

**RoHS
Compliant**

Features

- 1mm × 1mm SMD LED, 0.25mm thickness
- Low power consumption
- Wide view angle

Applications

- Ideal for back light and indicator
- Various colors and lens types available

Specifications

Emitting Colour : Red/Green/Blue
 Lens Colour : Water transparent
 Material : AlGaInP/ InGaN/GaN / InGaN/GaN



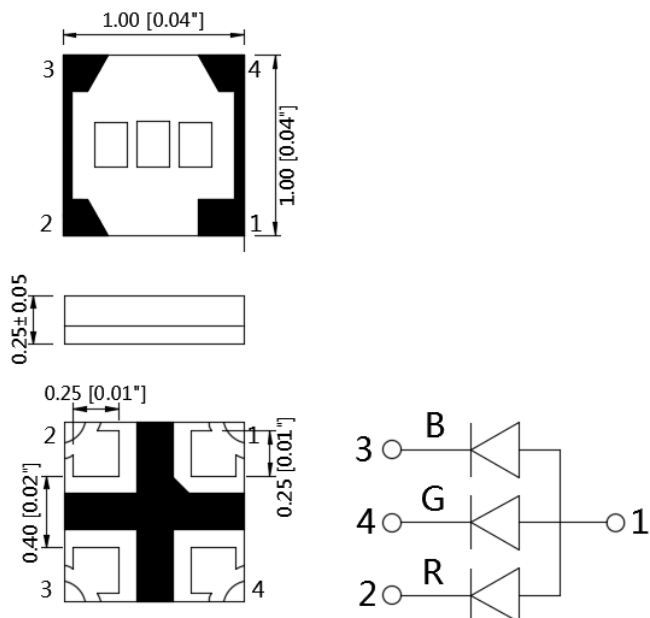
Absolute Maximum Ratings: (T_A = 25°C)

Parameter	Symbol	Red	Green	Blue	Unit
Forward current	I _F	20			mA
Reverse voltage	V _R	5			V
Power Dissipation	P _D	45	62	68	mW
Operating Temperature	T _{op}	-40 to +85			°C
ESD(Human-body mode)	-	4	2		KV
Storage Temperature	T _{STG}	-40 to +85			°C
Peak pulsing current (1/8 duty f=1kHz)	I _{FP}	30			mA

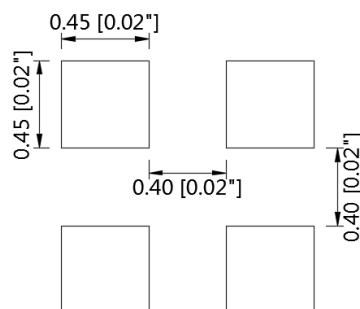
Electro-Optical Characteristics at T_A = 25°C

Parameter	Test Condition	Symbol		Min.	Typ.	Max.	Unit	
Spectral half bandwidth	If=5mA	Δλ	Red	--	20	--	nm	
Dominant wavelength			λd	Green	--	25		--
				Blue	--	25		--
		λd		Red	615	--		625
Green			530	--	540			
Blue			465	--	475			
Forward Voltage		VF	Red	1.7	--	2.3	V	
			Green	2.2	--	3.1		
			Blue	2.5	--	3.4		
Luminous Intensity	IV	Red	80	--	200	mcd		
		Green	100	--	250			
		Blue	32	--	80			
Viewing angle at 50% Iv	If=10mA	2θ1/2		--	120	--	Deg.	
Reverse current	Vr=5V	Ir		--	--	10	μA	

Package outlines

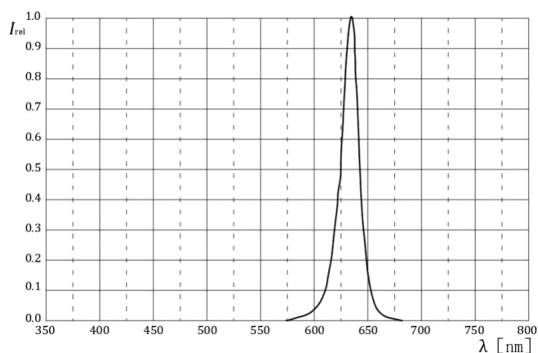


Recommend Pad Layout



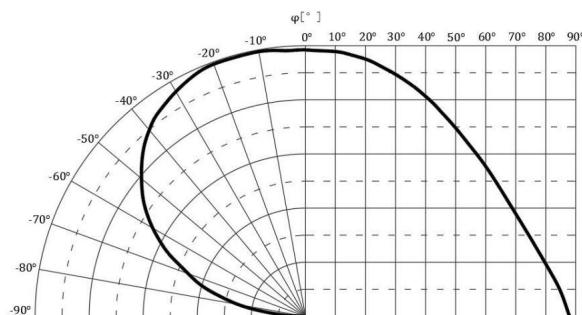
Relative Spectral Emission (Red)

