Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : ParaLED-A-042-120V12W2700A-BB

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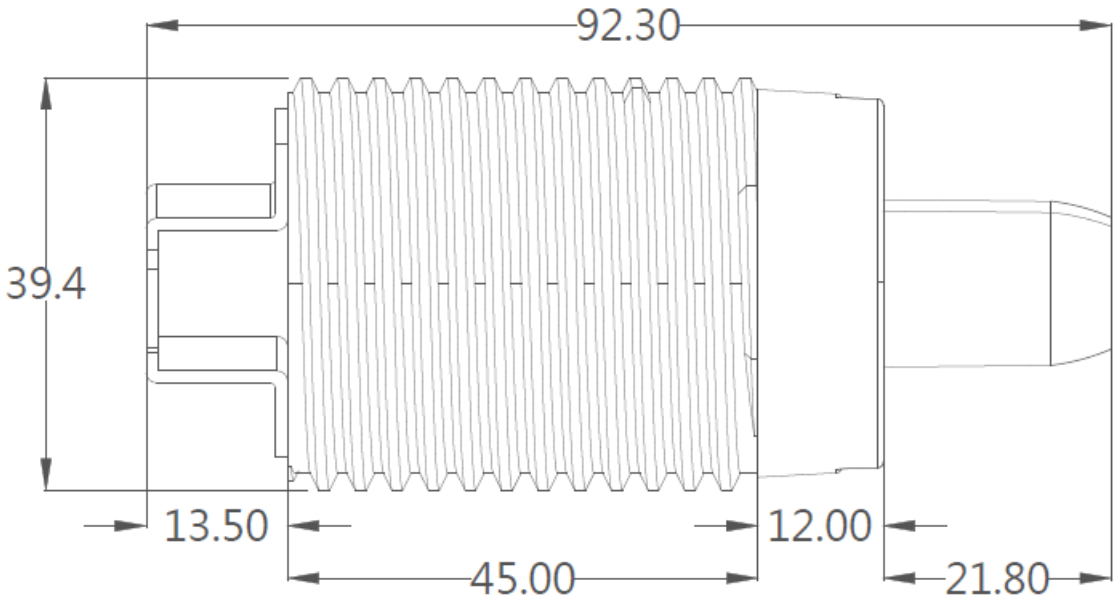
1.General Description

(1)Naming rule

ParaLED-A-042-120V12W2700A-BB

Product Series type : ParaLED
Dimming Type : Dimmable
Numbers of chips on board : 42
Voltage : 120VAC
Power Dissipation : 12W
Color Temperature : 2700K
Color Rendering : >RA90
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	℃
Storage Temperature	T_{stg}	-40 ~ +105	℃
Power Factor	Pf	>0.95	
THDi		<20%	
Dimming	available		
Assembly process temperature	T_{sol}	<325℃ , 5 secs	

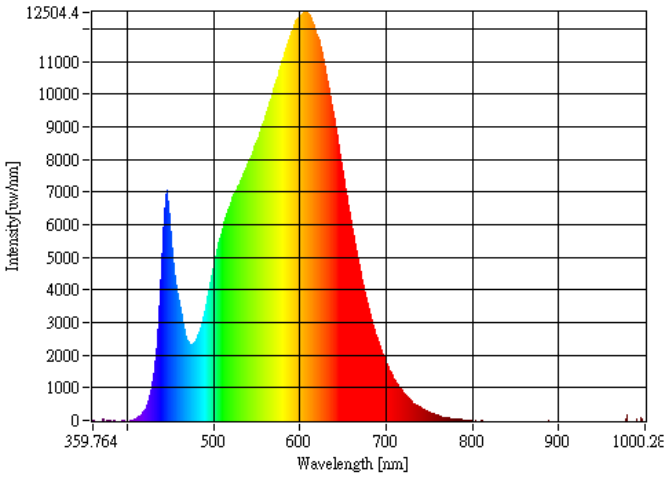
(2)Electro-Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	-	-	120	-	V
Luminous Intensity	Φ_v	V_F=120V	-	600	-	Lm
Color rendering	Ra	V_F=120V	90	-	-	CRI

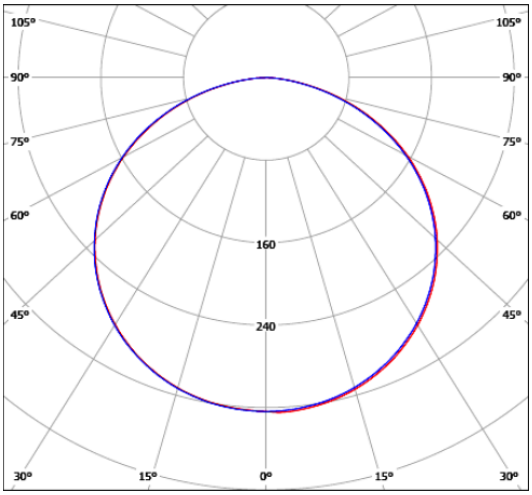
Notice: Operating Voltage of product varies from 110V~130V，users must keep the temperature of solder joint point under 105 ℃ (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

