

Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : ParaLED-A-084-230V12W2700B-BB

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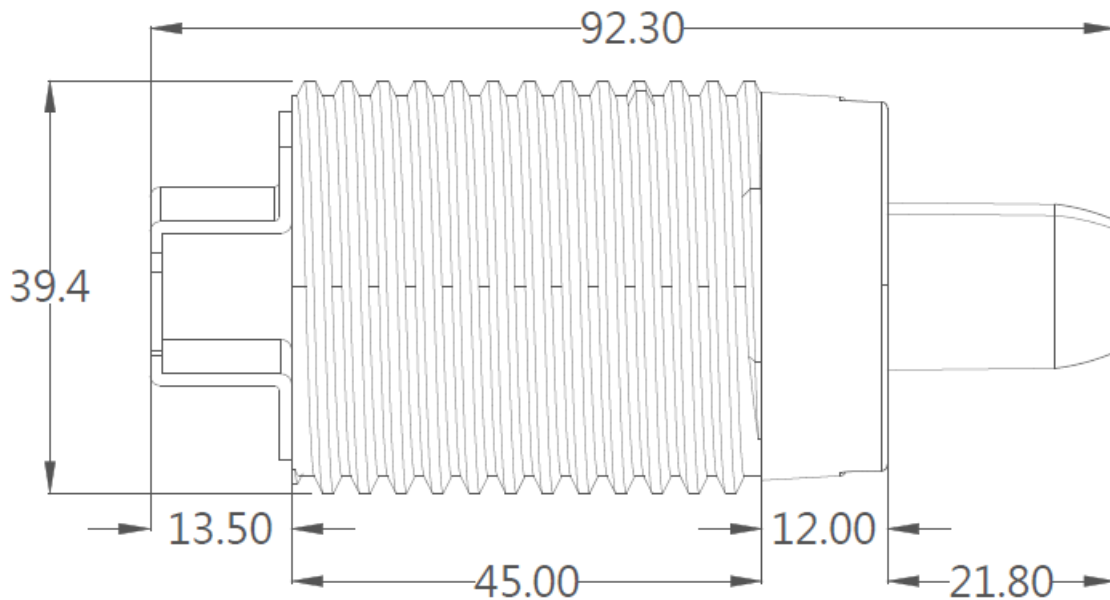
1.General Description

(1)Naming rule

ParaLED-A-084-230V12W2700K-RA80-45mm

- Product Series type : ParaLED
- Dimming Type : Dimmable
- Numbers of chips on board : 84
- Voltage : 230VAC
- Power Dissipation : 12W
- Color Temperature : 2700K
- Color Rendering : RA80~89
- Appearance : Fixing Iron piece(13.5mm) + socket(45mm)
- Optical parts : Light Guide Lens

(2)Outline Dimensions (Unit : mm / Tolerance: 0.2mm)



2. Electro-Optical Characteristics

(1) Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	12	W
Forward Voltage	V_F	230	V
Operating Temperature	T_{opr}	-40 ~ +105	°C
Storage Temperature	T_{stg}	-40 ~ +105	°C
Power Factor	Pf	>0.95	
THDi		<20%	
Dimming		available	
Assembly process temperature	T_{sol}	<325°C , 5 secs	

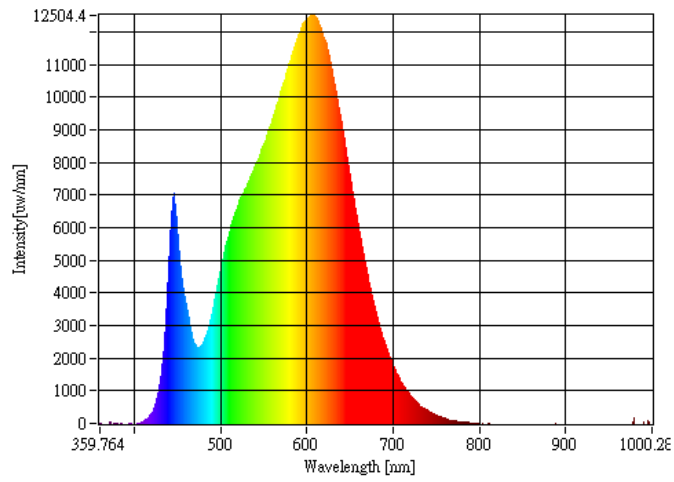
(2) Electro-Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	-	-	230	-	V
Luminous Intensity	Φ_v	$V_F=230V$	-	720	-	Lm
Color rendering	Ra	$V_F=230V$	-	80	-	CRI

