Surface Mount Full Color PLCC LEDs MSL-204RGBU

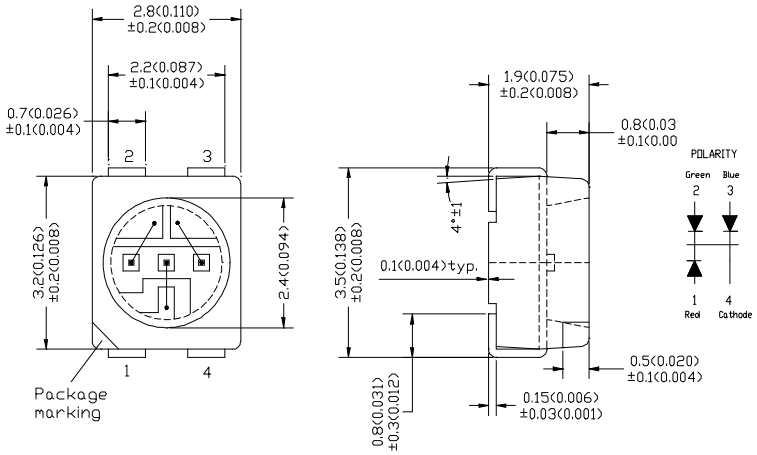
Description

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

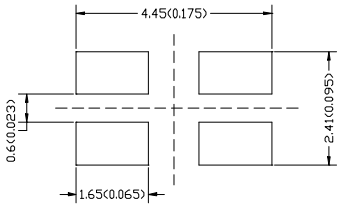
Features

- Key pad backlighting
- Symbol backlighting
- Front panel indicator

Package Dimensions



Recommended Solder Patterns



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

Absolute Maximum Ratings

@ T_A=25°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°C	
Storage Temperature Range	T_{stg}	-30°C to +100°C	
Electrostatic Discharge Threshold	E_{ot}	1000	V

Optical-Electrical Characteristics

Blue

@ T_A=25ºC

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=20mA	I_V	-	80	-	mcd
Forward Voltage	I_F=20mA	V_F	-	3.7	4.1	V
Reverse Current	V_R=5V	I_R	-	-	10	μA
Peak/Dominant Wavelength	I_F=20mA	λ_d	-	470	-	nm
Spectral Linewidth	IF=20mA	$\Delta\lambda$	-	26	-	nm
Viewing Angle	I_F=20mA	$2\theta_{1/2}$	-	120	-	deg.

Green

@ T_A=25ºC

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=20mA	I_V	-	280	-	mcd
Forward Voltage	I_F=20mA	V_F	-	3.7	4.1	V
Reverse Current	V_R=5V	I_R	-	-	10	μA
Peak/Dominant Wavelength	I_F=20mA	λ_d	-	525	-	nm
Spectral Linewidth	IF=20mA	$\Delta\lambda$	-	35	-	nm
Viewing Angle	I_F=20mA	$2\theta_{1/2}$	-	120	-	deg.

Red

@ T_A=25ºC

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=20mA	I_V	-	150	-	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	IF=20mA	$\Delta\lambda$	-	20	-	nm
Viewing Angle	I_F=20mA	$2\theta_{1/2}$	-	120	-	deg.

