

AC module

DOB III D47 230V Series

DATASHEET

EDISON OPTO provides the high efficiency and uniform DOB Products with simple design、OTP function、high PF and Low THD. The lighting of product will bring you the enjoyment of light



Features

- Model size: D47mm(LES6.3mm/LES9.6mm)
- 6/8/10/12W@230VAC
- TRIAC Dimmable
- $PST < 1$; $SVM < 0.4$
- CE certification

Applications

- Down light
- Track light
- Pendant light

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General Information

Ordering Code Format

<u>5</u>	<u>ELA</u>	<u>C</u>	<u>N</u>	<u>3T</u>	<u>23</u>	<u>xx</u>	<u>30</u>	<u>xx</u>			
X1	X2—X4	X5	X6	X7-X8	X9-X10	X11-X12	X13-X14	X15-X16			
X1	X2-X4	X5	X6	X7-X8	X9-X10						
Item	Module application	PCB Type	-	LED	Voltage						
5	Module	ELA	Edilex AC	C	circular	-	-	3T	EMC	23	230V

X11-X12	X13-X14	X15-X16
Power Consumption	Emitting color	code
06	6W	2200K
08	8W	2700K
		3000K
10	10W	4000K
12	12W	5700K

Electrical Characteristic

Parameter	Min	Typ	Max	Unit
Rated supply voltage AC	207	230	253	V
Input voltageAC		230		V
Mains frequency		50/60		Hz
Power factor	0.9			
Percent Flicker			10	%
SVM			0.4	
Pst LM			1.0	
Current THD		30		%
Beam characteristic		120		°
Hi-pot Test (AC input to Bottom)	1.5			KV

Absolute Ratings

Parameter	Min	Max	Unit
Input voltage		253	V
Power Dissipation		6.6/8.8/11/13.2	W
Surges protection(L/N)		1.5	KV
Case Temperature (Tc)		85	°C
Operating ambient temperature (Ta)	-25	+55	°C
Storage ambient temperature	-40	+85	°C
Storage ambient humidity		45	%

NOTE:

- ※ Rated Lifetime is calculated based on theoretical TM-21 calculations.
- ※ Tc: Case temperature at "Tc point" .
- ※ Ta: ambient temperature

Electro-Optical Characteristics (Vin=230V ; Tc=25°C)

Order Code	CCT (K)	Luminous Flux(lm)		Efficacy	CRI	LES	Vac	Watt
		Tc=25°C		(lm/W)	Ra	(mm)		
		Min.	Typ.	Typ.	Min.	Typ.	Typ.	
5ELACN3T23062731	2700	500	550	92	80	6.3	230	6
5ELACN3T23063031	3000	510	570	95				
5ELACN3T23064031	4000	540	600	100				
5ELACN3T23062732	2700	440	490	82	90			
5ELACN3T23063032	3000	460	510	85				
5ELACN3T23064032	4000	485	540	90				

Order Code	CCT (K)	Luminous Flux(lm) Tc=25°C		Efficacy (lm/W)	CRI Ra	LES (mm)	Vac	Watt
		Min.	Typ.	Typ.	Min.	Typ.	Typ.	
5ELACN3T23082730	2700	660	740	92	80	6.3	230	8
5ELACN3T23083030	3000	680	760	95				
5ELACN3T23084030	4000	720	800	100				
5ELACN3T23085730	5700	720	800	100	90			
5ELACN3T23082231	2200	540	600	75				
5ELACN3T23082731	2700	590	660	82				
5ELACN3T23083031	3000	610	680	85				
5ELACN3T23084031	4000	650	720	90				

Order Code	CCT (K)	Luminous Flux(lm) Tc=25°C		Efficacy (lm/W)	CRI Ra	LES (mm)	Vac	Watt
		Min.	Typ.	Typ.	Min.	Typ.	Typ.	
5ELACN3T23102725	2700	1015	1130	113	80	9.6	230	10
5ELACN3T23103025	3000	1040	1160	116				
5ELACN3T23104025	4000	1090	1215	122				
5ELACN3T23102724	2700	910	1010	101	90			
5ELACN3T23103024	3000	930	1035	104				
5ELACN3T23104024	4000	980	1090	109				

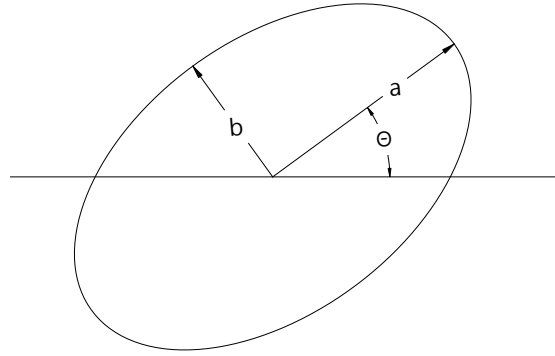
Order Code	CCT (K)	Luminous Flux(lm) Tc=25°C		Efficacy (lm/W)	CRI Ra	LES (mm)	Vac	Watt
		Min.	Typ.	Typ.	Min.	Typ.	Typ.	
5ELACN3T23122718	2700	1080	1200	100	80	9.6	230	12
5ELACN3T23123018	3000	1130	1255	105				
5ELACN3T23124018	4000	1190	1325	110				
5ELACN3T23122719	2700	980	1090	91	90	9.6	230	12
5ELACN3T23123019	3000	1025	1140	95				
5ELACN3T23124019	4000	1060	1180	98				

NOTE:

Measurement precision $\pm 7\%$ for the flux data and $\pm 7\%$ for the efficacy data.

