

Lead (Pb) Free Product – RoHS Compliant

SMB660N-1100-01

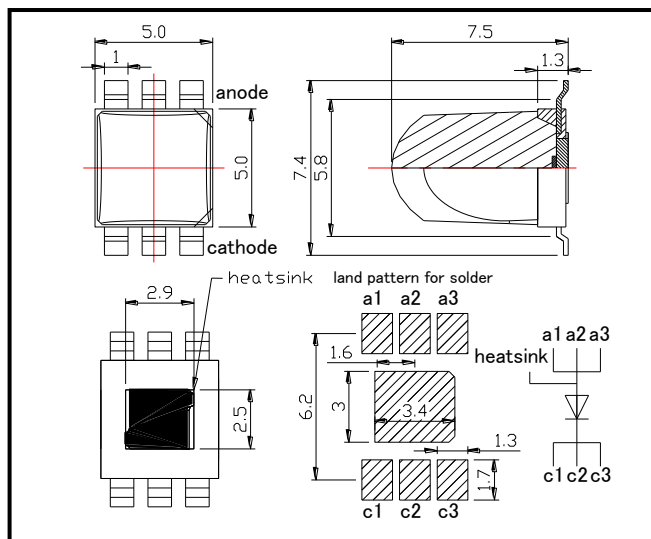
High Power type Top LED with Lens

SMB660N-1100-01 is an AlGaInP LED mounted on copper heat sink with a 5*5 mm package
These devices are available to be operated and 2,700mW/sr at IFP=2A.

◆ Specifications

- 1) Product Name High Power Top LED
- 2) Type No. SMB660N-1100-01
- 3) Chip
 - (1) Chip Material AlGaInP
 - (2) Chip Dimension 1000um*1000um
 - (3) Chip Number 1pce
 - (4) Peak Wavelength 660nm 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	PD	1600	mW	Ta=25°C
Forward Current	IF	600	mA	Ta=25°C
Pulse Forward Current	IFP	2000	mA	Ta=25°C
Reverse Voltage	VR	5	V	Ta=25°C
Thermal Resistance	Rthja	10	K/W	
Junction Temperature	Tj	100	°C	
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

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

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=500mA		2.1	2.4	V
	VFP	IFP=2A		2.8	3.3	V
Radiated Power	Po	IF=500mA		300		mW
		IFP=2A		1200		mW
Radiant Intensity	IE	IF=500mA		800		mW/sr
		IFP=2A		2700		mW/sr
Brightness	Iv	IF=500mA		56000		mcd
		IFP=2A		190000		mcd
Peak Wavelength	λP	IF=100mA		660		nm
Half Width	Δλ	IF=100mA		25		nm
Viewing Half Angle	θ 1/2	IF=100mA		±7		deg.
Rise Time	tr	IF=100mA		300		ns
Fall Time	tf	IF=100mA		30		ns

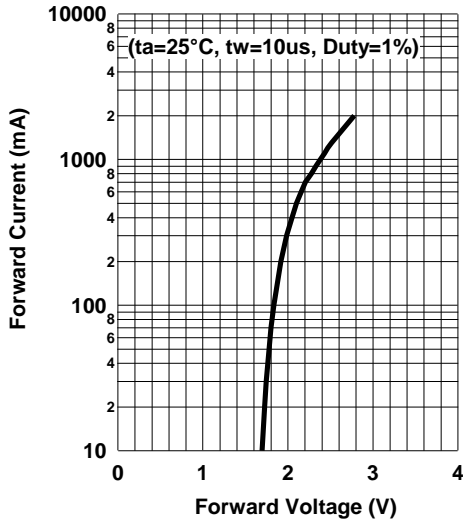
‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by Tektronix J-6512.

