

*Paragon Semiconductor Lighting Technology*

*PSLT*

**ParagonLED**

## Specifications

**Product Type : CDLT-042-72185-120V-27**

**Issued Date : 11/01/2016**

# Contents

## 1. General Description

1-1 Naming Rule

1-2 Outline dimensions

## 2. Electro-optical characteristics

2-1 Absolute Maximum Rating

2-2 Electro-optical characteristics

2-3 Graphs

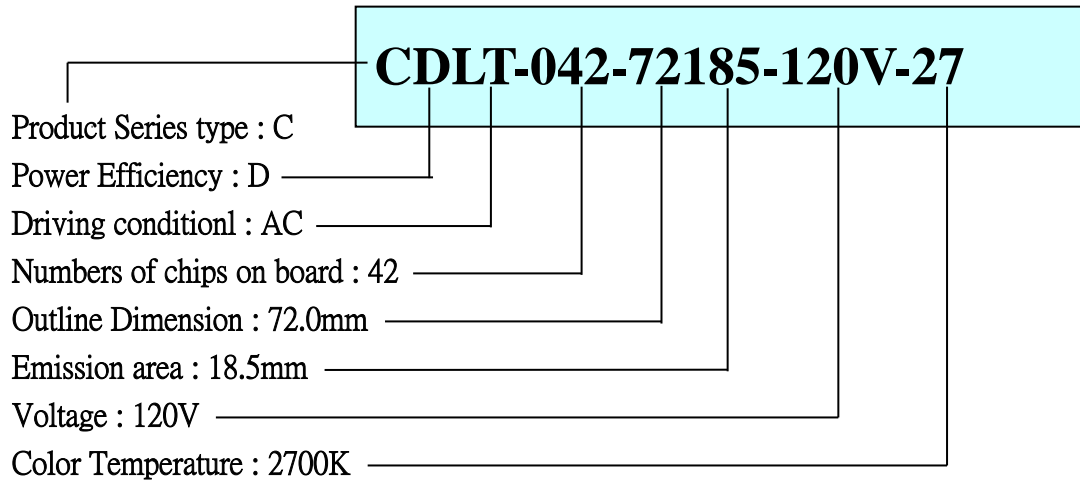
2-4 Layout

## 3. Junction Temperature measurement

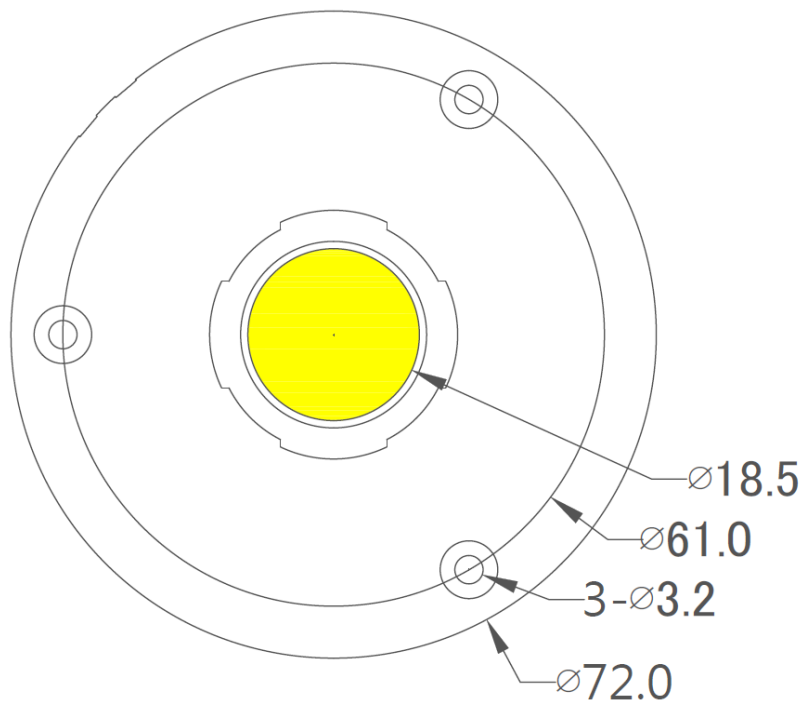
## 4. Reliability Test

# 1.General Description

## (1)Naming rule



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



Thickness:  $15.4 \pm 0.2$ 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		$V_R=120V$	-	2700	-	
Luminous Intensity	$\Phi_v$	$V_F=120V$	-	1400	-	Lm
Color rendering	Ra	$V_F=120V$	90	-	-	CRI

