

Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : CDLT-042-72185-120V-30

Issued Date : 11/01/2016

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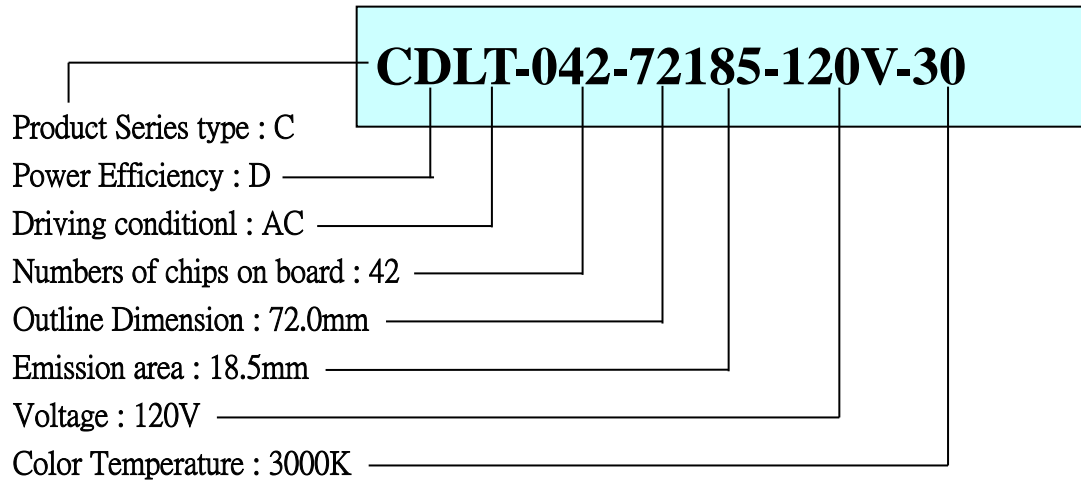
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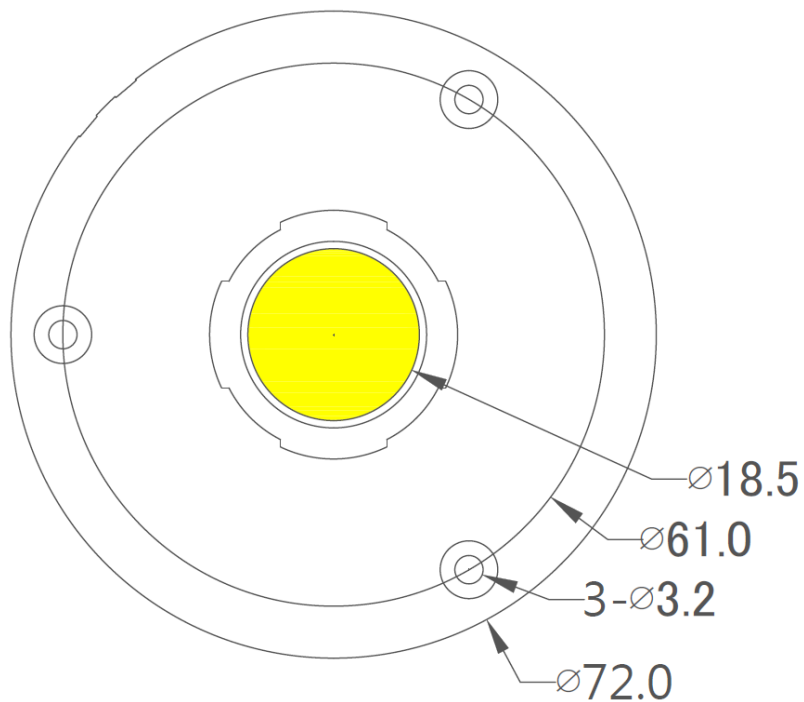
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1.General Description

(1)Naming rule



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



Thickness: 15.4 ± 0.2 mm

2. Electro-Optical Characteristics

(1) Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	18	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 [0~10V]		
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
Color Temperature		$V_R=120V$	-	3000	-	
Luminous Intensity	Φ_v	$V_F=120V$	-	1400	-	Lm
Color rendering	Ra	$V_F=120V$	90	-	-	CRI

