Surface Mount Full Color Chip LEDs MSL-157RGB

Description

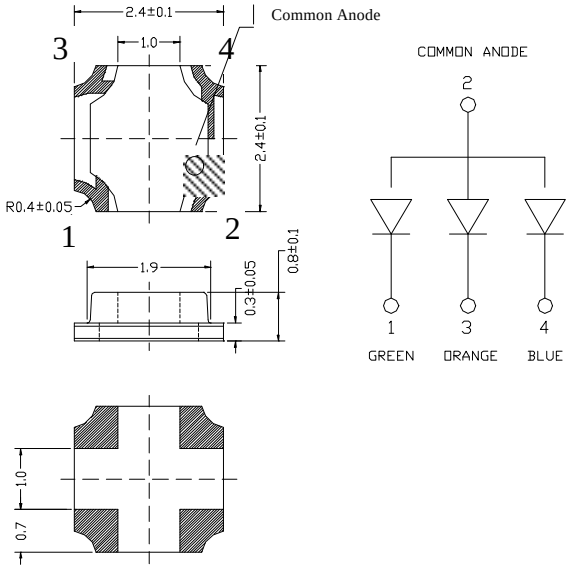
The MSL-157RGB , a full colors device, is made with InGaN (on Sapphire substrate) BLUE, TRUE GREEN and AlInGaP SOFT RED LED dice. It is PCB type package, suitable for all SMT assembly methods.

Features

- Key pad backlighting
- Symbol backlighting
- Front panel indicator

Package Dimensions

Unit: mm



Notes :
1. All dimensions are in millimeters.
2. Tolerance is ± 0.10 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	

Optical-Electrical Characteristics

Blue

@ T_A=25ºC

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=20mA	I_V	15	40	-	mcd
Forward Voltage	I_F=20mA	V_F	-	3.7	4.2	V
Reverse Current	V_R=5V	I_R	-	-	100	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

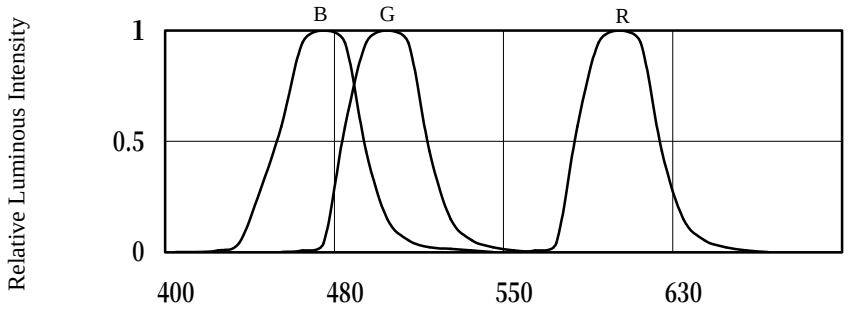
Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=20mA	I_V	70	150	-	mcd
Forward Voltage	I_F=20mA	V_F	-	3.7	4.2	V
Reverse Current	V_R=5V	I_R	-	-	100	μA
Peak/Dominant Wavelength	I_F=20mA	λ_d	-	525	-	nm
Spectral Linewidth	IF=20mA	$\Delta\lambda$	-	35	-	nm
Viewing Angle	I_F=20mA	$2\theta_{1/2}$	-	120	-	deg.

Orange

@ T_A=25ºC

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=20mA	I_V	25	50	-	mcd
Forward Voltage	I_F=20mA	V_F	-	2.0	2.6	V
Reverse Current	V_R=5V	I_R	-	-	100	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.

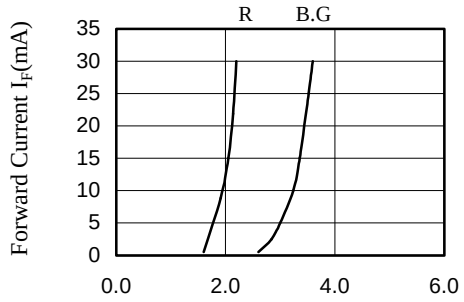
Typical Optical-Electrical Characteristic Curves



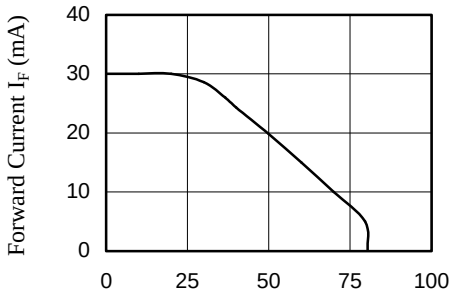
Wavelength (nm)

FIG.1 RELATIVE INTENSITY LUMINOUS VS. WAVELENGTH

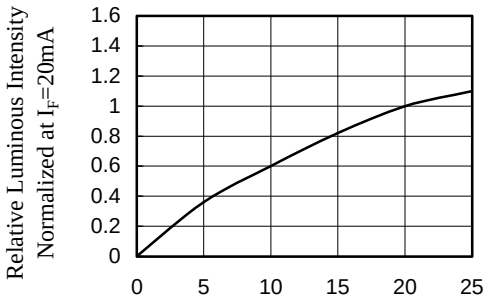
Typical Optical-Electrical Characteristic Curves



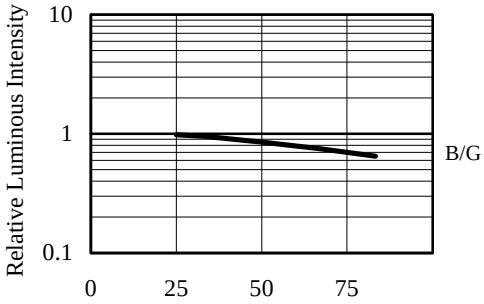
Forward Voltage (V)
FIG.2 FORWARD CURRENT VS.
FORWARD VOLTAGE



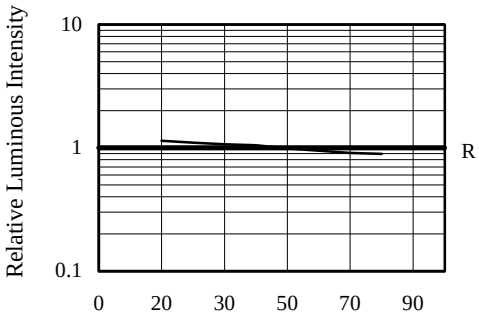
Ambient Temperature (^oC)
FIG.3 FORWARD CURRENT VS.
AMBIENT TEMPERATURE



Forward Current I_F (mA)
FIG.4 RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT



Ambient Temperature (^oC)
FIG.5-2 RELATIVE LUMINOUS INTENSITY VS.
AMBIENT TEMPERATURE



Ambient Temperature (^oC)
FIG.5-3 RELATIVE LUMINOUS INTENSITY VS.
AMBIENT TEMPERATURE

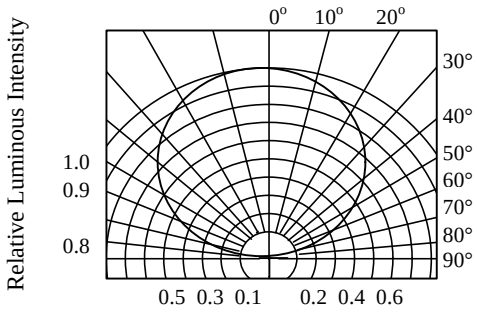


FIG.6 RADIATION DIAGRAM