

SML1209-0PB-TR

Super Blue

Dome Lens Surface Mount LED

3.2 × 2.4 × 2.4 mm Chip LED

20° viewing angle

DWG BY:
KB / JG
12-15-06

CHK BY:
PL
07-17-08

QA:

__-__-__

MFG:

__-__-__

REVISION LTR: A

07-16-08

Features

- 3.2x2.4mm SMT LED, 2.4mm THICKNESS.
- LOW POWER CONSUMPTION.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE : 1500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

Description

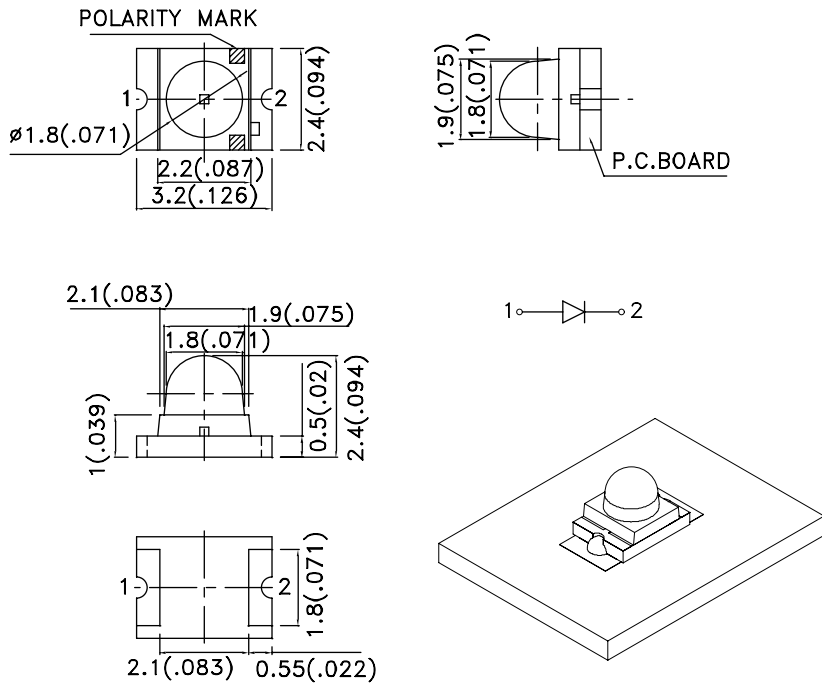
The Blue source color devices are made with InGaN on SiC Light Emitting Diode.

Static electricity and surge damage the LEDS.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ unless otherwise noted.
3. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	θ1/2
SML1209-0PB-TR	Blue (InGaN)	WATER CLEAR	110	380	20°

Notes:

- θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- Luminous intensity/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue	468		nm	IF=20mA
λD [1]	Dominant Wavelength	Blue	470		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Blue	21		nm	IF=20mA
C	Capacitance	Blue	100		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue	3.2	4	V	IF=20mA
IR	Reverse Current	Blue		10	uA	VR=5V
X	Chromaticity Coordinates	Blue	0.13			IF=20mA
Y	Chromaticity Coordinates	Blue	0.05			IF=20mA

Notes:

- Wavelength: +/-1nm.
- Forward Voltage: +/-0.1V.

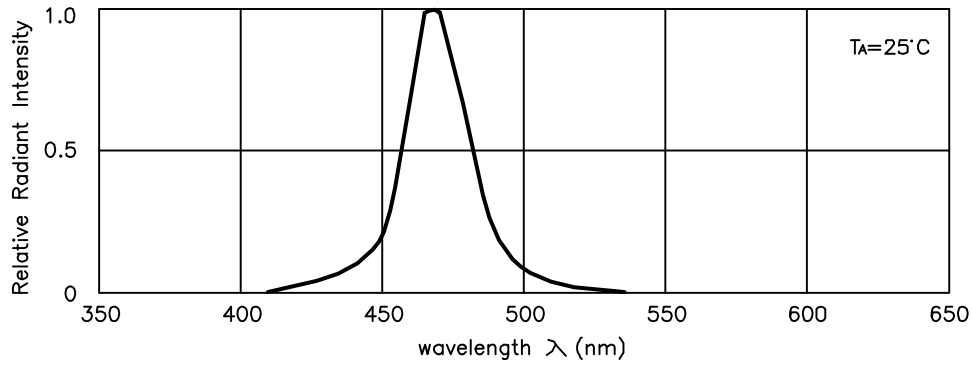
Absolute Maximum Ratings at TA=25°C

Parameter	Blue	Units
Power dissipation	120	mW
DC Forward Current	30	mA
Peak Forward Current [1]	100	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