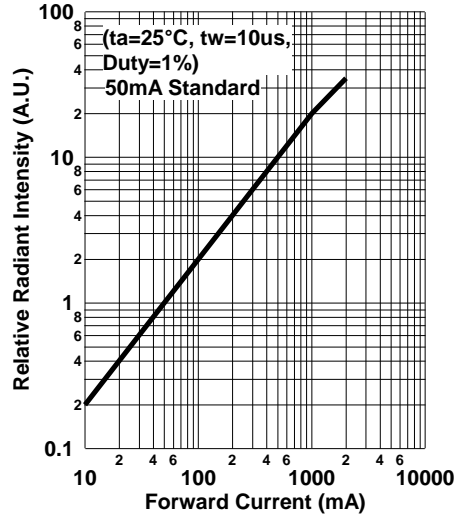
Marubeni America Corporation

3945 Freedom Circle, Suite 1000, Santa Clara, CA 95054
408-330-0650 (Ext. 330), 408-330-0655 (FAX), sales@tech-led.com

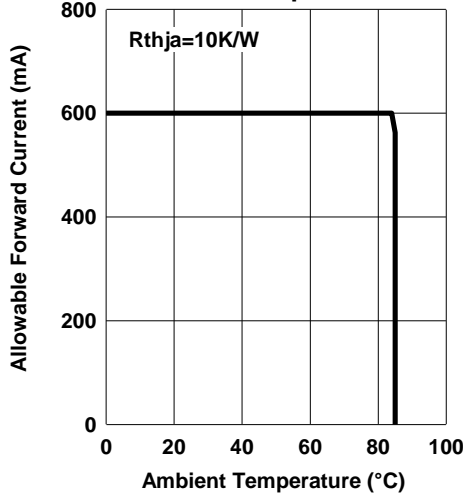
Forward Current - Forward Voltage



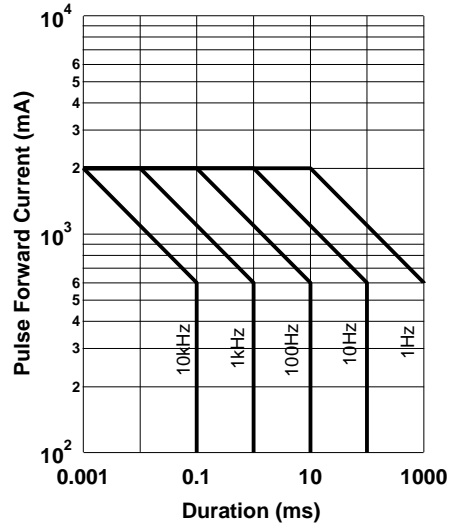
Relative Radiant Intensity - Forward Current



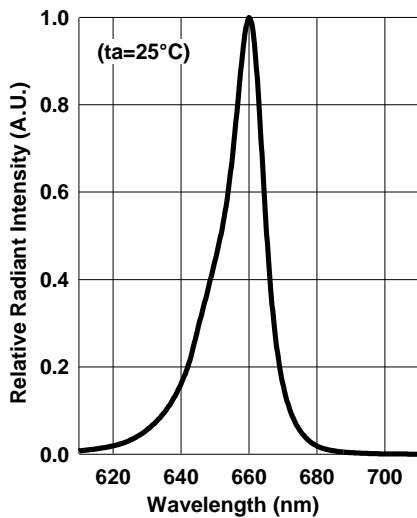
Allowable Forward Current - Ambient Temperature

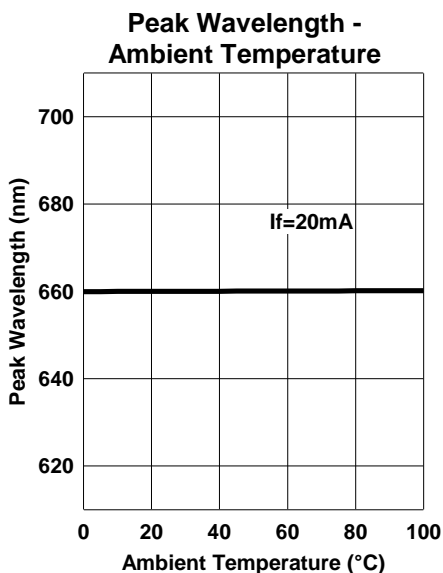
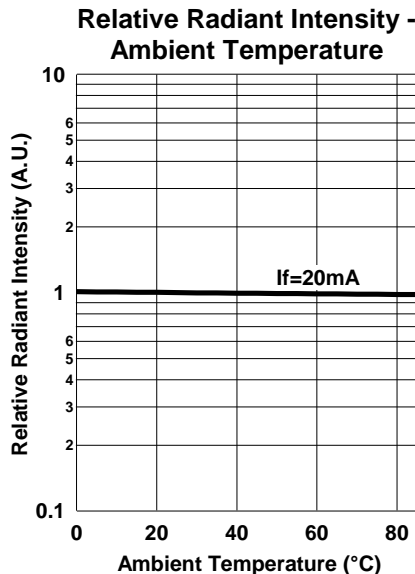
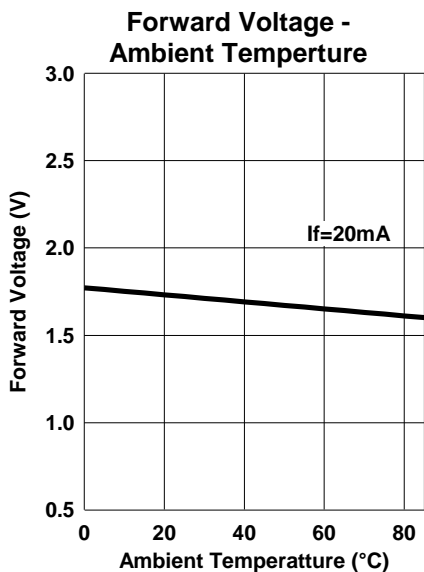


