

Surface Mount Chip LEDs

MSL-194B

Description

The MSL-194B, a BLUE source Chip LED device, is designed in an industry standard package suitable for SMT assembly method. It utilizes InGaN on SiC LED chip technology and water clear epoxy package.

Applications

- Small Size
- Industry Standard Footprint(0603)
- Compatible with IR Solder process
- Available in 8 mm Tape on 7"(178mm)

Diameter Reels

Features

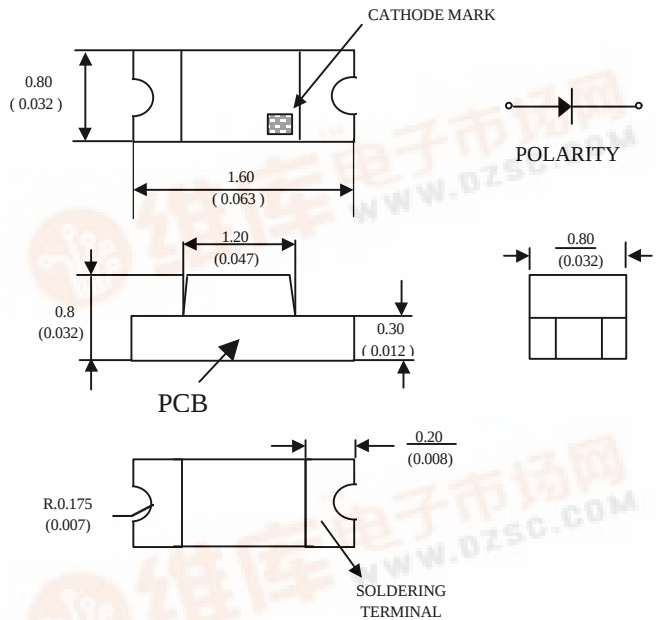
- Push-Button Backlighting
- LCD Backlighting
- Symbol Backlighting
- Front Panel Indicator

Absolute Maximum Ratings

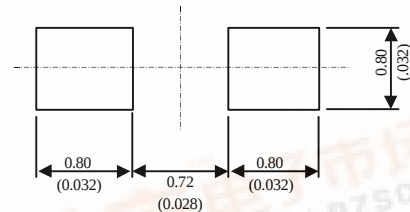
@ $T_A = 25^\circ\text{C}$

Parameter	Symbol	Maximum Rating	Unit
Peak Forward Current(1/10 Duty Cycle@1KHz)	I_{FP}	100	mA
DC Forward Current	I_F	30	mA
Power Dissipation	P_D	126	mW
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{OPR}	-20°C to $+80^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-30°C to $+100^\circ\text{C}$	
Electrostatic Discharge Threshold	E_{OT}	1000	V

Package Dimensions



Recommended Solder Patterns



NOTE:

1. All dimensions are in millimeter (inches)
2. Tolerance is $\pm 0.1\text{mm}$ (.004") unless otherwise specified.

Optical-Electrical Characteristics

@ $T_A=25^{\circ}\text{C}$

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	$I_F=20\text{mA}$	I_V	5.0	12.0	-	mcd
Forward Voltage	$I_F=20\text{mA}$	V_F	-	3.5	4.0	V
Reverse Current	$V_R=5\text{V}$	I_R	-	-	10	μA
Peak/Dominant Wavelength	$I_F=20\text{mA}$	λ_p/λ_d	-	465/470	-	nm
Spectral Linewidth	$I_F=20\text{mA}$	$\Delta\lambda$	-	26	-	nm
Viewing Angle	$I_F=20\text{mA}$	$2\theta_{1/2}$	-	130	-	deg.

Typical Optical-Electrical Characteristic Curves

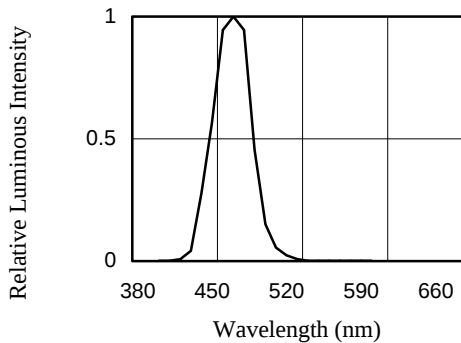


FIG.1 RELATIVE INTENSITY LUMINOUS VS. WAVELENGTH

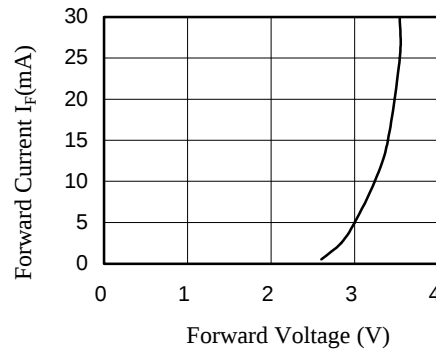


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

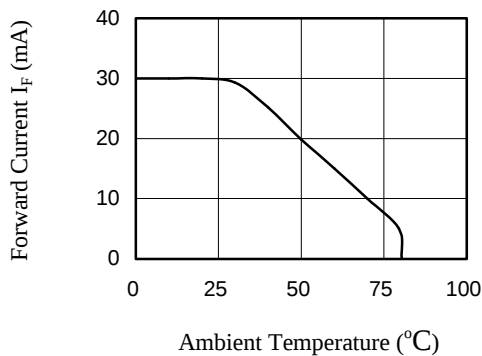


FIG.3 FORWARD CURRENT VS. AMBIENT TEMPERATURE

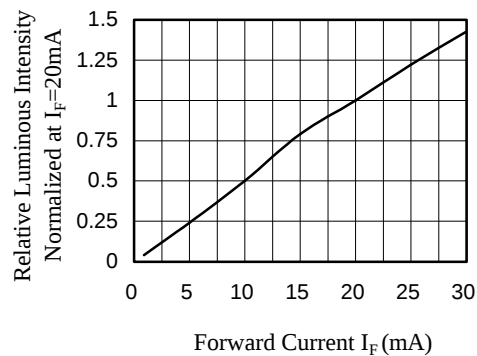


FIG.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

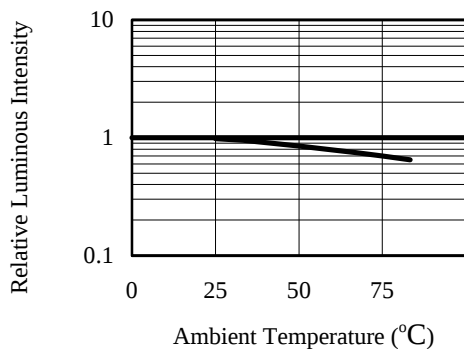


FIG.5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

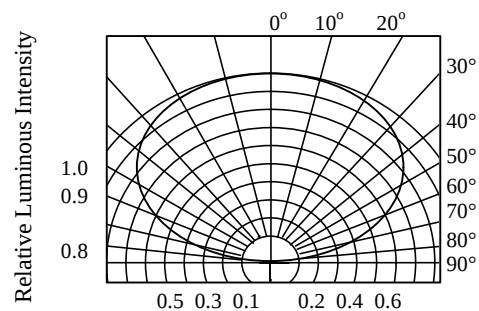


FIG.6 RADIATION DIAGRAM