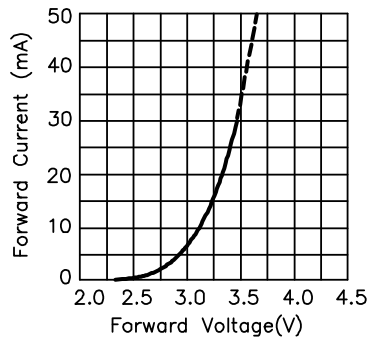
Note:

- 1/10 Duty Cycle, 0.1ms Pulse Width.

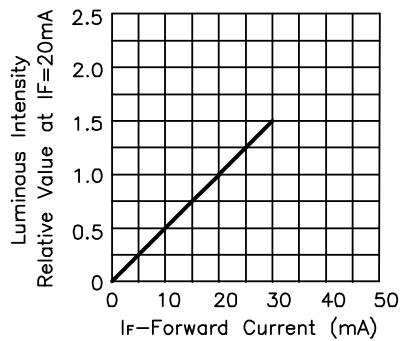
Optical Characteristics Curves



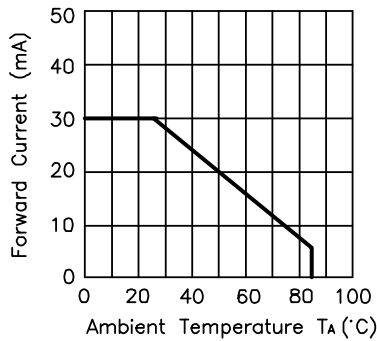
RELATIVE INTENSITY Vs. WAVELENGTH



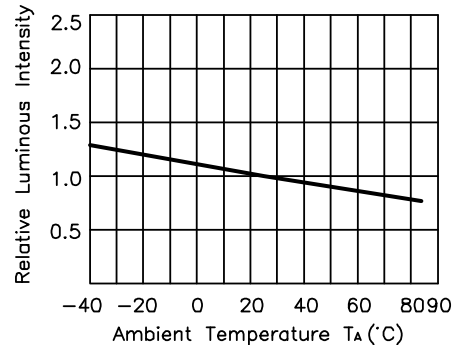
FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT

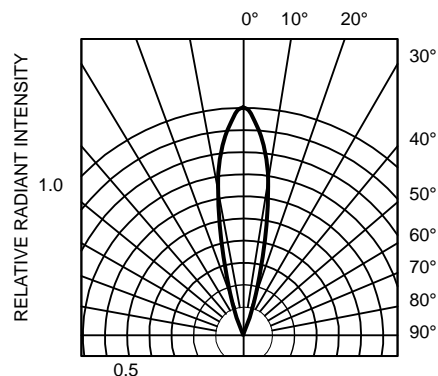


FORWARD CURRENT DERATING CURVE



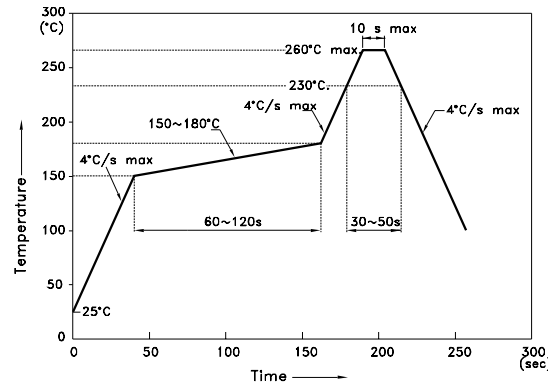
LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

RADIATION DIAGRAM



SMD Chip Lamps Packaging Specifications

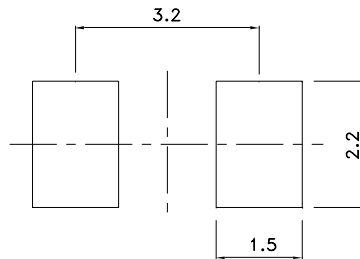
Reflow Soldering Profile For Lead-free SMT Process.



NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Tape Specifications (Units : mm)