Typical Optical-Electrical Characteristic Curves

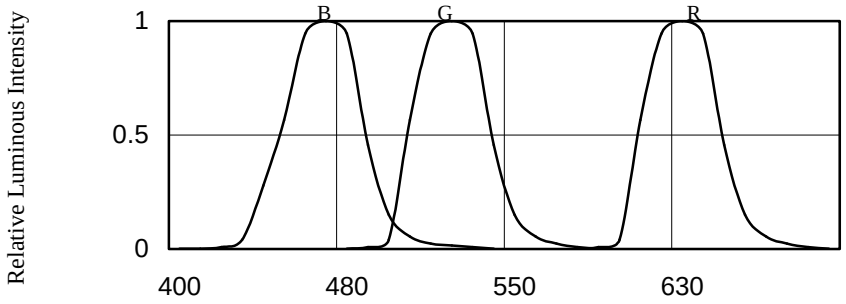
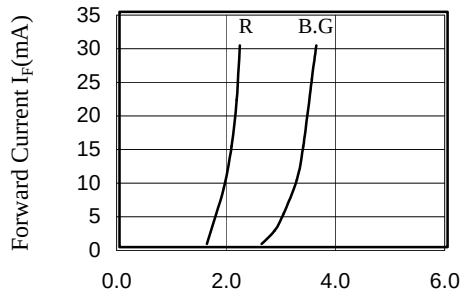
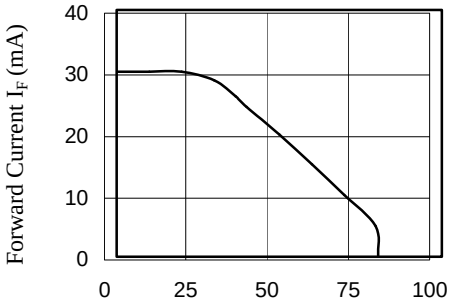


FIG.1 RELATIVE INTENSITY LUMINOUS VS. WAVELENGTH

Typical Optical-Electrical Characteristic Curves



Forward Voltage (V)
FIG.2 FORWARD CURRENT VS.
FORWARD VOLTAGE



Ambient Temperature (^oC)
FIG.3 FORWARD CURRENT VS.
AMBIENT TEMPERATURE

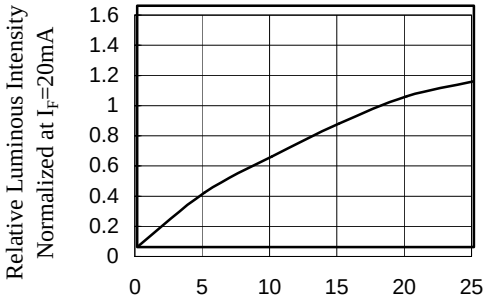


FIG.4 RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT

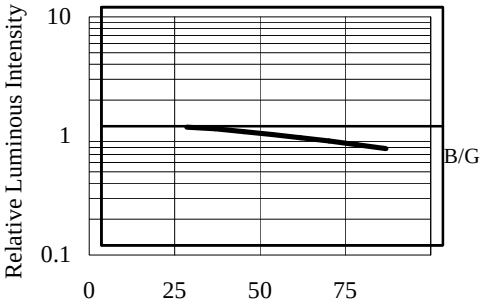


FIG.5-2 RELATIVE LUMINOUS INTENSITY VS.
AMBIENT TEMPERATURE

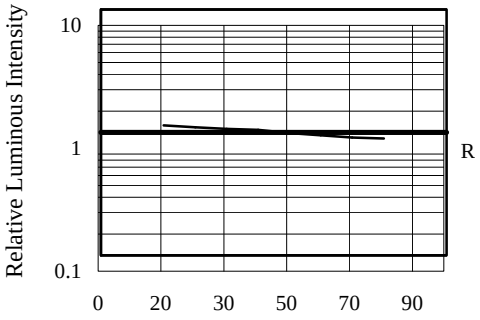


FIG.5-3 RELATIVE LUMINOUS INTENSITY VS.
AMBIENT TEMPERATURE

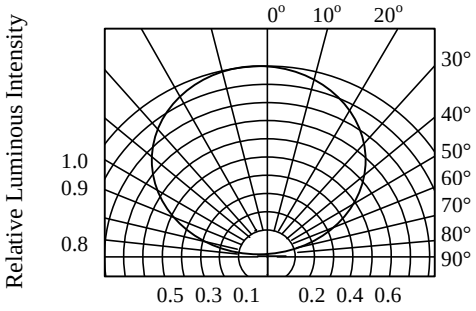


FIG.6 RADIATION DIAGRAM