

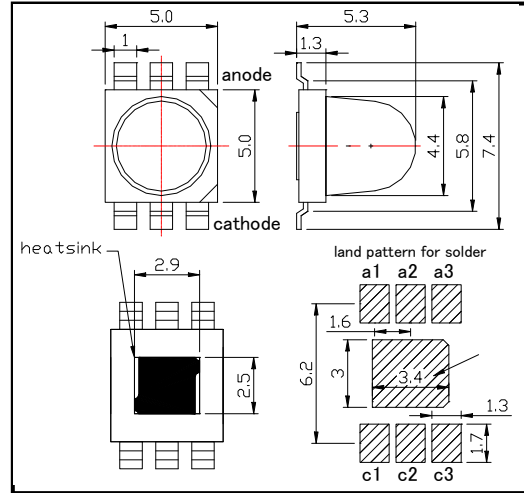
SMB780-1100-03-I High Power type Top LED with Lens

SMB780-1100-03 is an AlGaAs LED mounted on copper heat sink with a 5x5 mm package and molded with super beam lens. On forward bias, it emits a band of visible light which peaks 780nm. These devices are intended to be operated at pulsed current of 4A under maximum 3.5V for stable long life.

◆ Outer dimension (Unit: mm)

◆ Specifications

- 1) Product Name Super Flux mold type LED
- 2) Type No. SMB780-1100-03
- 3) Chip
 - (1) Chip Material GaAlAs
 - (2) Chip Dimension 1000um*1000um
 - (3) Peak Wavelength 780nm typ.
- 4) Package
 - (1) Type Super Beam type LED
 - (2) Resin Material Epoxy Resin
 - (3) Lead Frame Silver Plated Copper



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	1100	mW	T _a =25°C
Forward Current	I _F	600	mA	T _a =25°C
Pulse Forward Current	I _{FP}	4000	mA	T _a =25°C
Reverse Voltage	V _R	10	V	T _a =25°C
Operating Temperature	T _{OPR}	-30 ~ +85	°C	
Storage Temperature	T _{STG}	-30 ~ +100	°C	
Soldering Temperature	T _{SOL}	265	°C	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 265°C

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

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =200mA		1.65	1.85	V
Pulsed Forward Voltage	V _F	I _{FP} =4A		3.5	4.5	V
Reverse Current	I _R	V _R =10V			10	uA
Total Radiated Power	P _O	I _F =200mA	35.0	60		mW
Radiant Intensity	I _E	I _F =200mA		100		mW/sr
Peak Wavelength	λ _P	I _F =50mA		780		nm
Half Width	Δλ	I _F =50mA		25		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±12		deg.
Rise Time	t _r	I _F =50mA		80		ns
Fall Time	t _f	I _F =50mA		80		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.