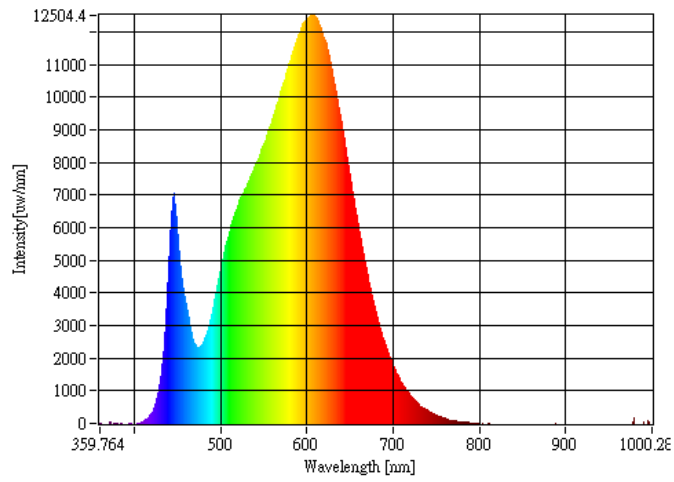
Notice: Operating Voltage of product varies from 110V~140V · users must keep the temperature of Tc point under 85 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

(3) Percent Flicker

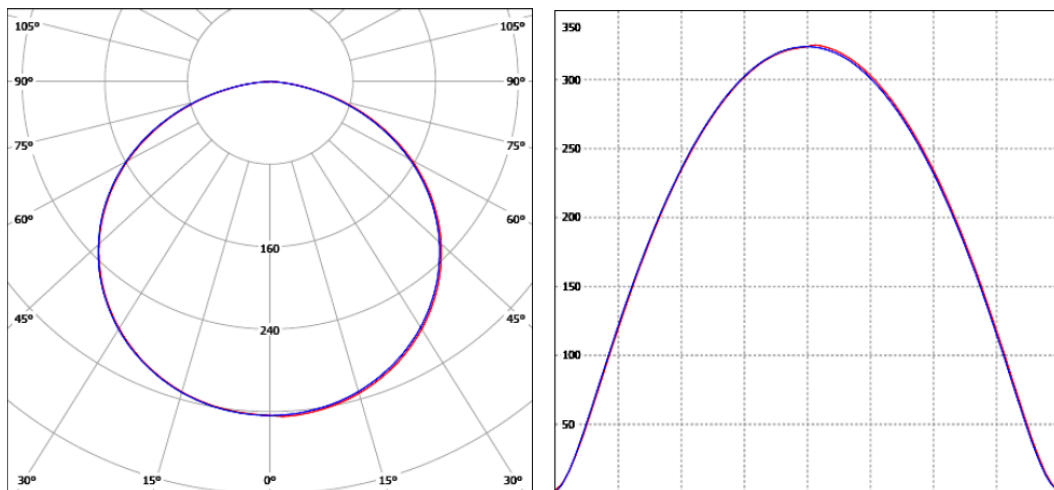
Wattage(W)	1.8	3.6	5.4	7.2	9	10.8	12.6	14.4	16.2	18
Flicker (%)	23	23	24	26	27	27	26	24	23	19