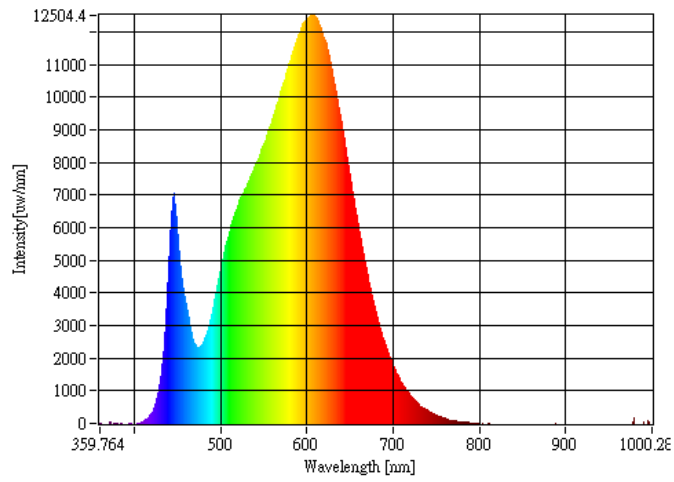
**Notice: Operating Voltage of product varies from 110V~140V · users must keep the temperature of Tc point under 85 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.**

### (3) Percent Flicker

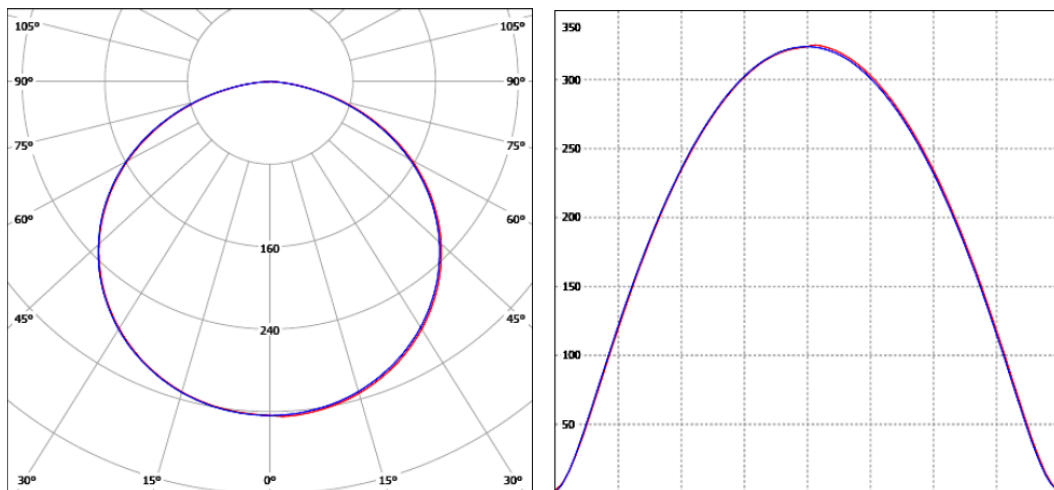
<b>Wattage(W)</b>	1.8	3.6	5.4	7.2	9	10.8	12.6	14.4	16.2	18
<b>Flicker (%)</b>	23	23	24	26	27	27	26	24	23	19