Measurement precision for CRI ± 2 and for color temperature $\pm 150K$

Color Coordinate

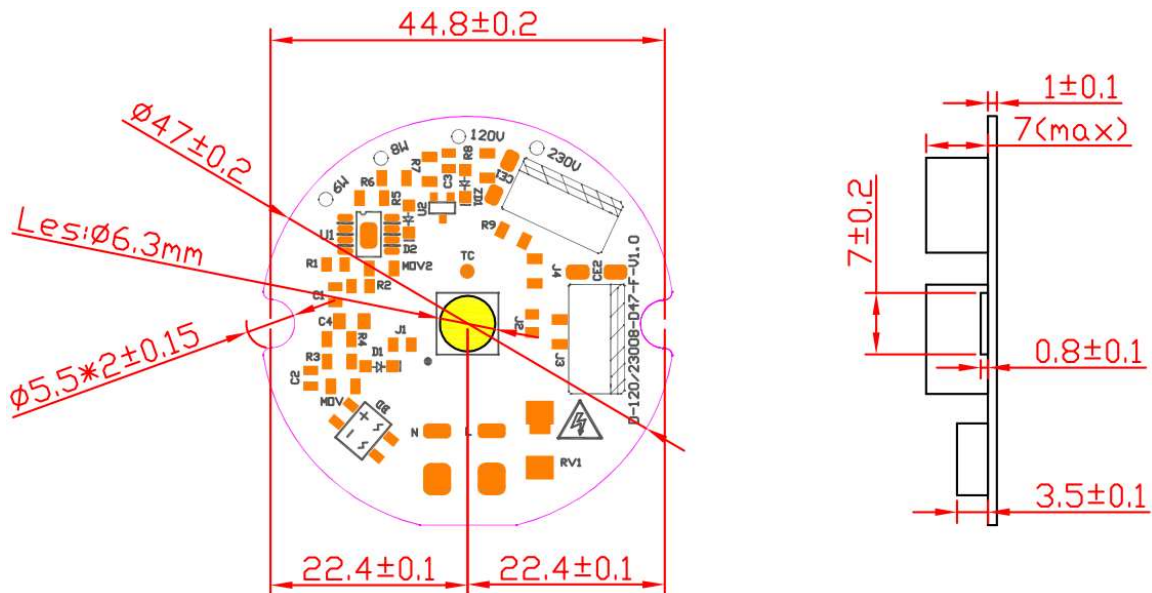


CCT	Steps	Cx	Cy	a	b	theta
2200K	3	0.5018	0.4153	0.00863	0.00398	49.27
2700K	3	0.4620	0.4145	0.00810	0.00420	53.42
3000K	3	0.4383	0.4081	0.00834	0.00408	53.13
4000K	3	0.3875	0.3868	0.00939	0.00402	53.43
5700K	3	0.3348	0.3491	0.00671	0.00330	58.35

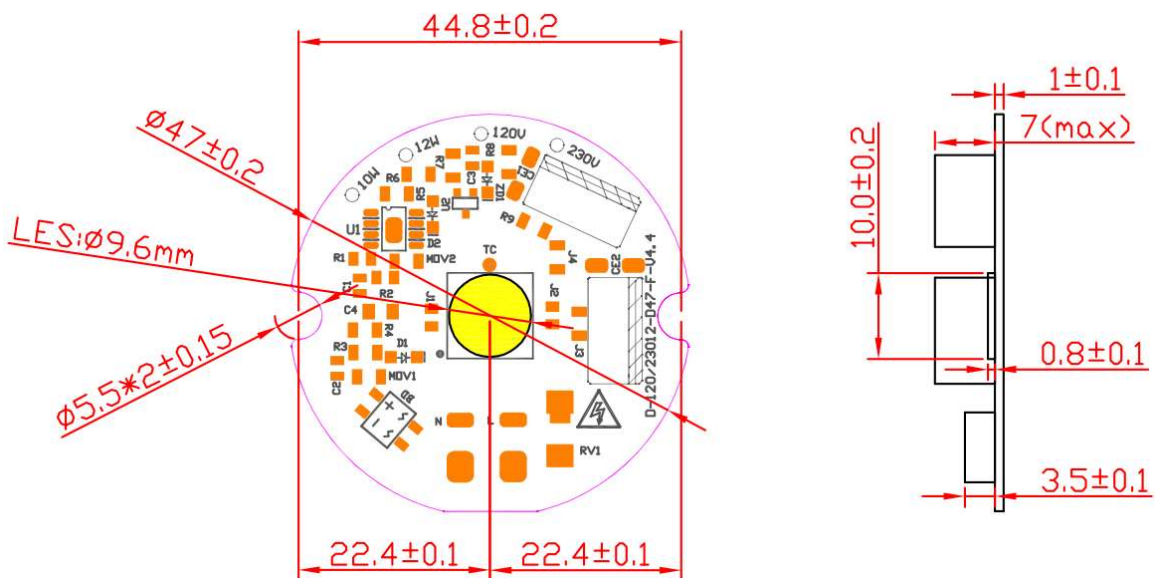
NOTE:CIE_{x,y} tolerance:±0.005,

Mechanical Dimension

5ELACN3T2306xx1x/5ELACN3T2308xx1x

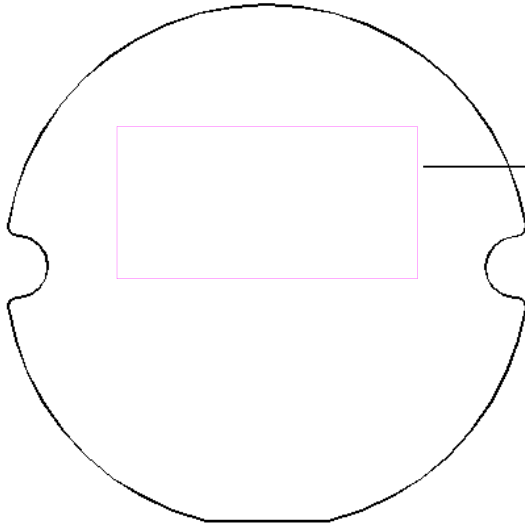


5ELACN3T2310xx1x/5ELACN3T2312xx1x



NOTE:
All dimension unit in mm

Marking Information



Example:

5ELACN3T23103024

D47 10W 3000K CRI90

A16303VA2

Q00394001620

1: Part No.

2: Description

3: LED BIN

4: Lot No.

Holder Dimensions(Version A)

Production description

- 1) Material: PC
- 2) Color: White/Black
- 3) Flame retardant rating: V0

Application Note

- 1) Operating temperature : -40°C~120°C
- 2) Apply on DOB D47 Series
- 3) M3 screws with flat head , max. head diameter should be no more than 6mm

