Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : SGAC-78-5050-220V-57

Issued Date : 06/25/2012

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

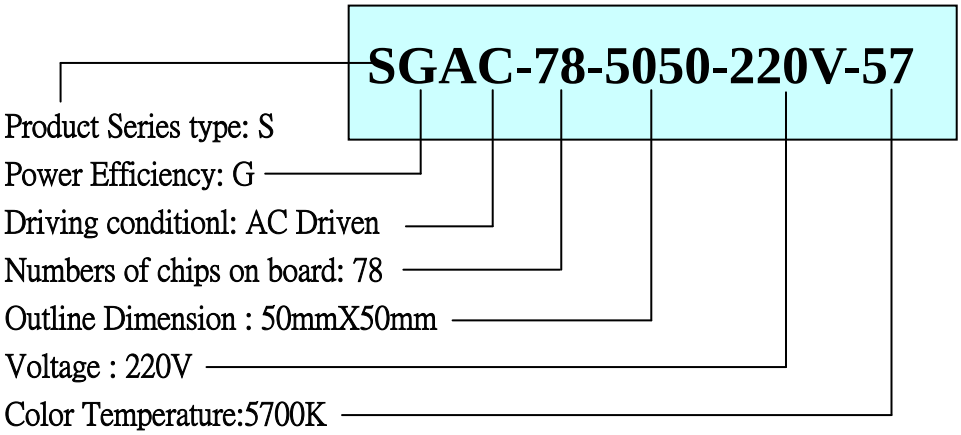
3. Junction Temperature measurement

4. Reliability Test

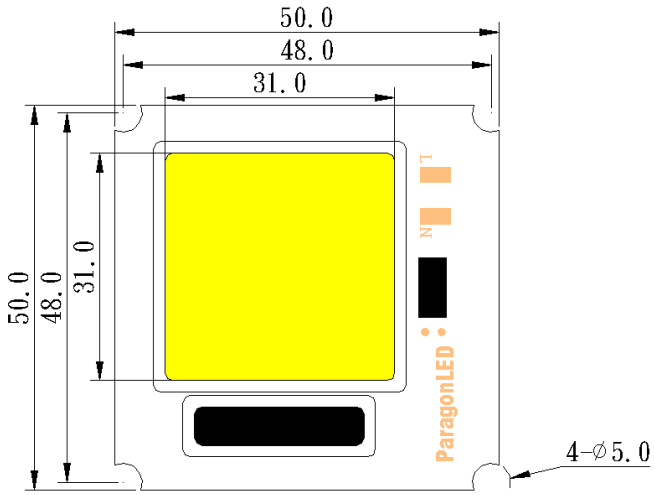
5.Instruction of ring

1. General Description

(1) Naming rule



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



Thickness: 1.6±0.2mm

2. Electro-Optical Characteristics

(1) Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	66	W
Forward Current	I_F	-	A
Forward Voltage	V_F	220V	V
Operating Temperature	T_{opr}	-40 ~ +60	℃
Storage Temperature	T_{stg}	-40 ~ +80	℃
Assembly process temperature	T_{sol}	<300℃ , 5 secs	

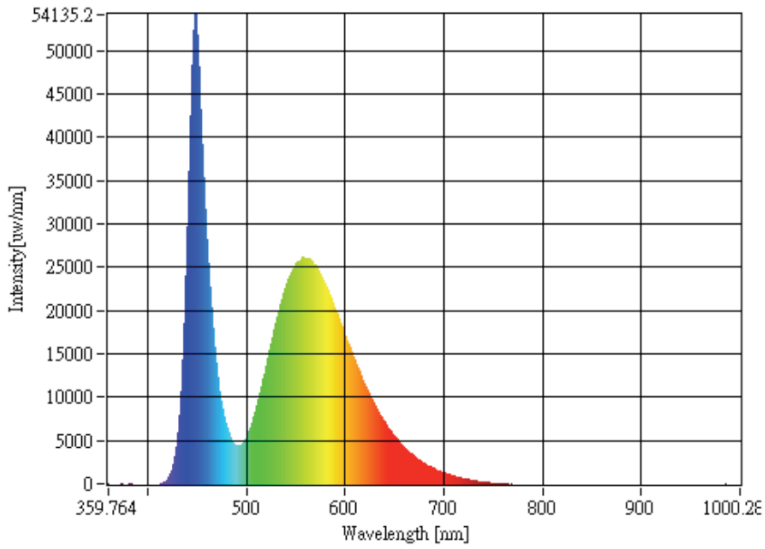
(2) Electro-Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	-	210	220	240	V
Luminous Intensity	Φ_v	V_F=220V	-	5280	-	Lm
Color rendering	Ra	V_F=220V	-	65	-	CRI