## (4) Graphs

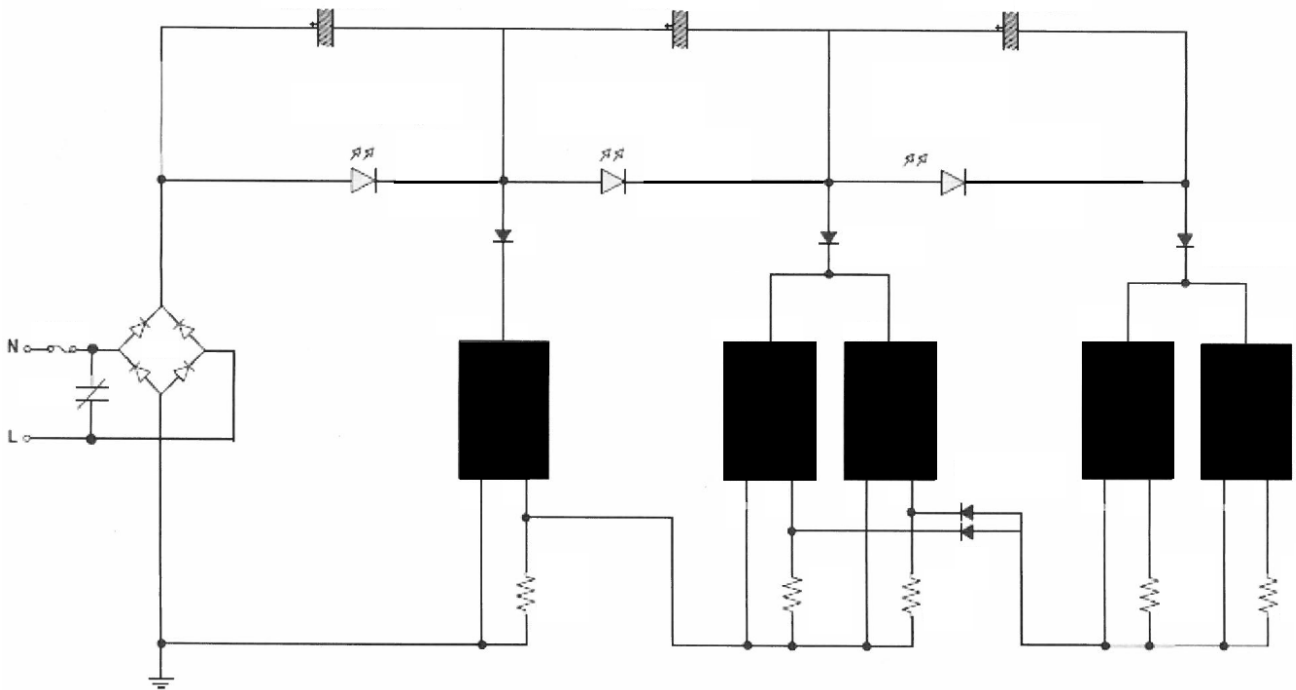
### Spectrum



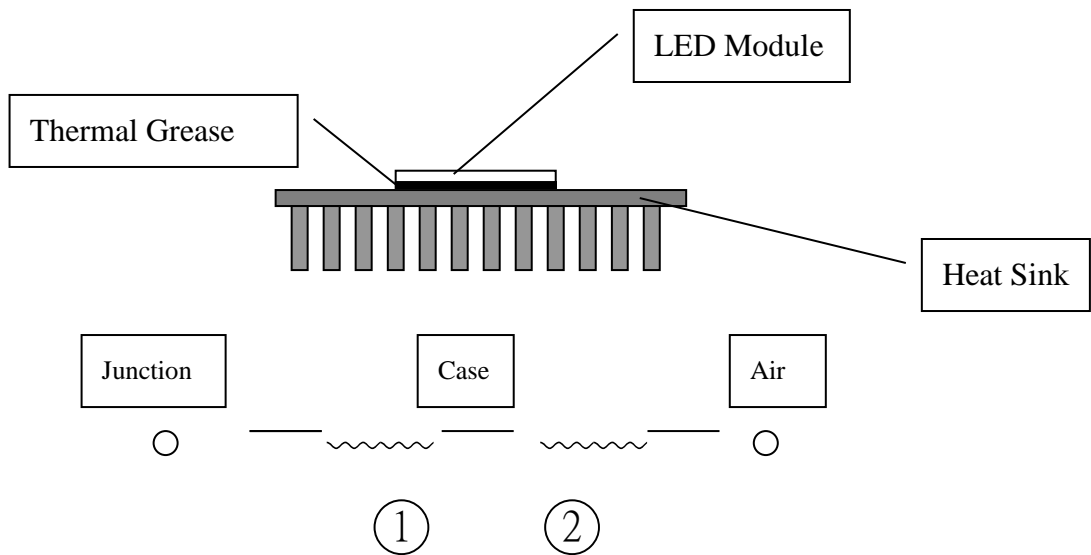
### Candle Power Distribution & Cartesian Coordinate



#### (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	$V_F = 120V$	$< L \times 0.7$