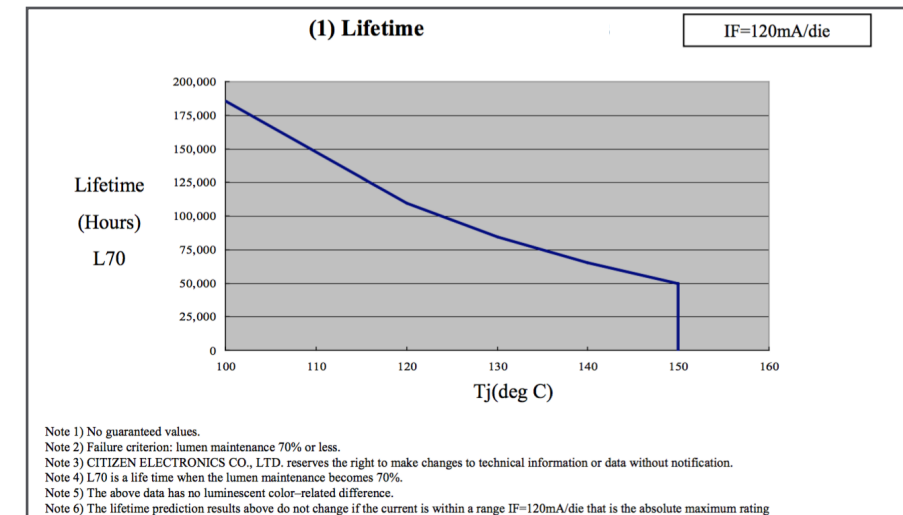




Table 1: Report at each LM-80 Test Condition						Table 2: Interpolation Report (projection based on <i>in-situ</i> temperature entered)	
Description of LED Light Source Tested (manufacturer, model, catalog number)						$T_{s,1}$ (°C)	85.00
Test Condition 1 - 55°C Case Temp						$T_{s,1}$ (K)	358.15
Sample size	20	Sample size	20	Sample size	20	α_1	9.637E-07
Number of failures	0	Number of failures	0	Number of failures	0	B_1	0.983
DUT drive current used in the test (mA)	2160	DUT drive current used in the test (mA)	2160	DUT drive current used in the test (mA)	2160	$T_{s,2}$ (°C)	105.00
Test duration (hours)	7,000	Test duration (hours)	7,000	Test duration (hours)	7,000	$T_{s,2}$ (K)	378.15
Test duration used for projection (hour to hour)	2,000 - 7,000	Test duration used for projection (hour to hour)	2,000 - 7,000	Test duration used for projection (hour to hour)	2,000 - 7,000	α_2	4.629E-06
Tested case temperature (°C)	55	Tested case temperature (°C)	85	Tested case temperature (°C)	105	B_2	0.986
α	1.914E-06	α	9.637E-07	α	4.629E-06	E_s/k_b	1.06E+04
B	0.993	B	0.983	B	0.986	A	7.417E+06
Calculated L70(7k)	183,000	Calculated L70(7k)	353,000	Calculated L70(7k)	74,000	B_0	0.985
Reported L70(7k)	>42000	Reported L70(7k)	>42000	Reported L70(7k)	>42000	$T_{s,j}$ (°C)	101.00
						$T_{s,j}$ (K)	374.15
						α	3.428E-06
						Projected L70(7k) at 101°C (hours)	100,000
						Reported L70(7k) at 101°C (hours)	>42000



Dimmable Ordering Data

Product							
Model No.	APDNDM-07-54	APDNDM-12-54	APDNDM-15-54	APDNDM-16-54	APDNDM-18-54	APDNDM-20-54	APDNDM-22-54
CCT	3000K/4000K/5000K						
Lumen Output	90-100lm/W						
Light Source	CITIZEN LED						
CRI	≥80						
Beam Angle	60°/90°/120°						
Power Requirement	AC100-277V 50/60Hz						
Power Consumption	7W	12W	15W	16W	18W	20W	22W
Housing Material	Aluminum / Die Cast Aluminum / Tempered Glass						
Operation Temperature	-20°C~ +40°C						
LED Lifespan	35000-50000 hrs						
Protection Rating	IP 54						
Dimming Option	0-10V / DMX512						
Product Standard							
Product Warranty	5-years limited warranty						

