

Surface Mount Full Color PLCC LEDs

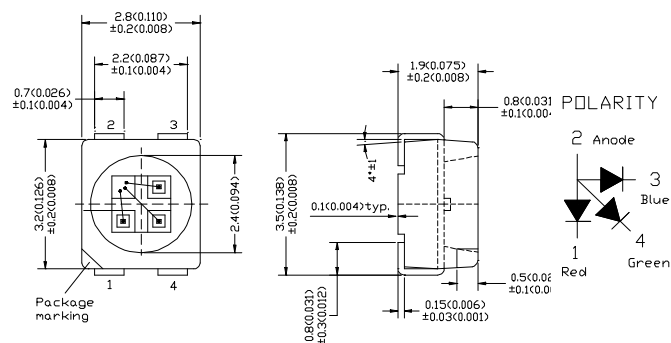
MSL-204RGBAH

Description

The MSL-204RGBAH, a full colors device, is made with InGaN (on Sapphire substrate) BLUE, GREEN and AlInGaP RED LED dice. It is PLCC package, suitable for all SMT assembly methods.

Package Dimensions

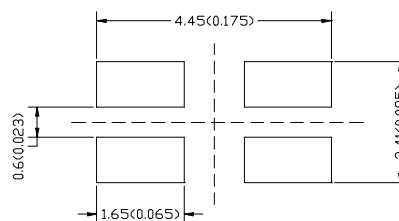
Unit: mm (inches)



Application

- Key pad backlighting
- Symbol backlighting
- Front panel indicator
- Indoor full color sign board

Recommand Solder Pad



Notes :

1. All dimensions are in millimeters.
2. Tolerance is ± 0.20 mm unless otherwise noted.

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
Continuous Forward Current	I_F	30	mA
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}	300	V

Optical-Electrical Characteristics**Blue**@ T_A=25°C

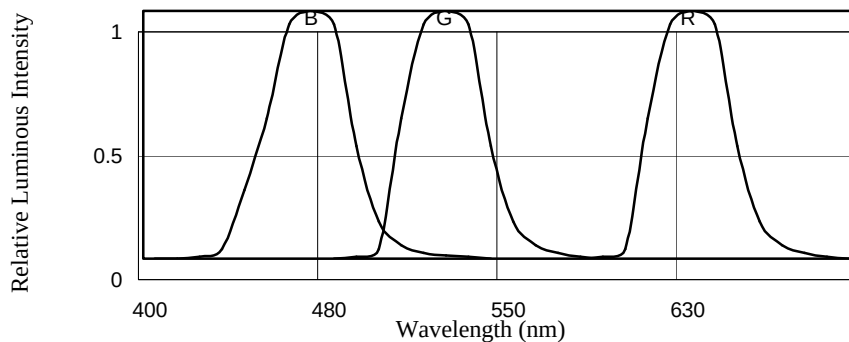
Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =20mA	I _V	-	80	-	mcd
Forward Voltage	I _F =20mA	V _F	-	3.5	4.2	V
Reverse Current	V _R =5V	I _R	-	-	100	μA
Peak/Dominant Wavelength	I _F =20mA	λ _d	-	470	-	nm
Spectral Linewidth	I _F =20mA	Δλ	-	26	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	-	120	-	deg.

Green@ T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =20mA	I _V	-	280	-	mcd
Forward Voltage	I _F =20mA	V _F	-	3.5	4.2	V
Reverse Current	V _R =5V	I _R	-	-	100	μA
Peak/Dominant Wavelength	I _F =20mA	λ _d	-	525	-	nm
Spectral Linewidth	I _F =20mA	Δλ	-	35	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	-	120	-	deg.

Red@ T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =20mA	I _V	-	130	-	mcd
Forward Voltage	I _F =20mA	V _F	-	2.1	2.6	V
Reverse Current	V _R =5V	I _R	-	-	10	μA
Peak/Dominant Wavelength	I _F =20mA	λ _d	-	625	-	nm
Spectral Linewidth	I _F =20mA	Δλ	-	20	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	-	120	-	deg.