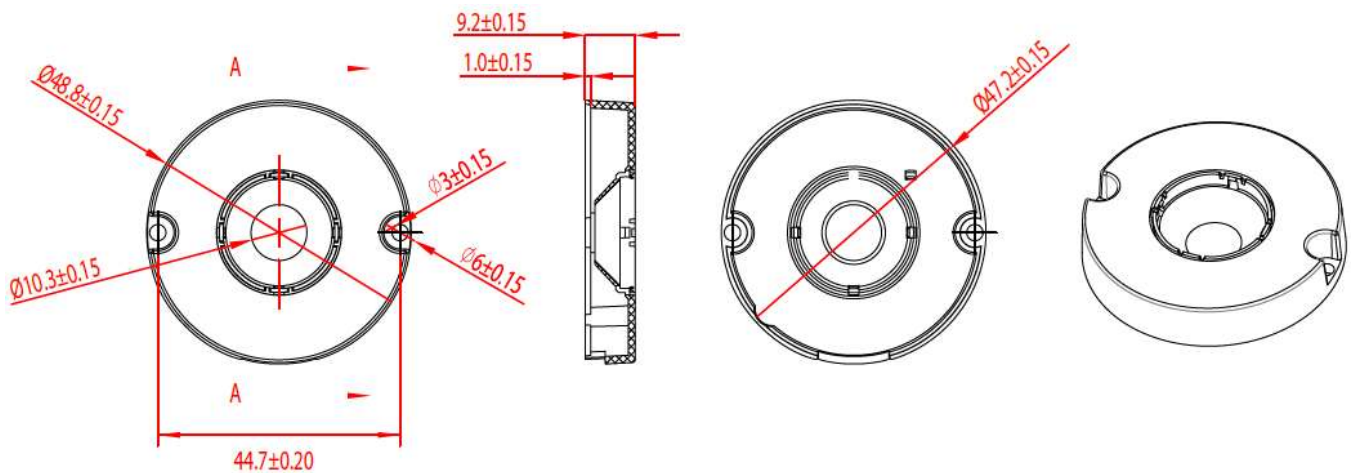
D47-White



D47-Black



Product Dimensions



Ordering Data

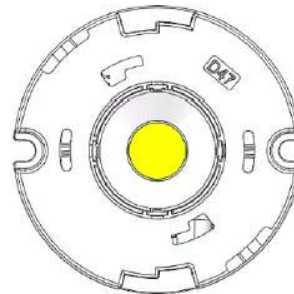
Part No	Color	Packaging Bag	Weight per pc.
13CRDAA00115	White	1,500 pcs	0.004 kg
13CRDAA00118	Black	1,500 pcs	0.004 kg

Holder Dimensions(Version B)

Production description

- 1) Material: PC
- 2) Color: White/Black
- 3) Flame retardant rating: V2

D47-White



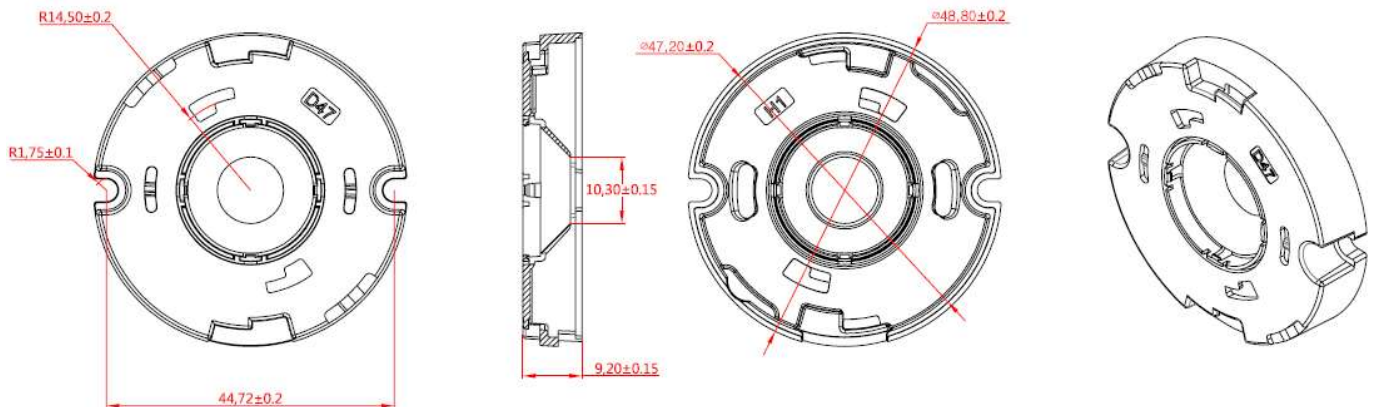
D47-Black



Application Note

- 1) Operating temperature : -40°C~120°C
- 2) Apply on DOB D47 Series
- 3) M3 screws with flat head , max. head diameter should be no more than 6mm