Product Certifications and Standards

Standard	Rohs	IP	EMC	LVD
Certificate Standards	IEC 62321	IEC 60529	EN-55015: 2013	EN-60598-1: 2015
			EN-61000-3-2: 2014	EN-60598-2-2: 2012
			EN-61000-3-3: 2013	EN-62031: 2008
			EN-61547: 2009	EN-62471: 2008
				EN-62493: 2010
				EN-61347-1: 2015
				EN-61347-2-13: 2014
				IEC-62384

Standard Ordering Data

Product							
Model No.	APDWN-07-54	APDWN-12-54	APDWN-15-54	APDWN-16-54	APDWN-18-54	APDWN-20-54	APDWN-22-54
CCT	3000K/4000K/5000K						
Lumen Output	90-100lm/W						
Light Source	CITIZEN LED						
CRI	≥80						
Beam Angle	60°/90°/120°						
Power Requirement	AC100-277V 50/60Hz						
Power Consumption	7W	12W	15W	16W	18W	20W	22W
Housing Material	Aluminum / Die Cast Aluminum / Tempered Glass						
Operation Temperature	-20°C~ +40°C						
LED Lifespan	35000-50000 hrs						
Protection Rating	IP 54						
Product Standard							
Product Warranty	5-years limited warranty						

Product Certifications and Standards

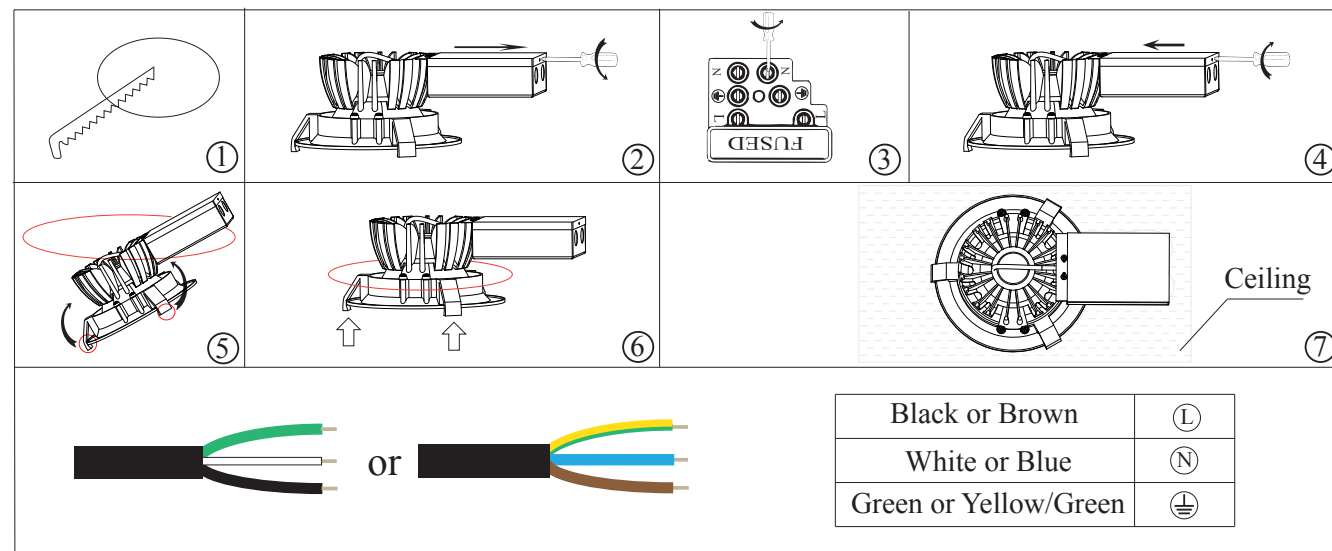
Standard	Rohs	IP	EMC	LVD
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			EN-61000-3-3: 2013	EN-62031: 2008
			EN-61547: 2009	EN-62471: 2008
				EN-62493: 2010
				EN-61347-1: 2015
				EN-61347-2-13: 2014
				IEC-62384

Product Installation Diagram

Preparation for Installation

1. Take out the luminaire from the box, and place it on a level platform for easy installation.
2. Qualified electrician are recommended to do installation, operation and maintenance job.
3. Ensure the normal ambient temperature is -25 °C — +45 °C .
4. Ensure the voltage of power supply matches with the voltage of the luminaire before installation.
5. Forbid to use the power cord with damaged insulation.
6. Ensure all power cables are connected firmly, and the screws are tightened before connecting the AC power.

