

Lead ( Pb ) Free Product – RoHS Compliant

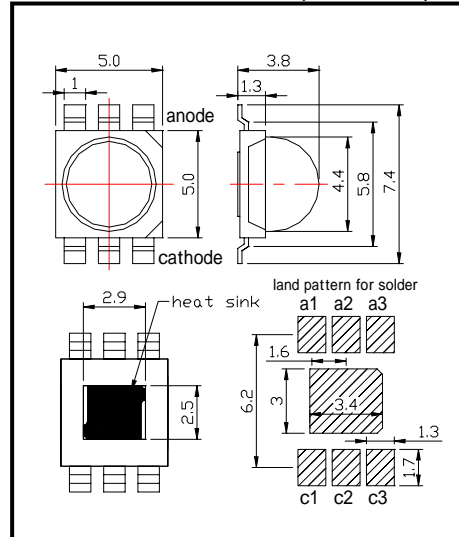
# SMB850D-1100-05(I) High Power Top LED with Lens

SMB850D-1100-05(I) is an AlGaAs LED mounted on insulating heat sink with a 5\*5 mm package and molded with epoxy resin lens. These devices are intended to be operated at pulsed current of 3A for stable long life.

### ◆ Specifications

1) Product Name	High Power Top LED
2) Type No.	SMB850D-1100-05(I)
3) Chip	
(1) Chip Material	GaAlAs
(2) Chip Dimension	1000um*1000um
(3) Chip Number	1pce
(4) Peak Wavelength	850nm 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 <sub>D</sub>	1200	mW	T <sub>a</sub> =25°C
Forward Current	I <sub>F</sub>	600	mA	T <sub>a</sub> =25°C
Pulse Forward Current	I <sub>FP</sub>	3000	mA	T <sub>a</sub> =25°C
Reverse Voltage	V <sub>R</sub>	10	V	T <sub>a</sub> =25°C
Operating Temperature	T <sub>OPR</sub>	-30 ~ +85	°C	
Storage Temperature	T <sub>STG</sub>	-30 ~ +100	°C	
Soldering Temperature	T <sub>SOL</sub>	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<sub>a</sub>=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =400mA		1.8	2.0	V
Pulsed Forward Voltage	V <sub>F</sub>	I <sub>FP</sub> =2A		2.8	4.0	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =10V			10	uA
Radiated Power	P <sub>O</sub>	I <sub>F</sub> =400mA	180	240		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =400mA		150		mW/sr
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =100mA		850		nm
Half Width	Δλ	I <sub>F</sub> =100mA		20		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =100mA		±33		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =100mA		65		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =100mA		25		ns

‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by Tektronix J-6512.