Product Dimensions

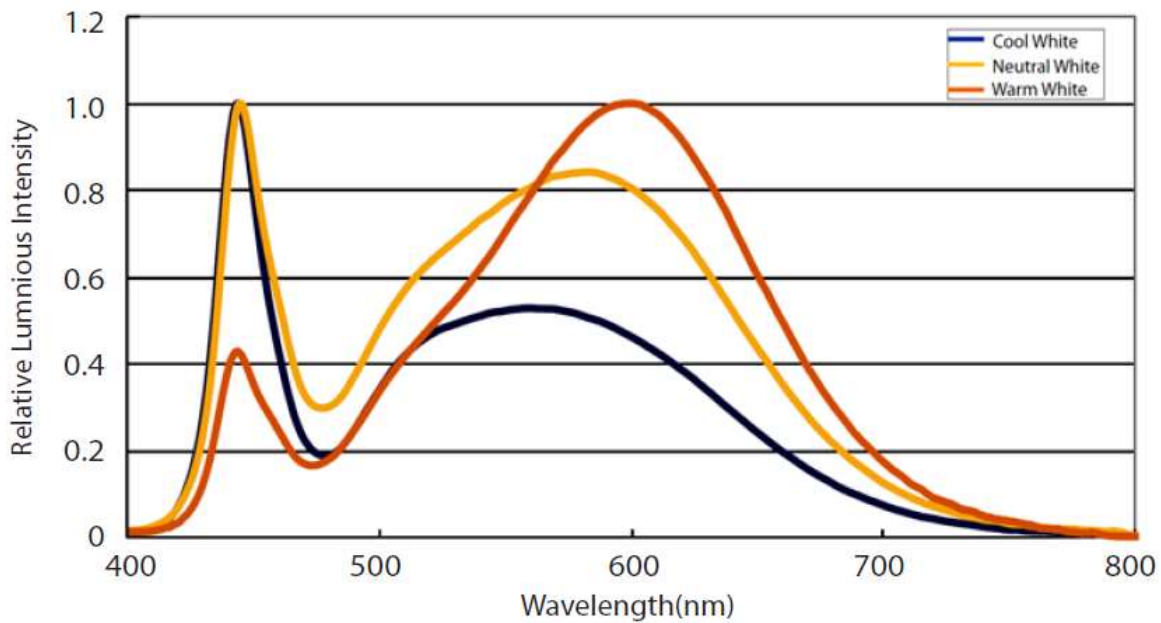


Ordering Data

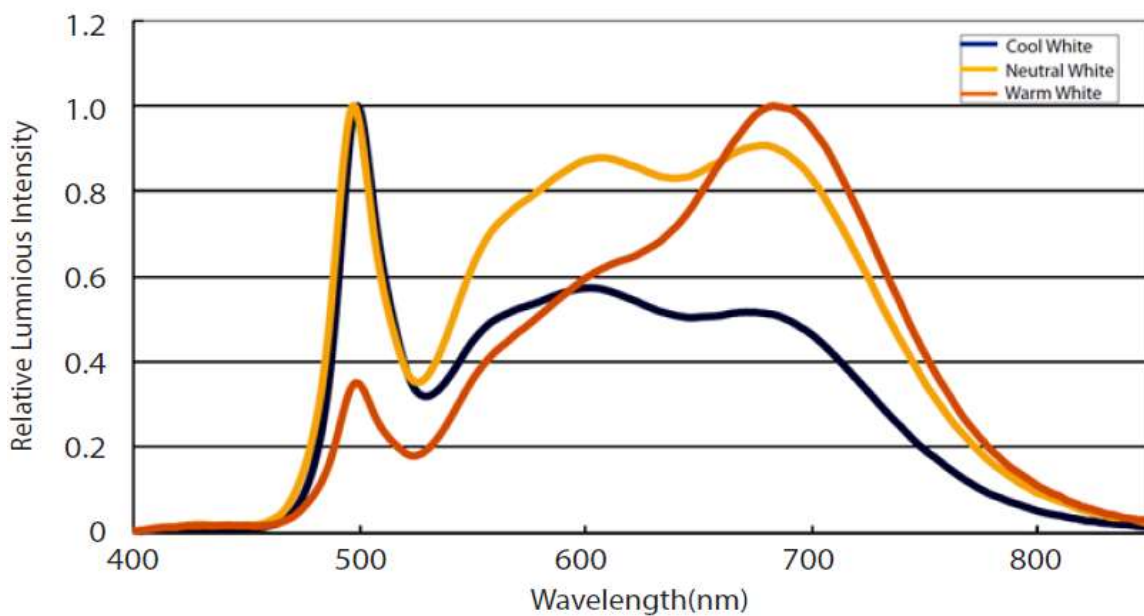
Part No	Color	Packaging Bag	Weight per pc.
13CRDAA00122	White	1,000 pcs	0.004 kg
13CRDAA00123	Black	1,000 pcs	0.004 kg