*Note: The AC power must be cut off before any installations or maintenance job.



- ① Ceiling opening.
- ② Loose the screws on the power supply case.
- ③ Connect the power cables to the fuse terminal.
- ④ Replace the metal box cover.
- ⑤ Tilt the fitting about 45 degrees angle to the ceiling.
- ⑥ Straighten the spring clips then put the fitting into the ceiling.
- ⑦ Installation is completed.

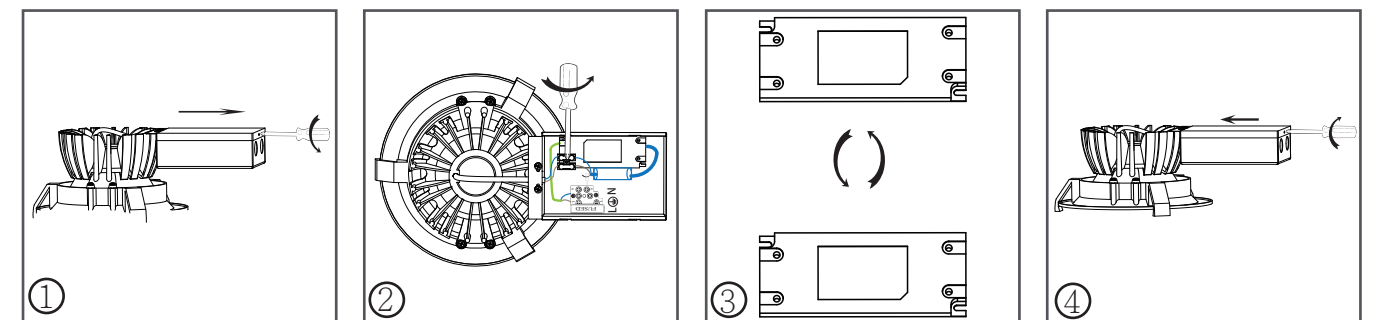
REPLACEMENT GUIDE FOR A⁺ LED Downlight

Note:

- A. Professionals or specially trained people are recommended to do any maintenance.
- B. Waters are strictly not allow to enter inside the fitting or any electrical components during maintenance.
- C. Before attempting to do any maintenance please make sure to turn off the AC power and let the fitting cool down before any further actions.

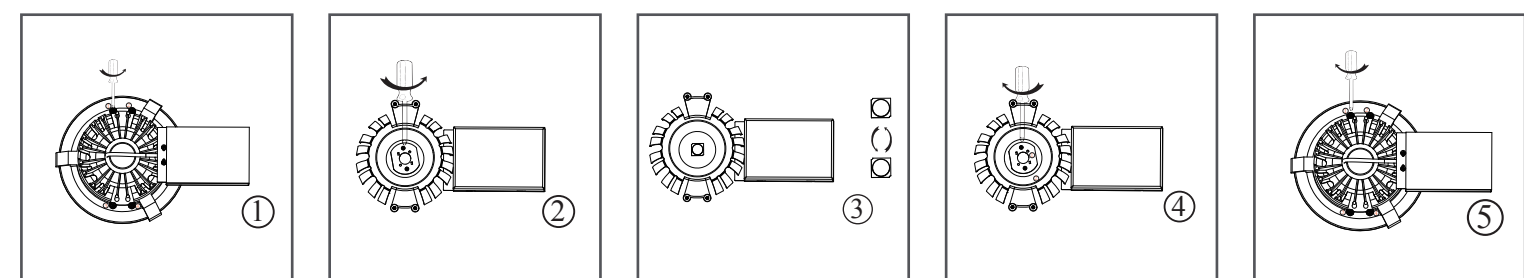
● Replace the Power Supply

- ① Loosen the screws on the power supply case then remove the metal cover.
- ② Rotate the DC plug in the direction of the arrow and disconnect the driver.
- ③ Pull out the driver and replace with a new one, connect the DC/AC cables accordingly.
- ④ Replace the metal box cover, replacement completed.



● Replace the LED Chip

- ① Loosen all screws of the heat sink.
- ② Loosen all screws of the bracket or clips.
- ③ Remove the existing LED chip then replace with new one.
- ④ Lock the LED chip into position with tightening the screws.
- ⑤ Replace the heat sink and clips then tighten all screws, replacement completed.





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