Typical Optical-Electrical Characteristic CurvesFIG.1 RELATIVE INTENSITY LUMINOUS
VS. WAVELENGTH

Typical Optical-Electrical Characteristic Curves

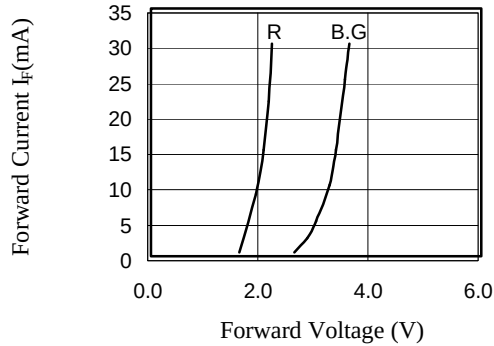


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

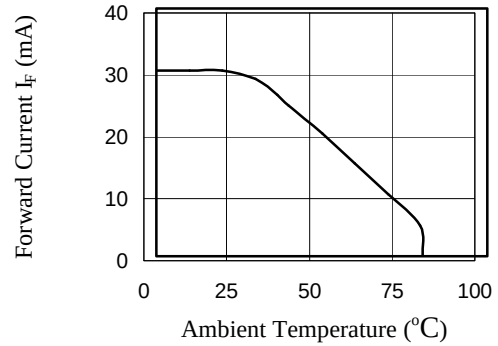


FIG.3 FORWARD CURRENT VS. AMBIENT TEMPERATURE

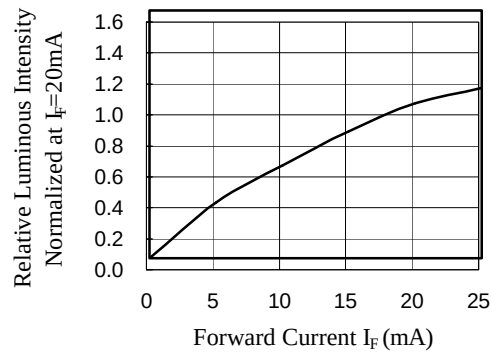


FIG.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

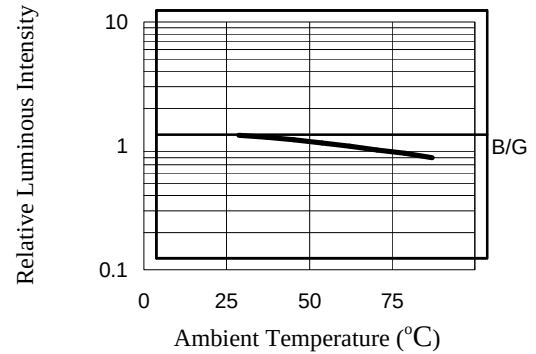


FIG.5-2 RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

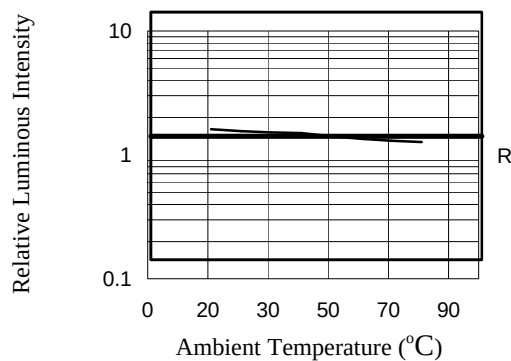


FIG.5-3 RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

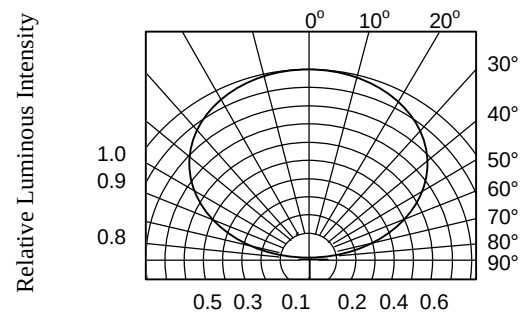


FIG.6 RADIATION DIAGRAM