Characteristic curve

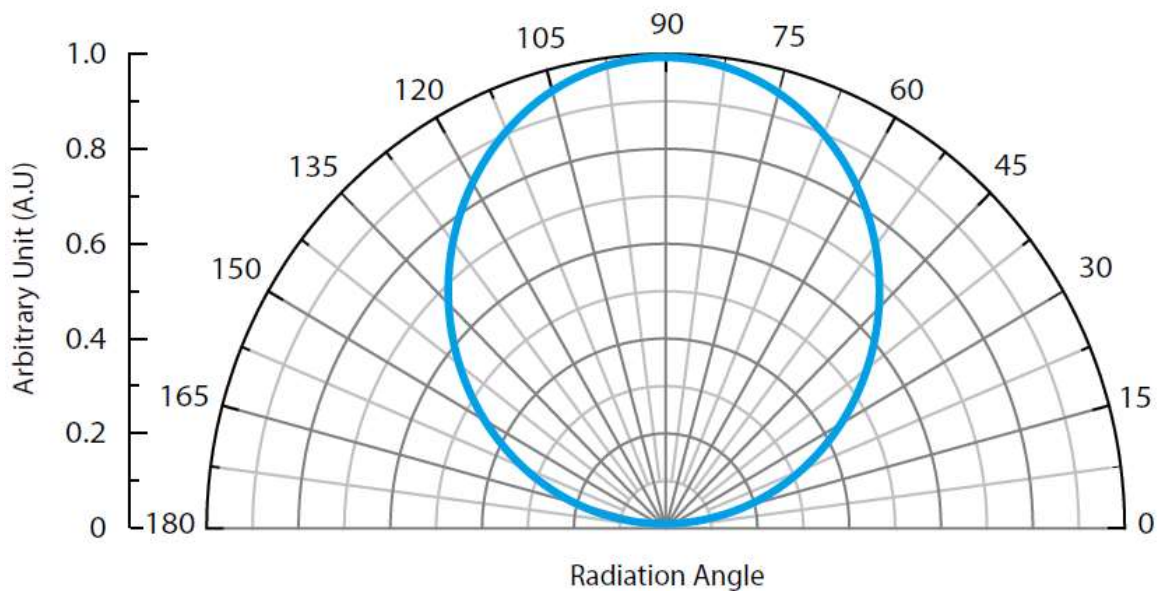
Color Spectrum (Tc=25°C,VAC=230V)_Ra 80



Color Spectrum (Tc=25°C,VAC=230V)_Ra 90

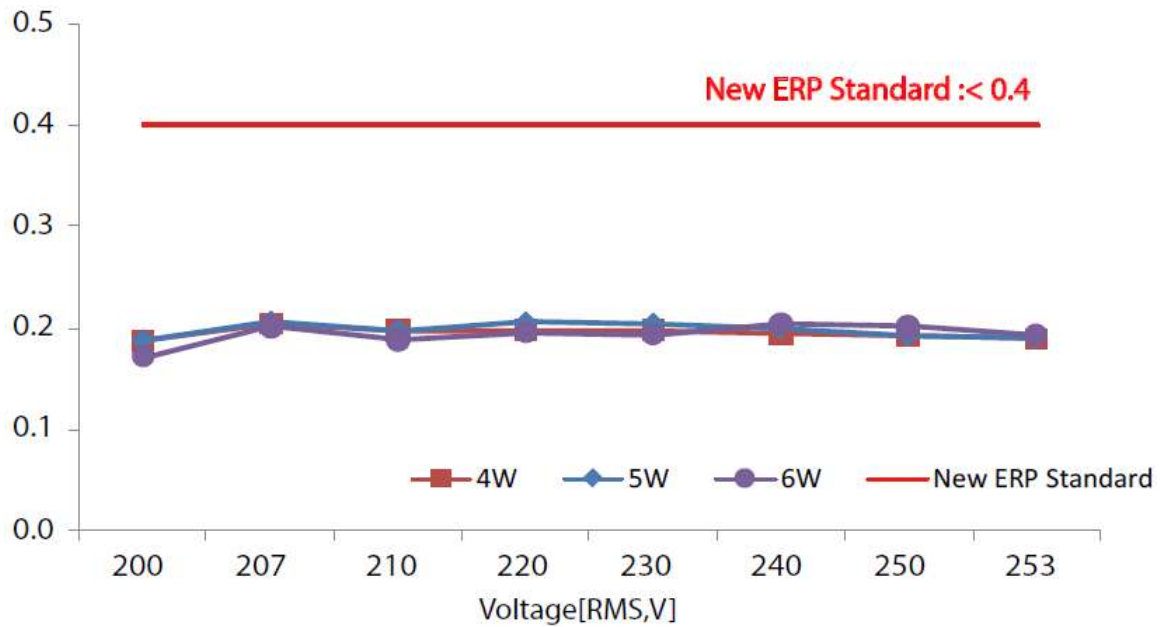


Beam Pattern

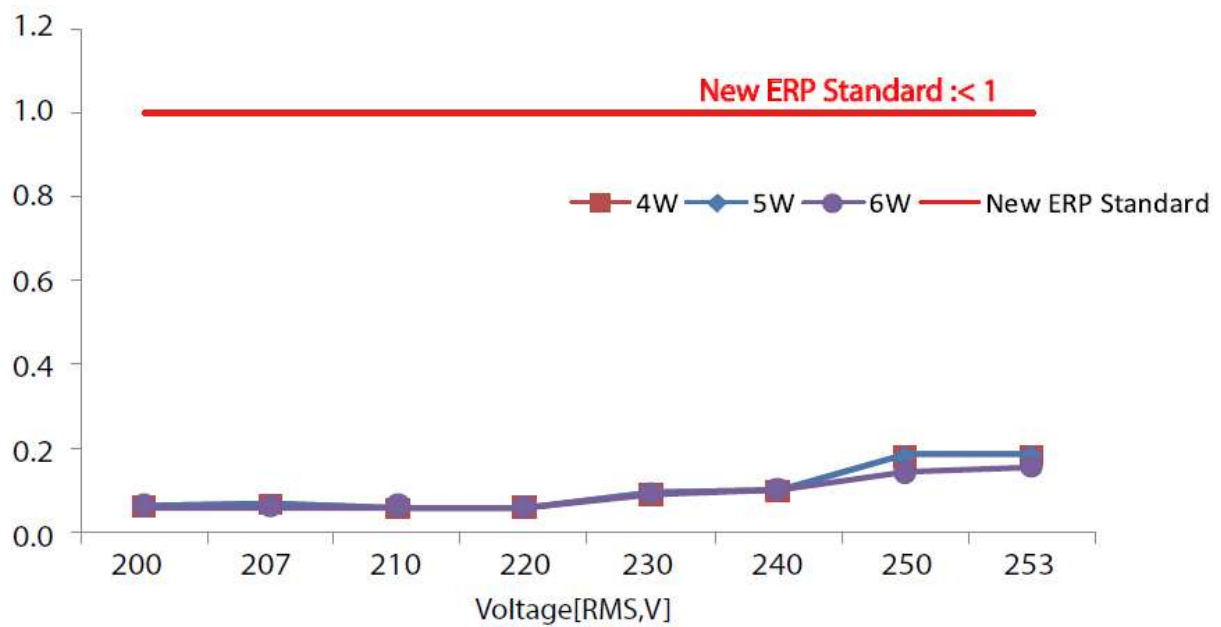


Characteristic curve

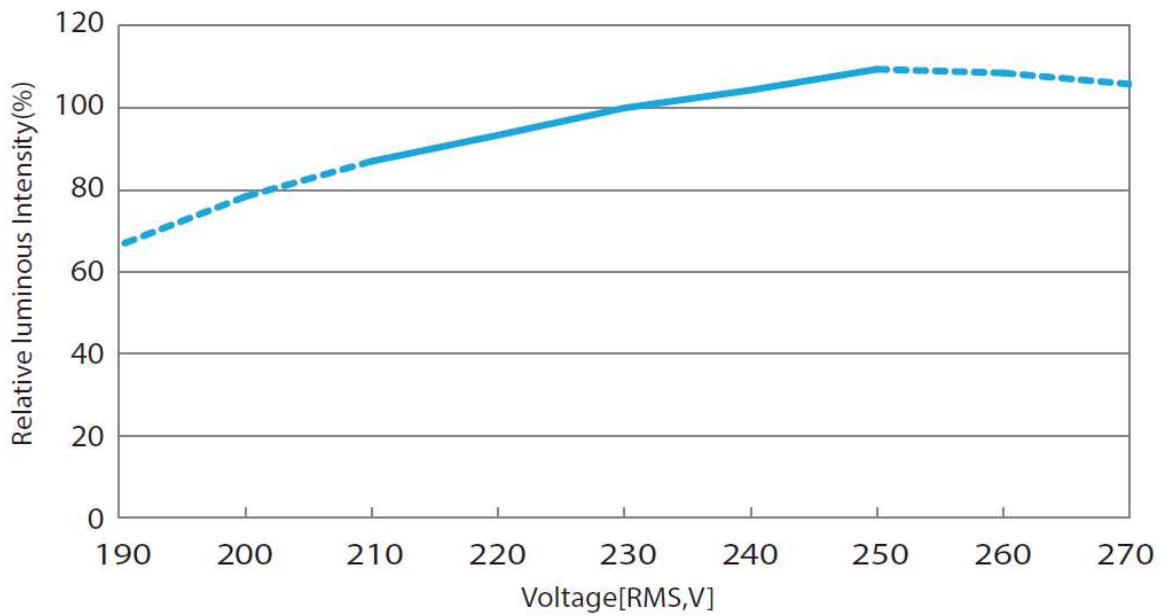
SVM Test($T_c=25^\circ\text{C}$)



