

Lead (Pb) Free Product – RoHS Compliant

SMB850D-1100-05-1723

High Power Top LED with Metal PCB

SMB850D-1100-05-1723 assembled on Cu made PCB with connectors.

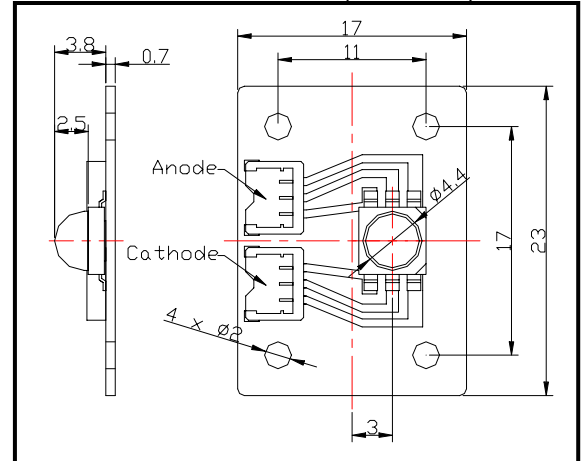
Its thermal resistance is lower as 10K/W and is furnished with connectors for easy operation.

These devices are intended to be operated at pulsed current of 3A for stable long life.

◆ Specifications

1) Product Name	High Power Top LED with Cu PCB
2) Type No.	SMB850D-1100-05-1723
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) PCB board	Cu Plate, Gold Plating on the Back
(3) Lens	Epoxy Resin

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	PD	2800	mW	Ta=25°C
Forward Current	IF	1000	mA	Ta=25°C
Pulse Forward Current	IFP	3000	mA	Ta=25°C
Reverse Voltage	VR	10	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		1.9	2.1	V
		IF=1000mA		2.1	2.8	
Pulsed Forward Voltage	VFP	IFP=3A		3.5	4.7	V
Reverse Current	IR	VR=10V			10	uA
Radiated Power	Po	IF=600mA	280	380		mW
		IF=1000mA	450	600		
Radiant Intensity	IE	IF=600mA		270		mW/sr
		IF=1000mA		440		
Peak Wavelength	λP	IF=100mA		850		nm
Half Width	Δλ	IF=100mA		40		nm
Viewing Half Angle	θ 1/2	IF=100mA		±33		deg.
Rise Time	tr	IF=100mA		15		ns
Fall Time	tf	IF=100mA		10		ns

‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by Tektronix J-6512.