

SMB810-1100-01-I

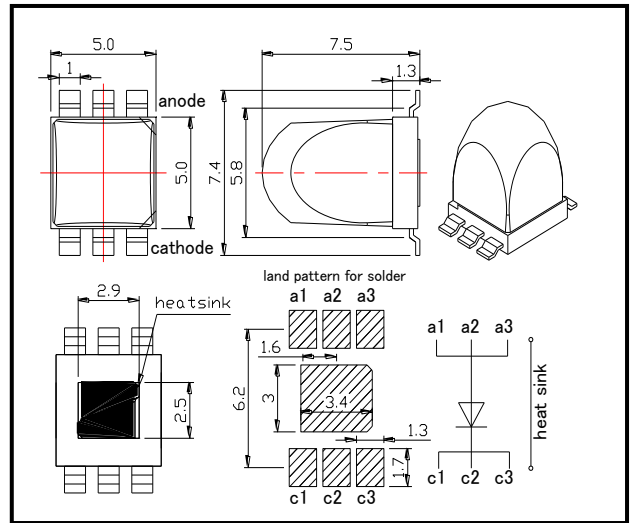
High Power type Top LED with Lens

SMB810-1100-01-I is an AlGaAs LED mounted on copper heat sink with a 5*5 mm package and molded with super beam lens. These devices are available to be operated and 3,100mW/sr at IFP=4A.

◆ Outer dimension (Unit: mm)

◆ Specifications

- 1) Product Name High Power Top LED
- 2) Type No. SMB810-1100-01-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	P _D	1,850	mW	T _a =25°C
Forward Current	I _F	800	mA	T _a =25°C
Pulse Forward Current	I _{FP}	4,000	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Thermal Resistance	R _{thja}	10	K/W	
Operating Temperature	T _{OPR}	-30 ~ +85	°C	
Storage Temperature	T _{STG}	-30 ~ +100	°C	
Soldering Temperature	T _{SOL}	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 [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =600mA		1.8	2.3	V
	V _{FP}	I _{FP} =4A		4.0	5.5	
Radiated Power	P _O	I _F =600mA		240		mW
		I _{FP} =4A		1,600		
Radiant Intensity	I _E	I _F =600mA		470		mW/sr
		I _{FP} =4A		3,100		
Peak Wavelength	λ _P	I _F =100mA		810		nm
Half Width	Δλ	I _F =100mA		35		nm
Viewing Half Angle	θ _{1/2}	I _F =100mA		±8		deg.
Rise Time	t _r	I _F =100mA		25		ns
Fall Time	t _f	I _F =100mA		15		ns

‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by Tektronix J-6512