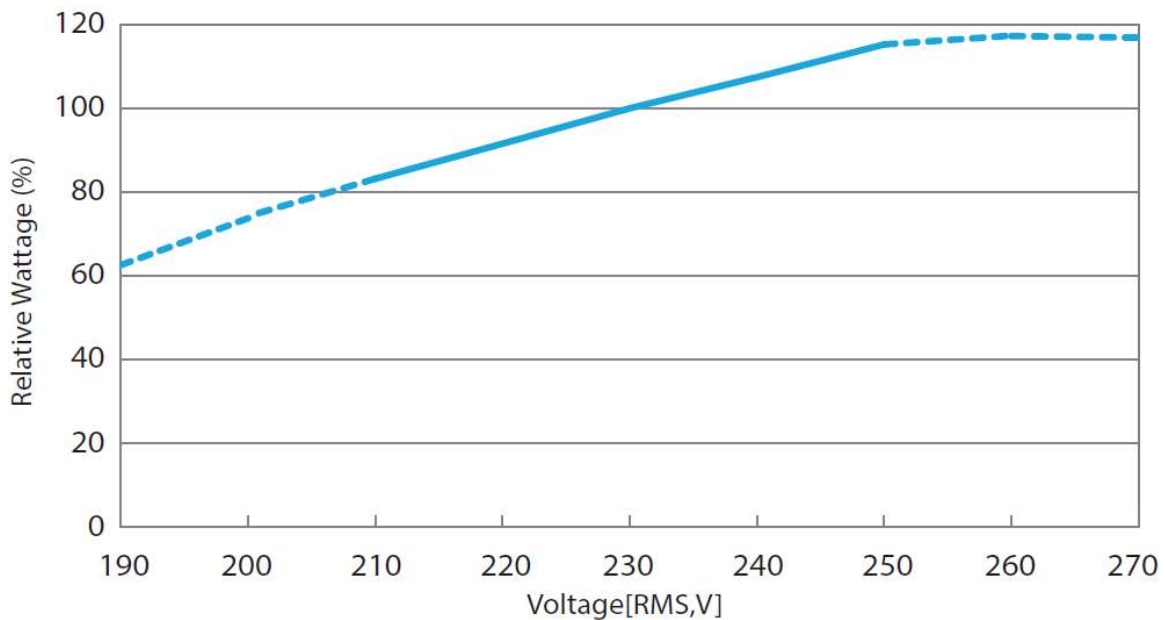
PST Test ($T_c=25^\circ\text{C}$)



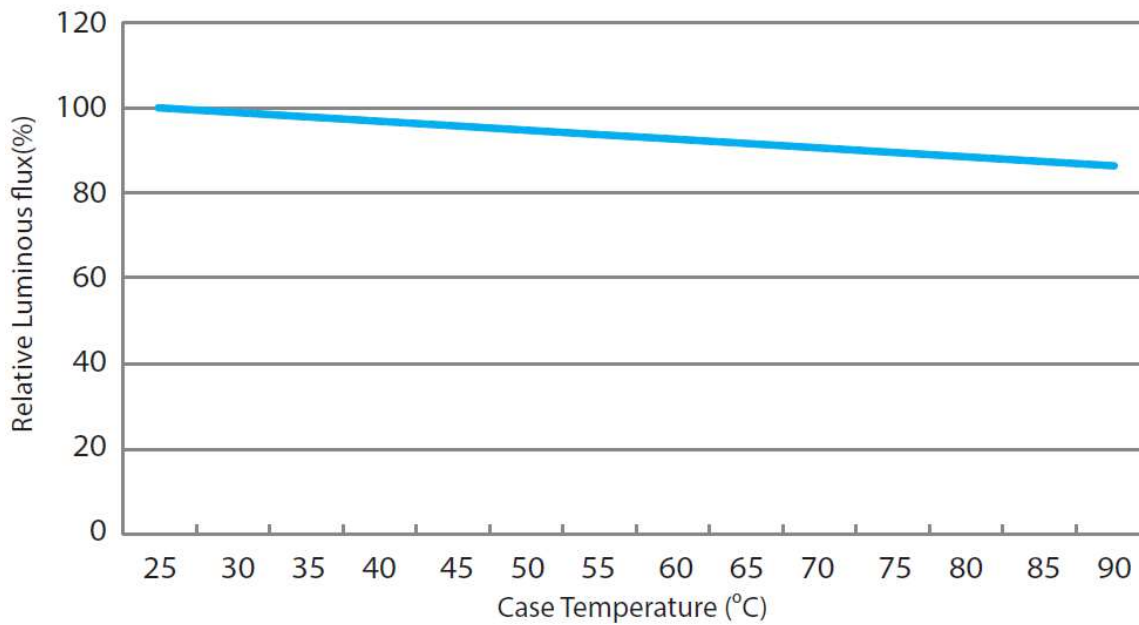
Relative luminous intensity vs. Voltage($T_c=25^{\circ}\text{C}$)



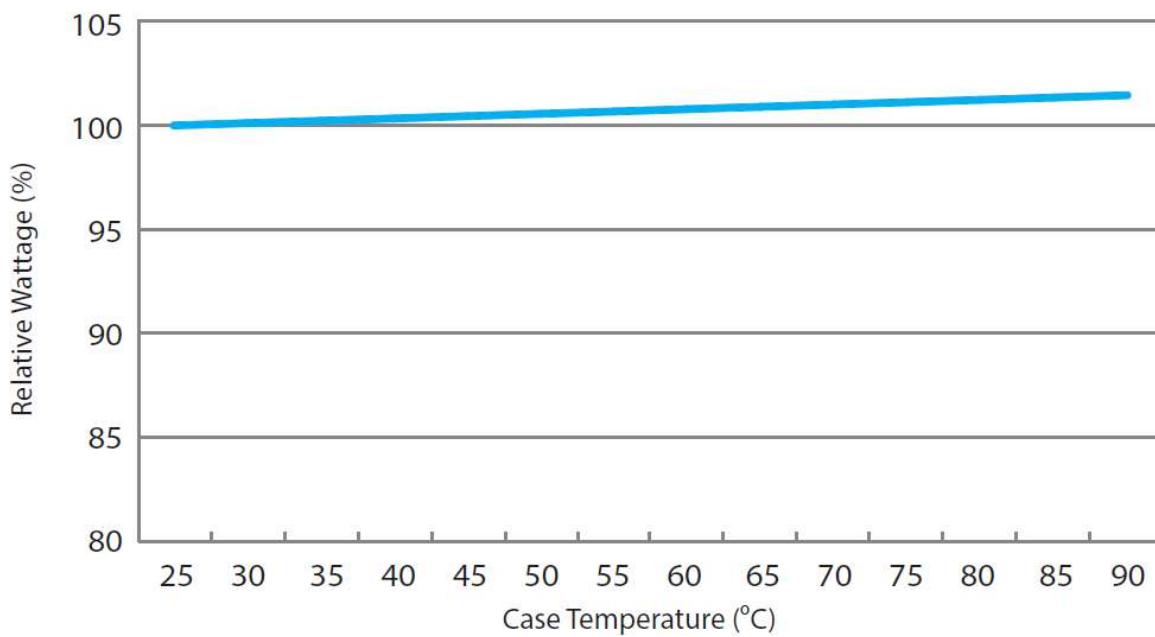
Relative Wattage vs. Voltage($T_c=25^{\circ}\text{C}$)