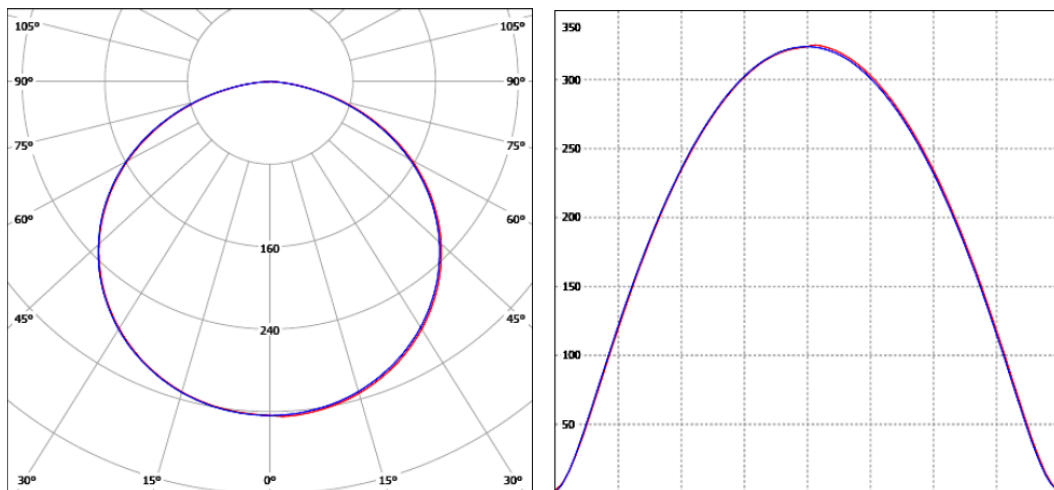
Notice: Operating Voltage of product varies from 220V~240V · users must keep the temperature of solder joint point under 105 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

