

Surface Mount Chip LEDs

MSL-194DR

Description

The MSL-194DR, a RED source Chip LED device, is designed in an indnstry standard package suitable for SMT assembly method. It utilizes AlGaAs on GaAs LED chip technology and water clear epoxy package.

Applications

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

Diameteer Reels

Features

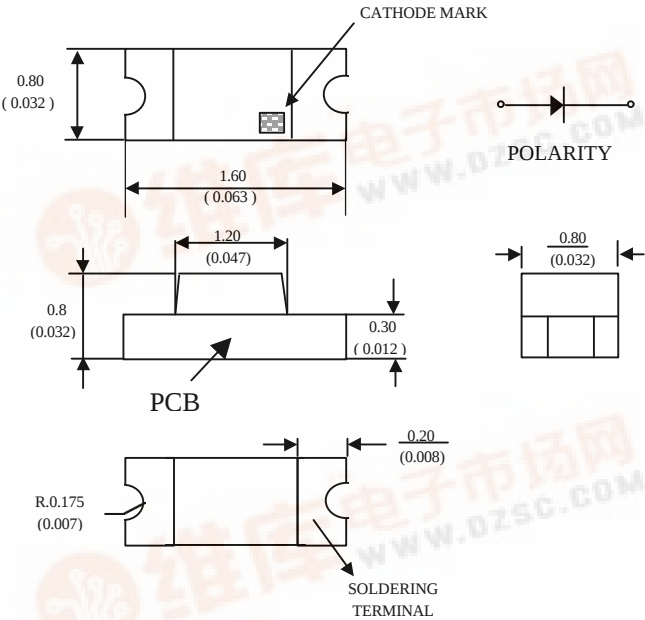
- Push-Button Backlighting
- LCD Backlighting
- Symbol Backlighting
- Front Panel Indicator

Absolute Maximum Ratings

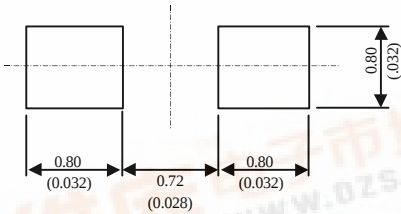
@ T_A=25°C

Parameter	Symbol	Maximum Rating	Unit
Peak Forward Current(1/10 Duty Cycle@1KHz)	I _{FP}	200	mA
DC Forward Current	I _F	25	mA
Power Dissipation	P _D	55	mW
Reverse Voltage	V _R	5	V
Operating Temperature Range	T _{OPR}	-25°C to +80°C	
Storage Temperature Range	T _{STG}	-30°C to +85°C	

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	10	21.5	-	mcd
Forward Voltage	$I_F=20\text{mA}$	V_F	-	1.9	2.0	V
Reverse Current	$V_R=5\text{V}$	I_R	-	-	10	μA
Peak/Dominant Wavelength	$I_F=20\text{mA}$	λ_p/λ_d	-	660/640	-	nm
Spectral Linewidth	$I_F=20\text{mA}$	$\Delta\lambda$	-	20	-	nm
Viewing Angle	$I_F=20\text{mA}$	$2\theta_{1/2}$	-	130	-	deg.

Typical Optical-Electrical Characteristic Curves

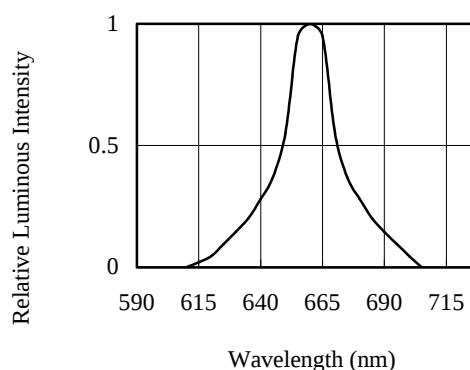


FIG.1 RELATIVE INTENSITY LUMINOUS VS. WAVELENGTH

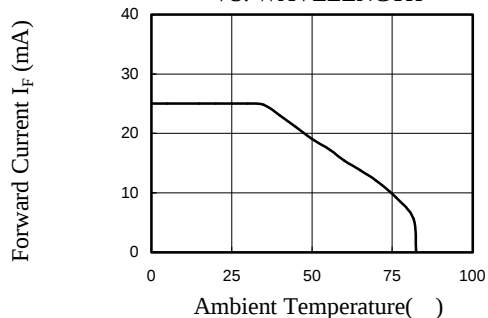


FIG. 3 FORWARD CURRENT VS. AMBIENT TEMPERATURE.

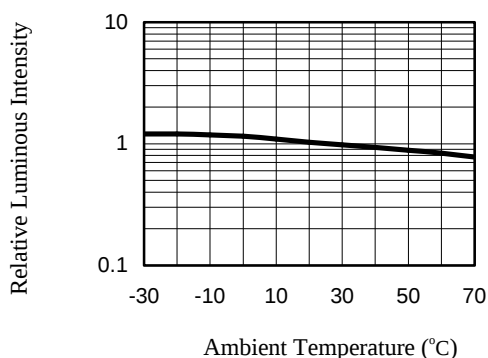


FIG.5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

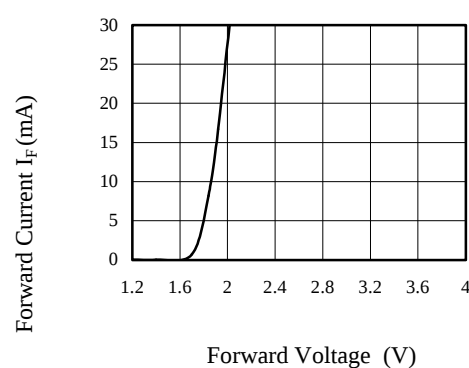


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE.

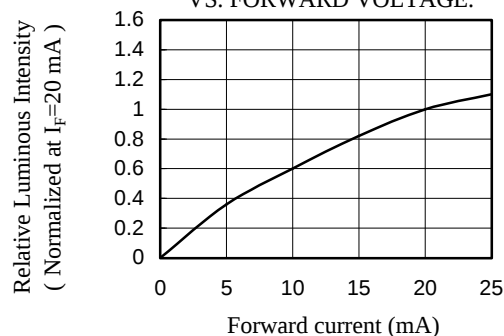


FIG. 4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

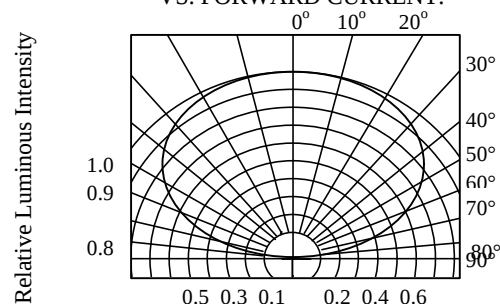


FIG.6 RADIATION DIAGRAM