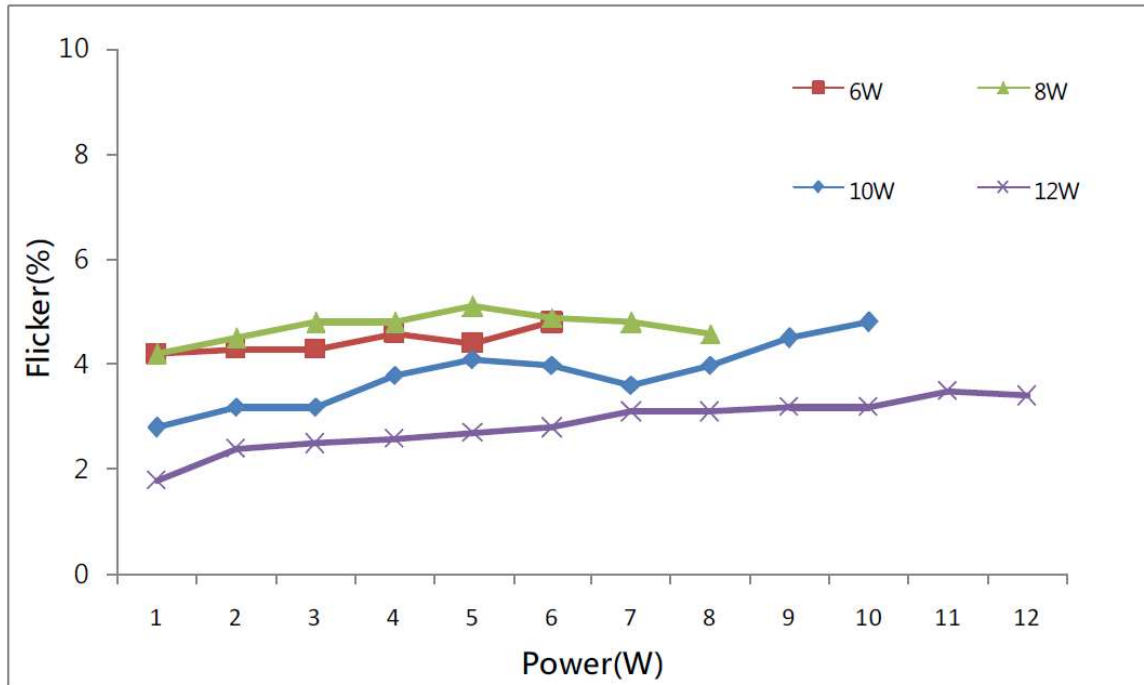
Relative luminous intensity vs. Case Temperature(Vac=230V)



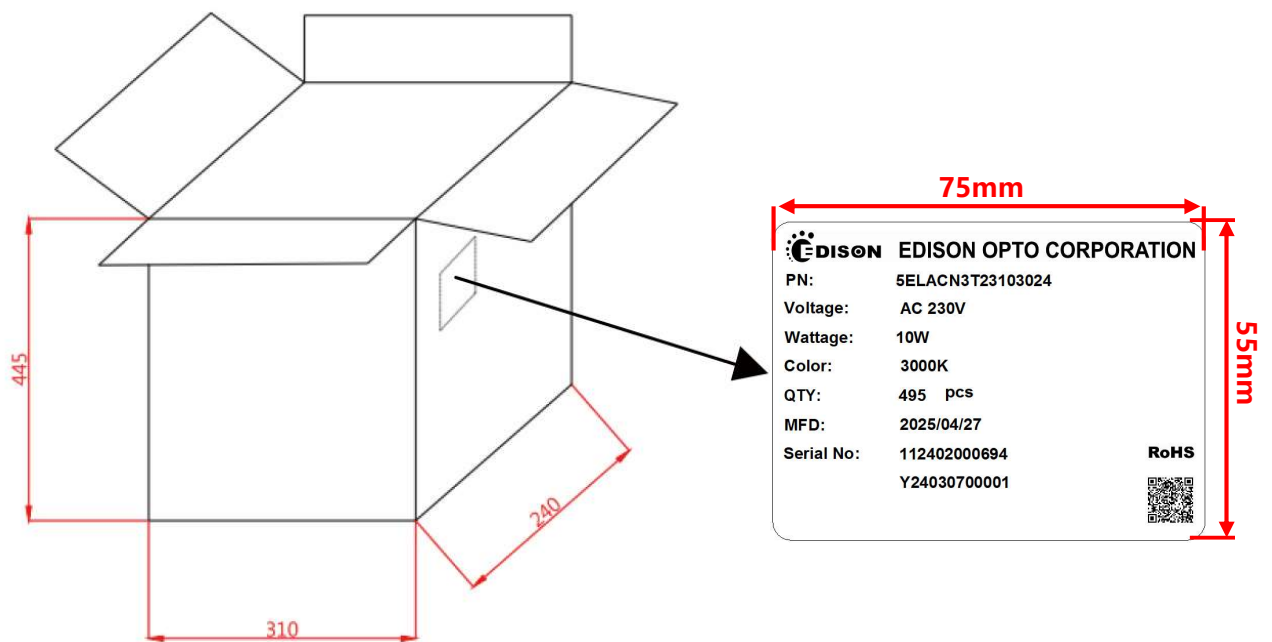
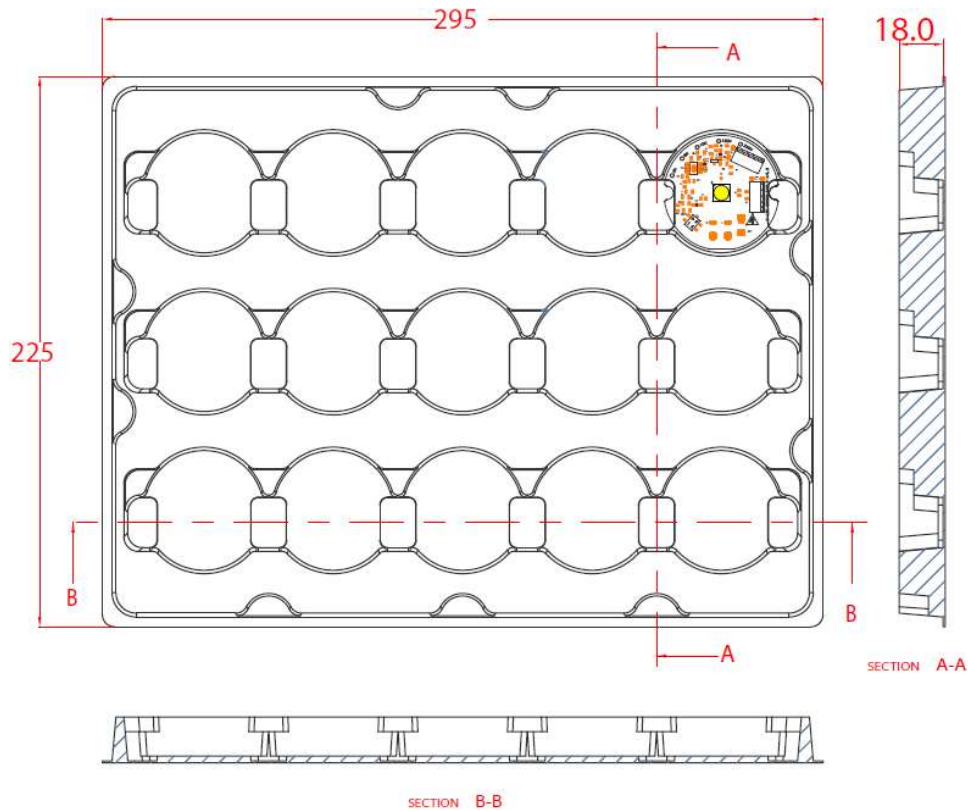
Relative Wattage vs. Tc(Vac=230V)



