

SMB470-1100

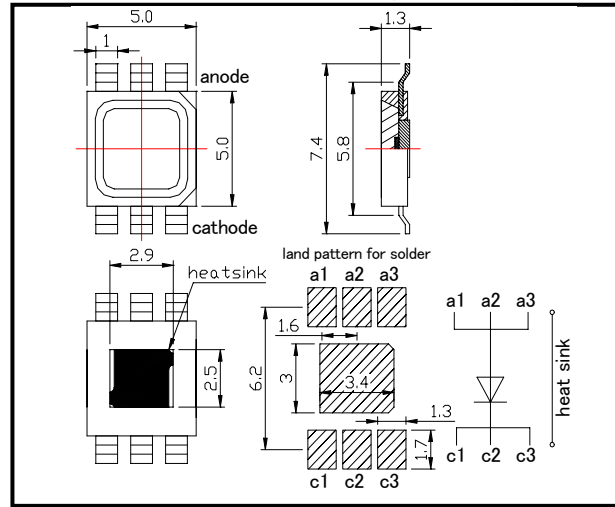
High Power type Top LED

SMB470-1100 is an InGaN LED mounted on copper heat sink with a 5x5 mm package. It emits peak wavelength at 470nm and brightness 3800mcd typical respectively at $\pm 60^\circ$ of viewing angle.

◆ Specifications

1) Product Name	High Power Top LED
2) Type No.	SMB470-1100
3) Chip	
(1) Chip Material	InGaN
(2) Chip Dimension	1000um*1000um
(3) Chip Number	1pce
(4) Peak Wavelength	470nm typ.
4) Package	
(1) Lead Frame Die	Silver Plated on Copper
(2) Package Resin	PPA Resin
(3) Lens	Epoxy Resin

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	1400	mW	$T_a=25^\circ\text{C}$
Forward Current	I_F	350	mA	$T_a=25^\circ\text{C}$
Pulse Forward Current	I_{FP}	700	mA	$T_a=25^\circ\text{C}$
Reverse Voltage	V_R	5	V	$T_a=25^\circ\text{C}$
Thermal Resistance	R_{thja}	10	K/W	
Operating Temperature	T_{OPR}	-30 ~ +85	$^\circ\text{C}$	
Storage Temperature	T_{STG}	-30 ~ +100	$^\circ\text{C}$	
Soldering Temperature	T_{SOL}	255	$^\circ\text{C}$	

‡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 [$T_a=25^\circ\text{C}$]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	$I_F=200\text{mA}$		3.4	4.0	V
		$I_F=350\text{mA}$		3.6	4.2	V
	V_{FP}	$I_{FP}=700\text{mA}$		4.0	4.8	V
Radiated Power	P_O	$I_F=200\text{mA}$		110		mW
		$I_{FP}=700\text{mA}$		360		mW
Brightness	I_v	$I_F=350\text{mA}$		3800		mcd
Peak Wavelength	λ_P	$I_F=50\text{mA}$		470		nm
Half Width	$\Delta\lambda$	$I_F=50\text{mA}$		17		nm
Viewing Half Angle	$\theta_{1/2}$	$I_F=50\text{mA}$		± 60		deg.

‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by Tektronix J-6501.