IF=5mA, Ta=25°C



Radiation Characteristics

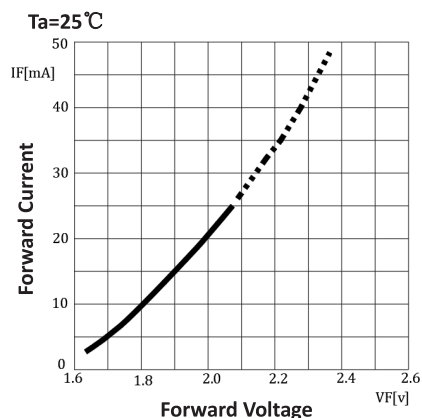
IF=10mA, Ta=25°C



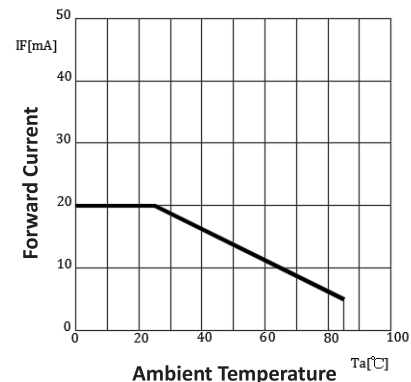
Tolerances are $\pm 0.1\text{mm}$ (0.004inch) unless otherwise noted.

Dimensions : Millimetres (Inches)

Forward Current vs Forward Voltage

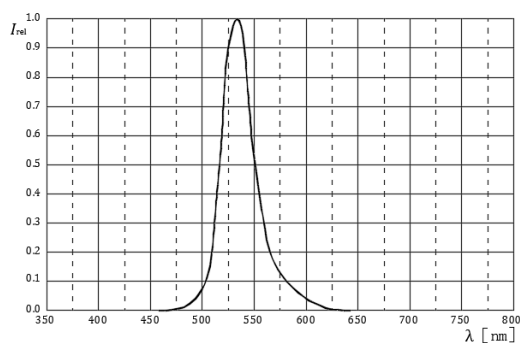


Forward Current Derating Curve



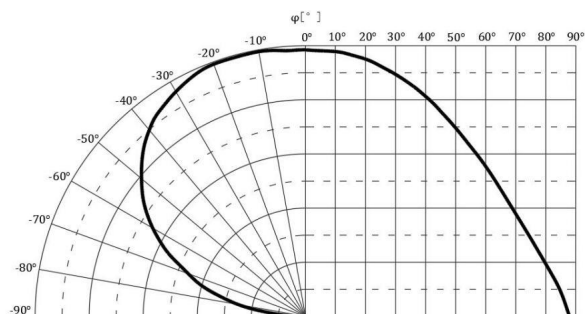
Relative Spectral Emission (Green)

$I_F = 5\text{mA}, T_a = 25^\circ\text{C}$

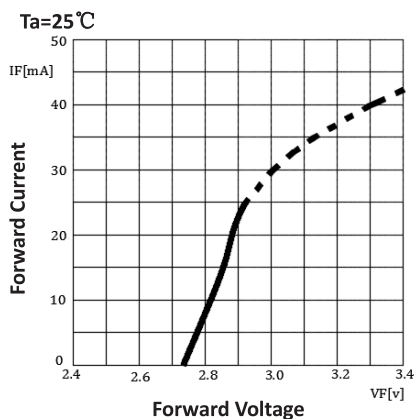


Radiation Characteristics

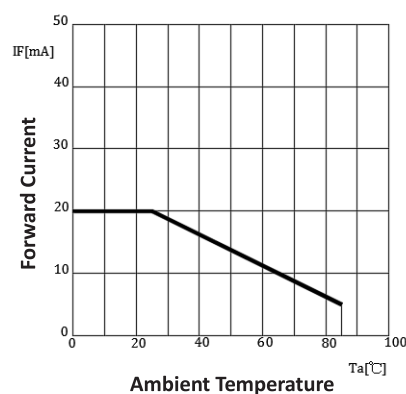
$I_F = 10\text{mA}, T_a = 25^\circ\text{C}$