Flicker Performance (During dimming)



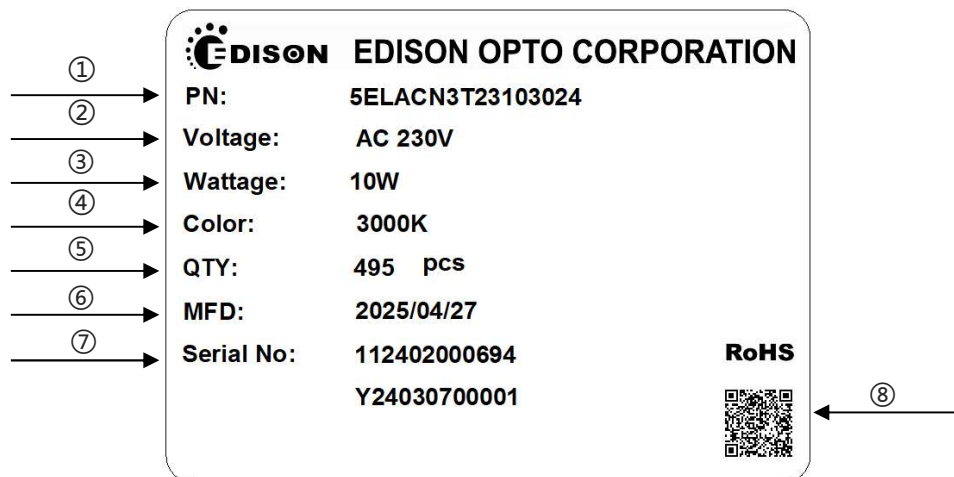
Product Packaging Information



Packing Structure

Product	Number of module / Tray	Number of module /Box	Dimension (mm)		
			Length	Width	Height
5ELACN3T2306xxxx	15pcs	495pcs	310	240	445
5ELACN3T2308xxxx					
5ELACN3T2310xxxx					
5ELACN3T2312xxxx					

Label Information



Number	Item	Remark
①	PN	Model Number (Refer to Page 2~3)
②	Voltage	Input voltageAC
③	Wattage	Power consumption
④	Color	CCT
⑤	QTY	Quantity
⑥	MFD	Manufacturing Date
⑦	Serial No	Manufacturing Order
⑧	QR Code	Including PN / Bin code / Qty / Serial No.

Precaution for Use

1. Please note that AC Module products are driven by high voltage, therefore when operating
2. AC Modules should be very cautious.
3. DO NOT touch the circuit board, components or terminals with body or metal while the circuit is active.
4. DO NOT add or change wires while the circuit of AC Module is active.
5. Long time exposure to sunlight or UV should be avoided; otherwise, it may cause the discoloration of lens.
6. DO NOT use adhesives to attach the LED that outgas organic vapor.
7. DO NOT use the products with materials containing Sulfur.
8. DO NOT assemble in humid environment or the conditions of containing oxidizing gas such as Cl, H₂S, NH₃, SO₂, NO_x, etc.
9. DO NOT make any modifications on the products.
10. AC Module uses integrated circuit (IC) which can be damaged when exposed to static electricity. Please operate with antistatic device. Do not touch the product unless ESD protection is used. AC Module can't be installed in end product unless the ESD protection is used.
11. DO NOT press the product; even a slight pressure may damage the product.
The environments such as high temperatures, high humidity or direct expose to sunlight should be avoided since the product is sensitive to these conditions.
12. Storage Precautions:
 - (1) The devices should be stored in the anti-static bag.
 - (2) If the anti-static bag has been opened, please make sure to reseal the bag to avoid air and moisture infiltrate in the bag.
13. It is strongly suggested to wear rubber insulated gloves and rubber bottom shoes while operating the AC Modules.
14. DO NOT wear any conductive accessories (such as jewelry) which could accidentally get an electric shock.
15. Faults, lightning, or fast switch may cause voltage surge which surpasses the normal value.
16. The failure of internal component may cause excessive voltages.
17. DO NOT directly make the HI-POT test over DC 1,750V on the module.
18. DO NOT separately connection L and N terminal when the power source turn on.

Environmental Compliance

AC module series are compliant to the Restriction of Hazardous Substances Directive or RoHS. The restricted materials including lead, mercury cadmium hexavalent chromium, Polybrominated Biphenyls (PBB) and Polybrominated Diphenyl Ethers (PBDE) are not used in AC module series to provide an environmentally friendly product to the customers.

Datasheet History

Versions	Description	Release Date
1	Establish a Datasheet.	2025/07/14
2	Add 2200K	2025/12/02

About EDISON OPTO

Edison Opto provides comprehensive LED and solid-state lighting products from LED Component, Light Module, UV / IR LED, LED sensing, Horticulture and Automotive Lighting. With a view to improve R&D process, Edison Opto develops the vertical platform on TEMOTM (Thermal. Electrical. Mechanical. Optical) to ensure the quality of products and services; Furthermore, Edison Opto creates LDMSTM (LED Design Manufacturing Service) from light source to luminaire manufacturing, to serve our customers a quality experience of customized solutions.

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