Forward Current-Pulse Duration



Relative Spectral Emission

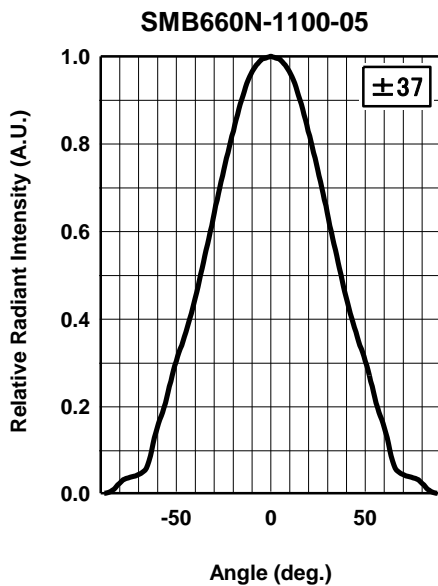
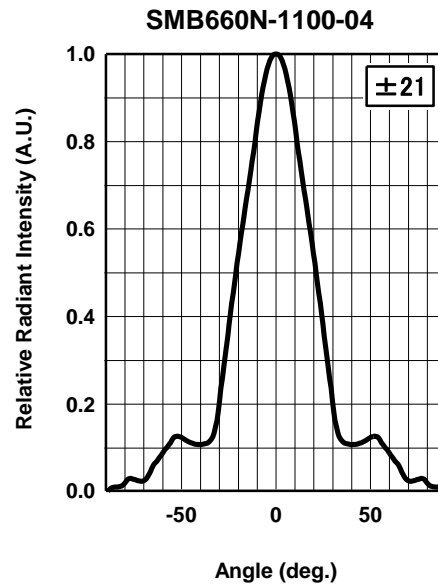
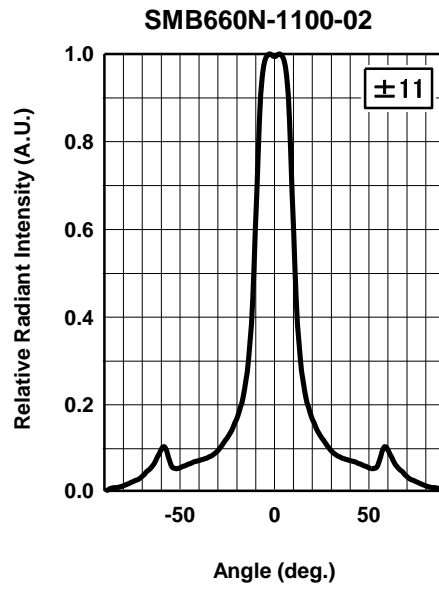
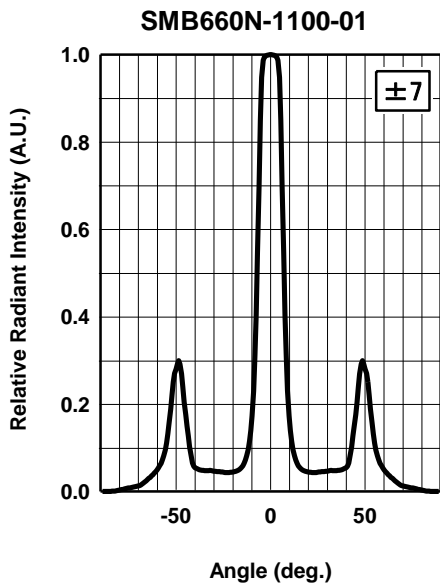




◆ Wrapping

Moisture barrier bag aluminum laminated film with a desiccant to keep out the moisture absorption during the transportation and storage.

Radiation Pattern



SMD LED STORAGE AND HANDLING PRECAUTIONS

< Storage Conditions before Opening a Moisture-Barrier Aluminum Bag >

- Before opening a moisture-barrier aluminum bag, please store it at <30°C, <60%RH. Please note that the maximum shelf life is 12 months under these conditions.

< Storage Conditions after Opening a Moisture-Barrier Aluminum Bag >

- After opening a moisture-barrier aluminum bag, store the aluminum bag and silica gel in a desiccator.
- After opening the bag, please solder the LEDs within 48 hours in a room with 5 - 30°C, <50%RH.
- Please put any unused, remaining LEDs and silica gel back in the same aluminum bag and then vacuum-seal the bag.
- It is recommended to keep the re-sealed bag in a desiccator at <30%RH.

< Notes about Re-sealing a Moisture-Barrier Aluminum Bag >

- When vacuum-sealing an opened aluminum bag, if you find the moisture-indicator of the silica gel has changed to pink from blue (indicating a relative humidity of 30 % or more), please do not use the unused LEDs, the aluminum bag, or the silica gel.

< Notes about Opening a Re-sealed Moisture-Barrier Aluminum Bag >

- When opening a vacuumed and re-sealed aluminum bag in order to use the remaining LEDs stored in the bag, if you find that the moisture-indicator of the silica has changed to pink, please do not use the LEDs.

※The 48-hour- long floor life does not include the time while LEDs are stored in the moisture-barrier aluminum bag.

However, we strongly recommend to solder the LEDs as soon as possible after opening the aluminum bag.