Forward Current vs Forward Voltage

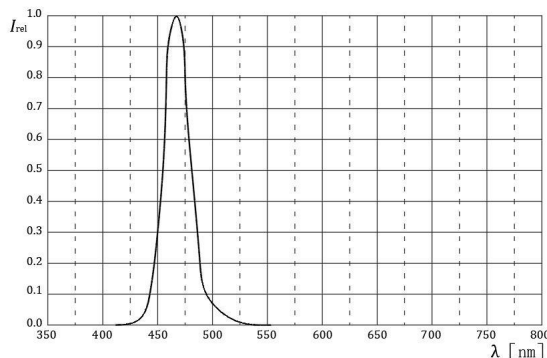


Forward Current Derating Curve



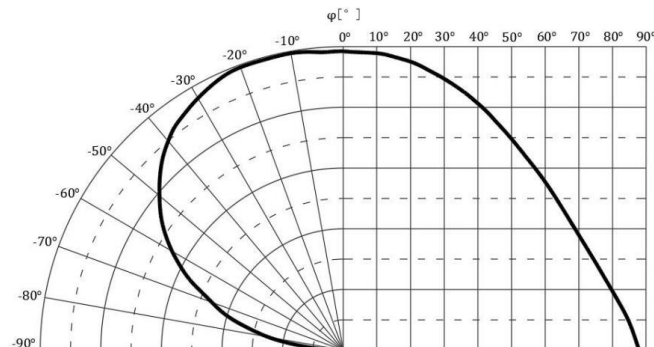
Relative Spectral Emission (Blue)

IF=5mA, Ta=25°C



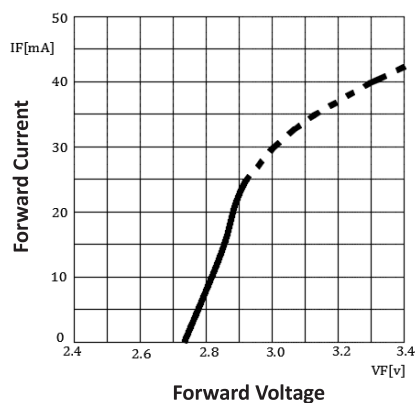
Radiation Characteristics

IF=10mA, Ta=25°C

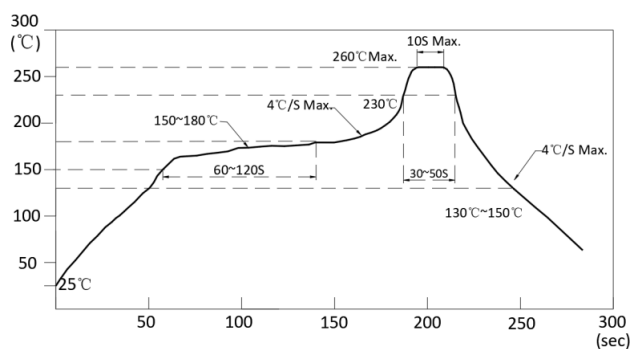
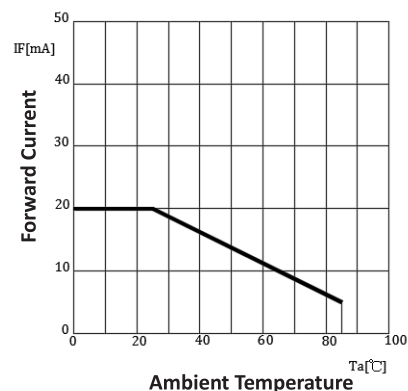


Forward Current vs Forward Voltage

Ta=25°C



Forward Current Derating Curve



Notes:

- We recommend the reflow temperature 245°C ($\pm 5^\circ\text{C}$). The maximum soldering temperature should be limited to 260°C.
- Don't cause stress to the epoxy resin while it is exposed to high temperature.
- Number of reflow process shall be 2 times or less.

Part Number Table

Description	Part Number
Multi Colour Led, Common Anode, Red, Green and Blue, SMD 1010, 0.25mm	MP017050

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