(4) Graphs

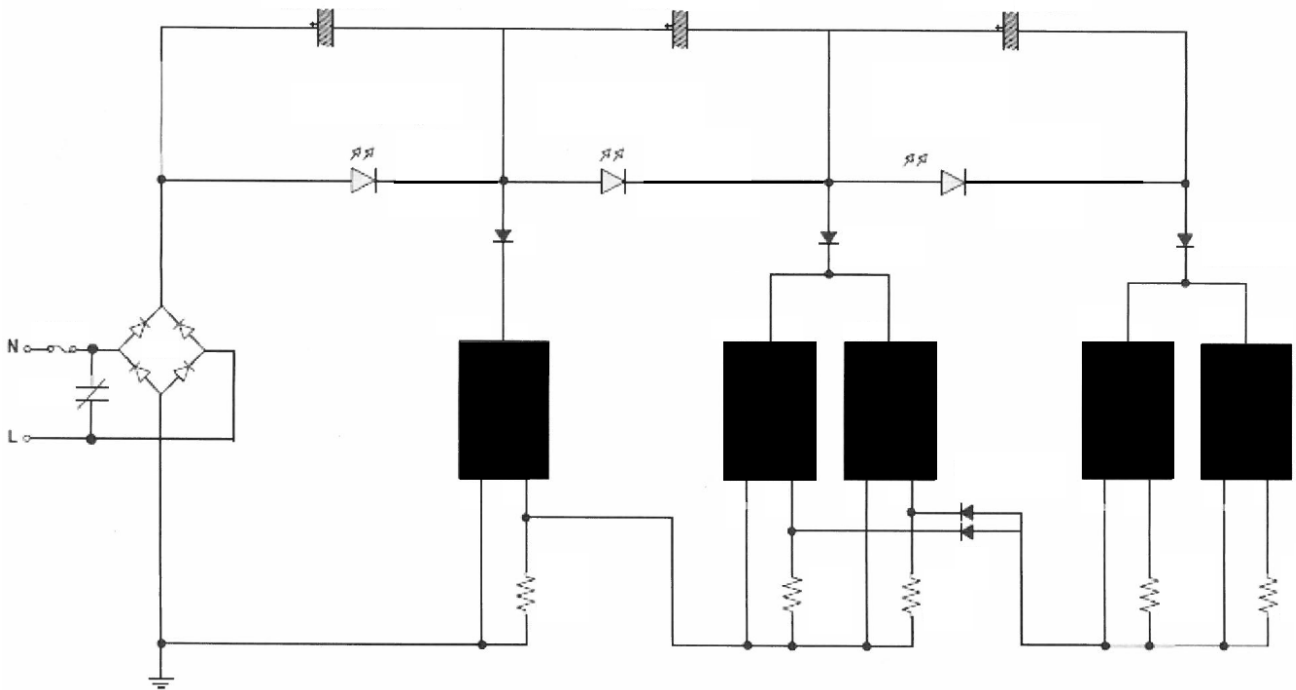
Spectrum



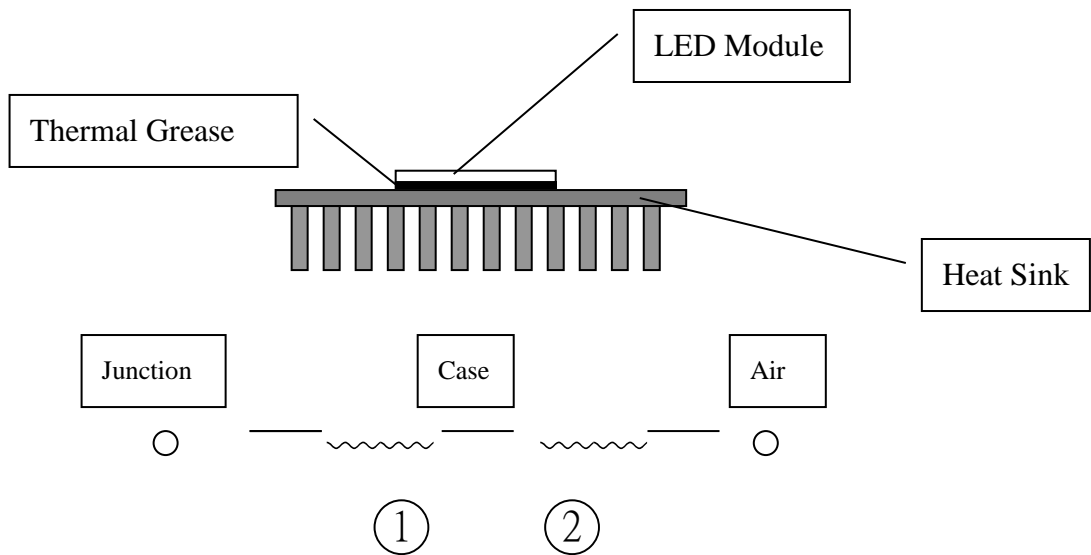
Candle Power Distribution & Cartesian Coordinate



(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	Tstg= +80°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	$V_F = 120V$	$> 0 \times 1.1$
Total Luminous Flux	$V_F = 120V$	$< L \times 0.7$