

Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : ParaLED-A-042-120V12W3000B-BB

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1.General Description

(1)Naming rule

ParaLED-A-042-120V12W3000B-BB

Product Series type : ParaLED

Dimming Type : Dimmable

Numbers of chips on board : 42

Voltage : 120VAC

Power Dissipation : 12W

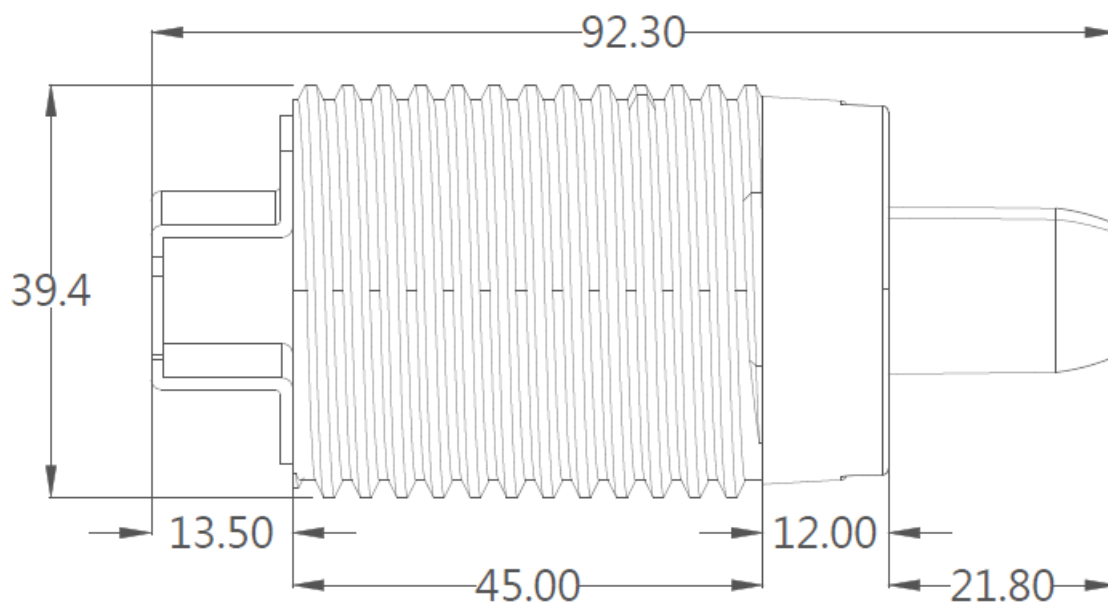
Color Temperature : 3000K

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	120	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	

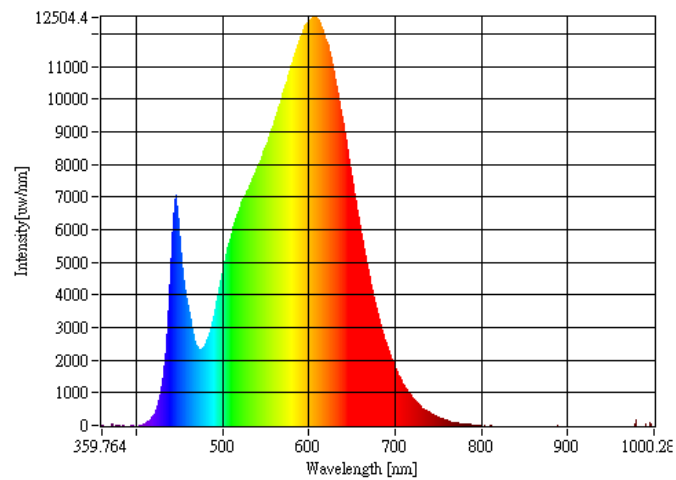
(2)Electro-Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	—	—	120	—	V
Luminous Intensity	Φ_v	$V_F=120V$	—	780	—	Lm
Color rendering	Ra	$V_F=120V$	—	80	—	CRI

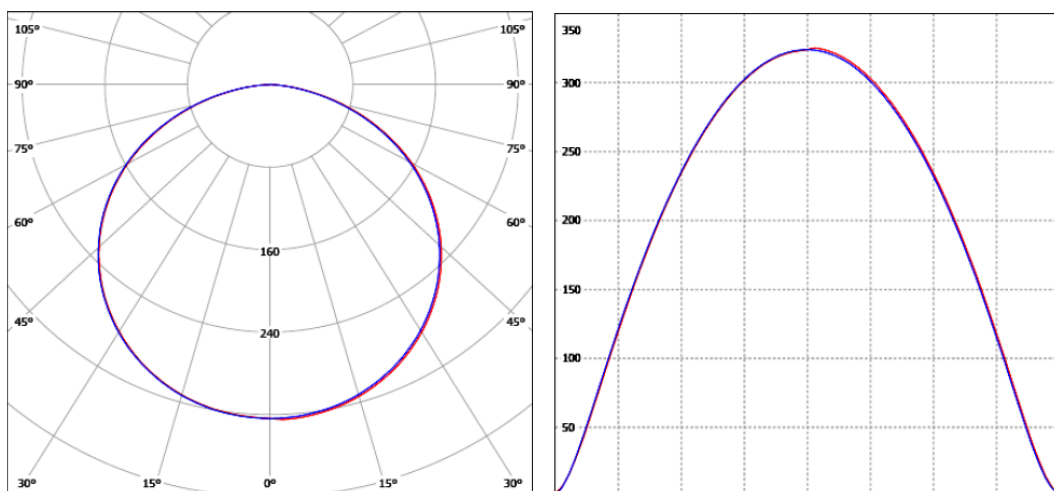
Notice: Operating Voltage of product varies from 110V~130V · users must keep the temperature of solder joint point under 105 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