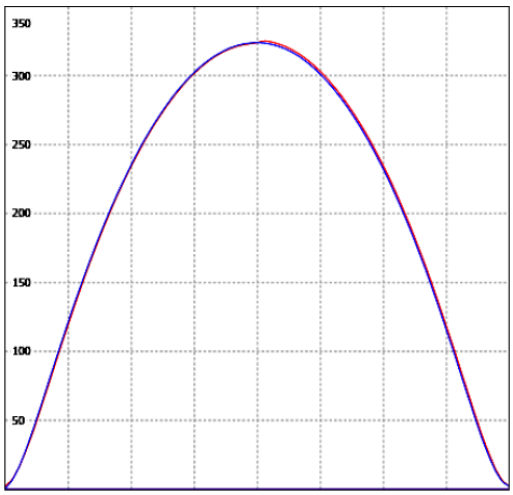
(3) Graphs

Spectrum

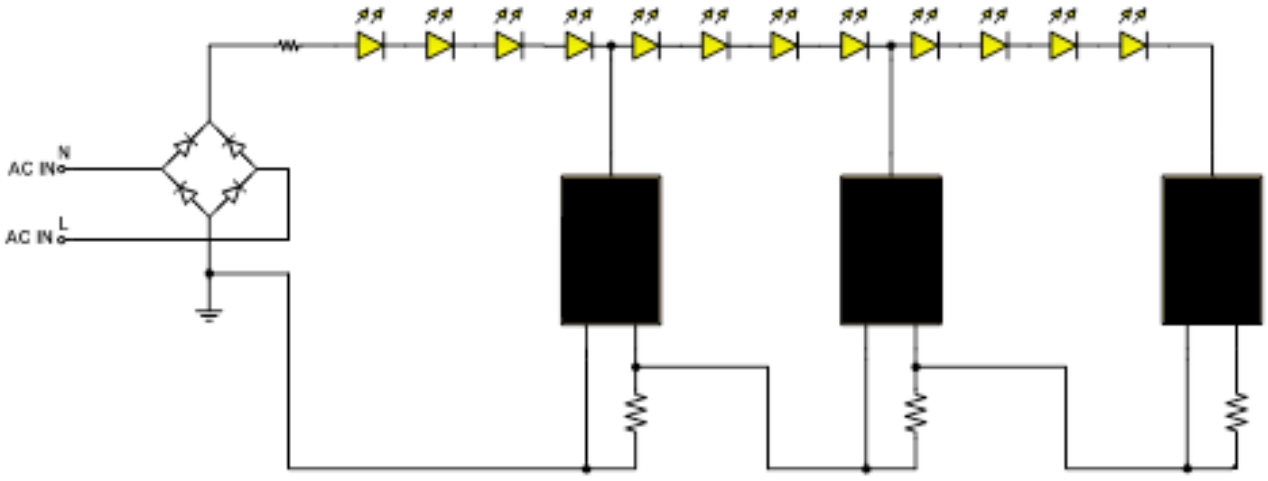


Candle Power Distribution & Cartesian Coordinate

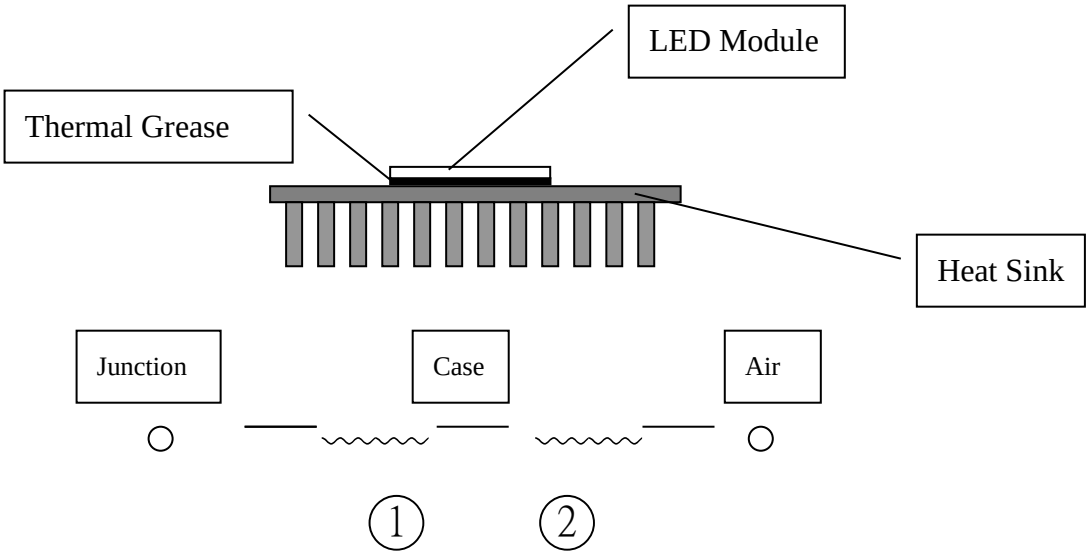




(4)Layout



3.Junction Temperature Measurement



①Thermal resistance of Junction to Case without heat sink : 10℃/W) 〔Reference Value〕

②Thermal 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 1~2 ℃/W.

4.Reliability Test

Test Item	Test Conditions	Number of failed
High Temperature Storage Test	Tstg= +80℃ , x1,000 hrs	0/20
Low Temperature Storage Test	Tstg= -40℃ , x1,000 hrs	0/20
Continous Light-on Test	Ta= 25℃ , RH=65%, x1,000 hrs	0/20
Boiling Test	Ta= 100℃ , RH=100%, x180mins	0/20
Thermal Cycle Test	-40℃ x 30 mins, 80℃ x 30 mins, 100 cycles	0/20

Measuring Item	Measuring Condition	Judging Criteria of Failure
Forward Voltage	I_F = 120V	> 0 x 1.1
Total Luminous Flux	I_F = 120V	< L x 0.7