(3) Graphs

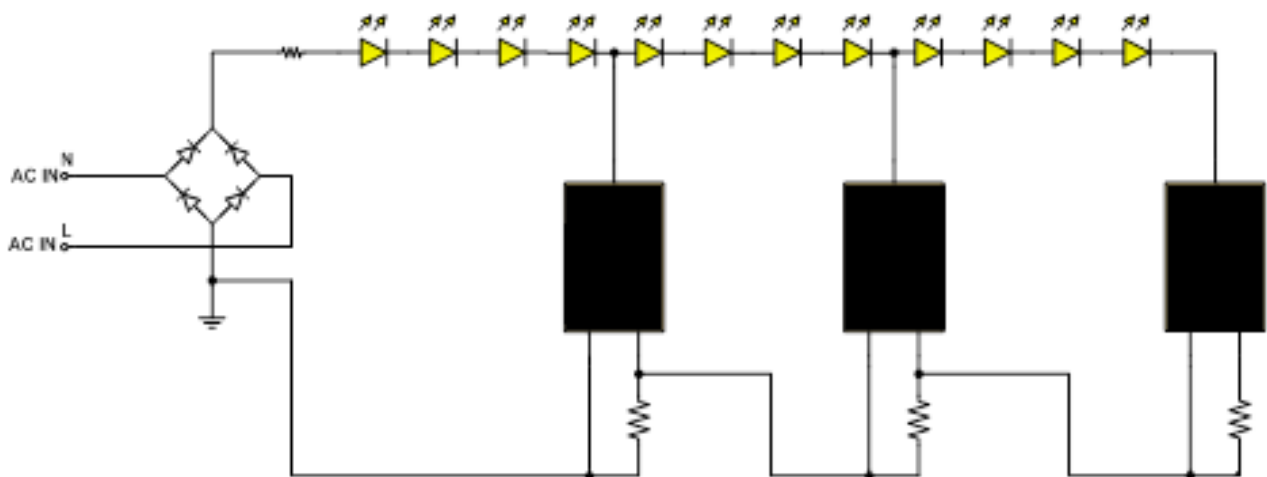
Spectrum



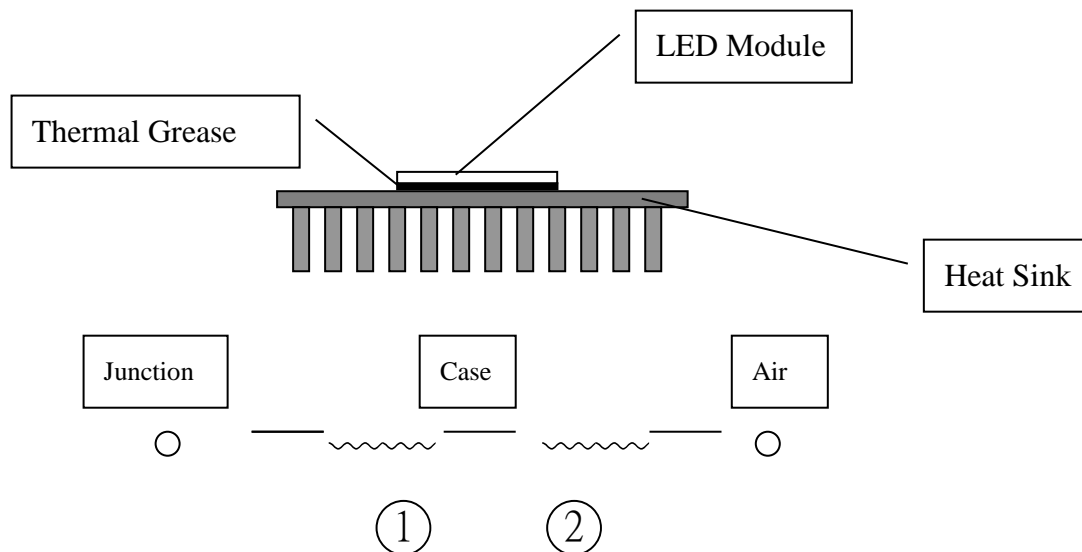
Candle Power Distribution & Cartesian Coordinate



(4) Layout



3. Junction Temperature Measurement



- ① Thermal resistance of Junction to Case without heat sink : $10^{\circ}\text{C}/\text{W}$ [Reference Value]
- ② Thermal resistance of Case to Ambient Air: Depending on what kind of heat sink users choose. In ideal thermal dissipation situation, the thermal resistance is about $1\sim 2^{\circ}\text{C}/\text{W}$.

4. Reliability Test

Test Item	Test Conditions	Number of failed
High Temperature Storage Test	$T_{\text{stg}} = +80^{\circ}\text{C}$, x1,000 hrs	0/20
Low Temperature Storage Test	$T_{\text{stg}} = -40^{\circ}\text{C}$, x1,000 hrs	0/20
Continous Light-on Test	$T_{\text{a}} = 25^{\circ}\text{C}$, RH=65%, x1,000 hrs	0/20
Boiling Test	$T_{\text{a}} = 100^{\circ}\text{C}$, RH=100%, x180mins	0/20
Thermal Cycle Test	-40°C x 30 mins, 80°C x 30 mins, 100 cycles	0/20

Measuring Item	Measuring Condition	Judging Criteria of Failure
Forward Voltage	$I_{\text{F}} = 230\text{V}$	$> 0 \times 1.1$
Total Luminous Flux	$I_{\text{F}} = 230\text{V}$	$< L \times 0.7$