(3) Graphs

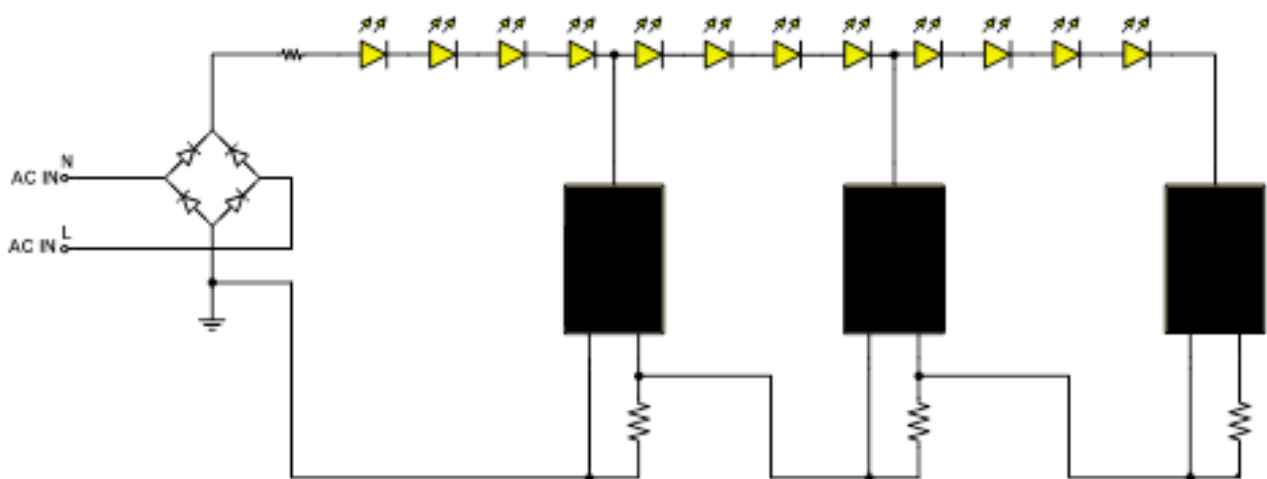
Spectrum



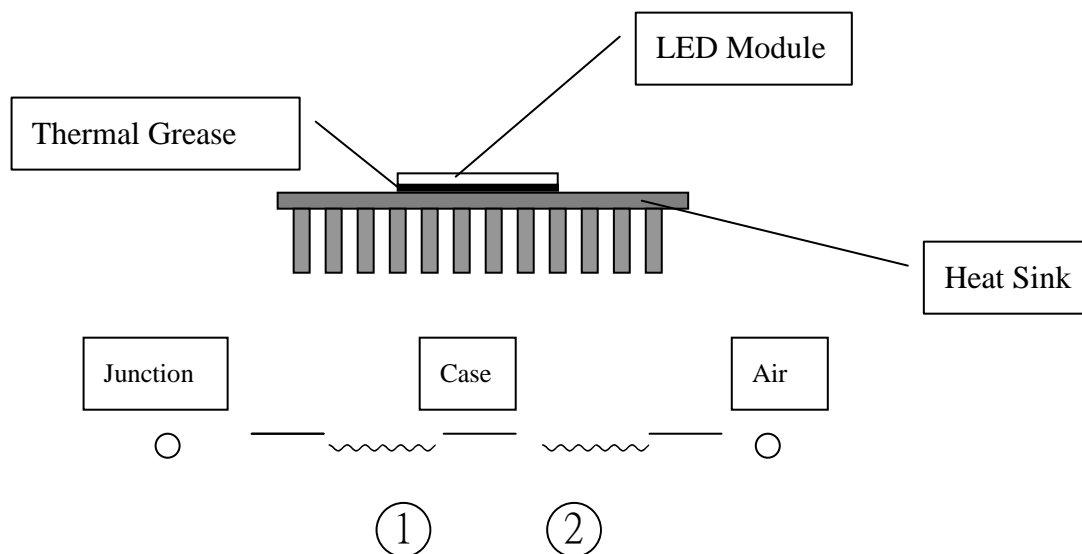
Candle Power Distribution & Cartesian Coordinate



(4) Layout



3. Junction Temperature Measurement



- ① Thermal resistance of Junction to Case without heat sink : 10°C/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 $1\sim 2^{\circ}\text{C/W}$.

4. Reliability Test

Test Item	Test Conditions	Number of failed
High Temperature Storage Test	Tstg= $+80^{\circ}\text{C}$, x1,000 hrs	0/20
Low Temperature Storage Test	Tstg= -40°C , x1,000 hrs	0/20
Continous Light-on Test	Ta= 25°C , RH=65%, x1,000 hrs	0/20
Boiling Test	Ta= 100°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	$I_F = 120\text{V}$	$> 0 \times 1.1$
Total Luminous Flux	$I_F = 120\text{V}$	$< L \times 0.7$