

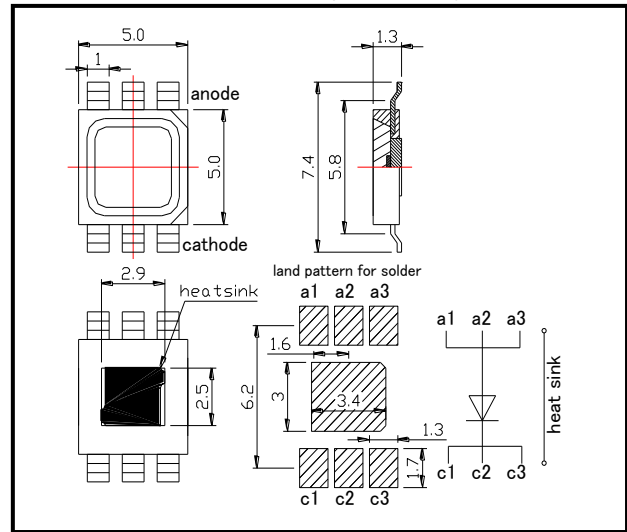
# SMB810-1100-I High Power type Top LED

SMB810-1100-I is an AlGaAs LED mounted on copper heat sink with a 5\*5 mm package. These devices are available to be operated and 1,250mW at IFP=4A.

◆Outer dimension (Unit: mm)

◆Specifications

- 1) Product Name High Power Top LED
- 2) Type No. SMB810-1100-I
- 3) Chip
  - (1) Chip Material AlGaAs
  - (2) Chip Dimension 1000um\*1000um
  - (3) Chip Number 1pce
- (4) Peak Wavelength 810nm typ.
- 4) Package
  - (1) Lead Frame Die Silver Plated on Copper
  - (2) Package Resin PPA Resin
  - (3) Lens Epoxy Resin



◆Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	PD	1850	mW	Ta=25°C
Forward Current	IF	800	mA	Ta=25°C
Pulse Forward Current	IFP	4000	mA	Ta=25°C
Reverse Voltage	VR	5	V	Ta=25°C
Thermal Resistance	Rthja	10	K/W	
Operating Temperature	TOPR	-30 ~ +85	°C	
Storage Temperature	TSTG	-30 ~ +100	°C	
Soldering Temperature	TSOL	255	°C	

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 5 seconds at 255°C

‡Thermal resistance: junction-ambient air flow

◆Electro-Optical Characteristics [Ta=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=600mA		1.8	2.3	V
	VFP	IFP=4A		4.0	5.5	
Radiated Power	Po	IF=600mA		200		mW
		IFP=4A		1250		
Radiant Intensity	IE	IF=600mA		120		mW/sr
		IFP=4A		800		
Peak Wavelength	λP	IF=100mA		810		nm
Half Width	Δλ	IF=100mA		35		nm
Viewing Half Angle	θ 1/2	IF=100mA		±8		deg.
Rise Time	tr	IF=100mA		25		ns
Fall Time	tf	IF=100mA		15		ns

‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by Tektronix J-6512