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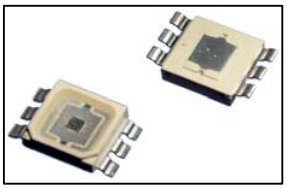
SMB1W-395



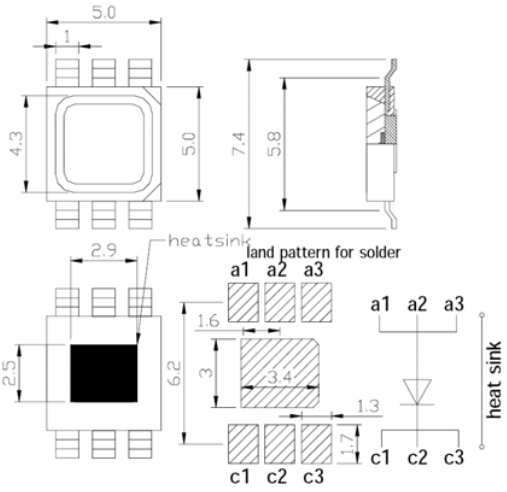
TECHNICAL DATA

High Power LED, SMD InGaN

SMB1W-395 are InGaN High Power LEDs mounted on a cooper heat sink with a 5x5 mm SMD package and molded with silicone resin. On forward bias, it emits a radiation of typical 100 mW at a peak wavelength of 395 nm.

Specifications

- Structure: InGaN, 1W high power chip
- Peak Wavelength: typ. 395 nm
- Optical Output Power: typ. 100 mW
- Package
  - SMD, PPA resin
  - Lead frame die: silver plated on copper
  - Lens: silicon resin



(Unit: mm)

Absolute Maximum Ratings (T_a=25°C)

Item	Symbol	Value	Unit
Power Dissipation	P_D	1250	mW
Forward Current	I_F	350	mA
Pulse Forward Current *[1]	I_{FP}	700	mA
Reverse Voltage	V_R	10	V
Operating Temperature	T_{opr}	-30 … +85	°C
Storage Temperature	T_{stg}	-30 … +100	°C
Soldering Temperature *[2]	T_{sol}	255	°C

*[1] duty = 1%, pulse width = 10 µs
*[2] must be completed within 5 seconds

Electro-Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F = 200 mA	-	4.0	4.5	V
Pulsed Forward Current	V_{FP}	I_{FP} = 500 mA	-	4.7	5.5	V
Reverse Current	I_R	V_R = 5 V	-	-	10	µA
Total Radiated Power	P_O	I_F = 200 mA	-	100	-	mW
Peak Wavelength	λ_P	I_F = 50 mA	-	395	-	nm
Half Width	$\Delta\lambda$	I_F = 50 mA	-	14	-	nm
Viewing Half Angle	$\Theta_{1/2}$	I_F = 50 mA	-	±60	-	deg.
Rise Time	t_r	I_F = 50 mA	-	200	-	ns
Fall Time	t_f	I_F = 50 mA	-	150	-	ns

Total Radiated Power is measured by S3584-08

Notes

- Do not view directly into the emitting area of the LED during operation!
- The above specifications are for reference purpose only and subjected to change without prior notice.

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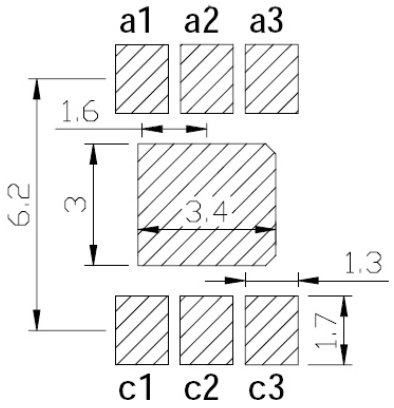
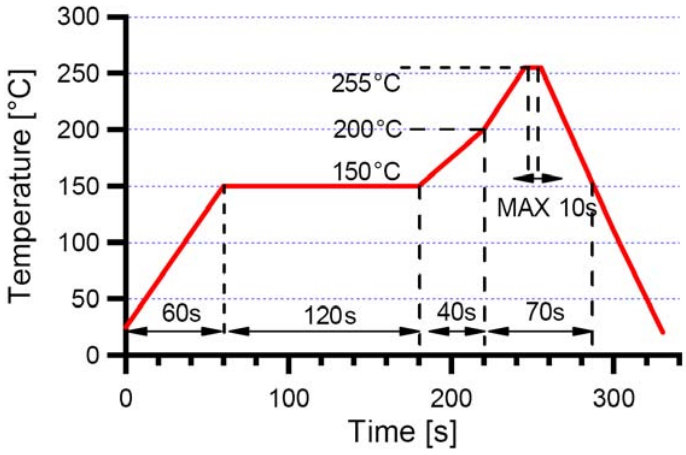
Recommended Land Layout (Unit: mm)



1. *Soldering Conditions*

- DO NOT apply any stress to the lead particularly when heat.
- After soldering the LEDs should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.

Soldering Conditions



2. *Static Electricity*

- The LEDs are very sensitive to Static Electricity and surge voltage. So it is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.
- All devices, equipment and machinery must be grounded properly. It is recommended that precautions should be taken against surge voltage to the equipment that mounts the LEDs.