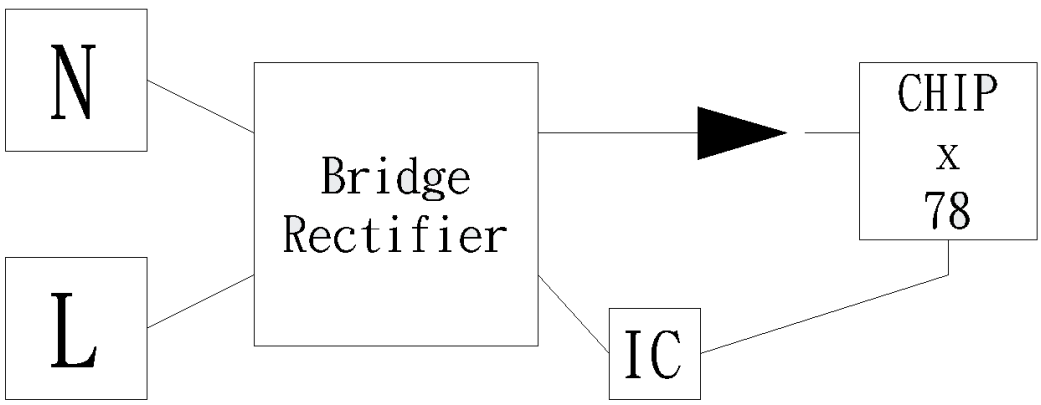
Notice: Operating current of SGAC-78 product varies from 210V~240V，users must keep the temperature of solder joint point under 60 ℃ (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

(3) Characteristics

Spectrum

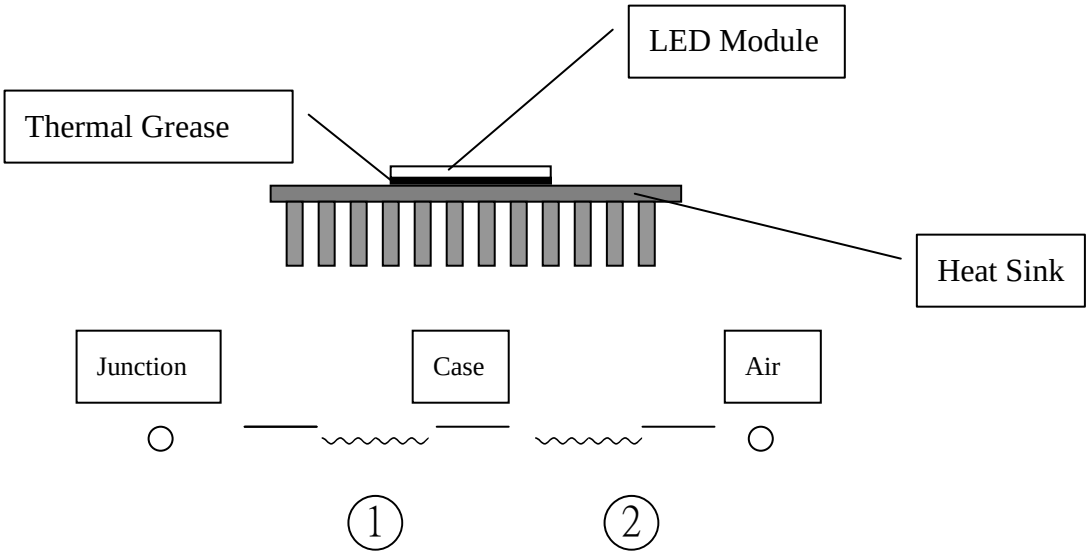


(4) Layout



78 in series =78 LED Chips

3. Junction Temperature Measurement



② Thermal 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	V_F = 220	> 0 x 1.1
Total Luminous Flux	V_F = 220	< L x 0.7

5.Instruction of ring

