

# Automotive Grade RGB LED in PLCC-6 Package Delivers Luminous Intensity to 2800 mcd, Provides Independent Control of Red, Green, and Blue Chips to Realize Every Color Within the Gamut Triangle Inside the CIE 1931 Color Space

## Product Benefits:

- High luminous intensity to 2800 mcd at 20 mA
- Compact 3.5 mm by 2.8 mm by 1.4 mm PLCC-6 surface-mount package
  - 6-pin package allows individual control of the driving current of each chip
- Utilizes the latest high brightness AlInGaP and InGaN technologies
- Wide temperature range from -40 °C to +110 °C
- Class B1 corrosion robustness
- AEC-Q102 qualified
- Moisture Sensitivity Level (MSL) of 3
- Withstands ESD voltages up to 2 kV for red and 8 kV for blue and green in accordance with JESD22-A114-B
- Compatible with IR reflow soldering
- Categorized per reel for luminous intensity, color, and forward voltage
- RoHS-compliant, halogen-free, and Vishay Green



## Market Applications:

- Ambient lighting, switch illumination, status indicators, and dashboard signal and symbol illumination in automobiles; large-format, full-color message and video display boards; backlighting in consumer devices, home appliances, medical instrumentation, and telecom equipment; and a wide range of accent and decorative lighting

## The News:

Vishay Intertechnology introduces a new tricolor LED that provides luminous intensity to 2800 mcd at 20 mA for interior automotive lighting, RGB displays, and backlighting.

- Featuring separate anode and cathode connections for the red, green, and blue LED chips inside its PLCC-6 surface-mount package, the Automotive Grade VLMRGB6122.. enables individual control of each chip, making it possible to realize every color within the color room defined by the gamut triangle area inside the CIE 1931 color space through color mixing
- The device delivers 70 % higher brightness than previous-generation solutions in a package with a 22 % lower profile than competing products
- The VLMRGB6122.. operates at a 25 °C higher temperature than standard solutions



## The Key Specifications:

Color		Red	Green	Blue
Luminous intensity (mcd) @ $I_F = 20$ mA	Min.	710	1800	280
	Typ.	900	2200	320
	Max.	1400	2800	450
Wavelength (nm) @ $I_F = 20$ mA	Min.	618	520	450
	Typ.	623	527	455
	Max.	630	535	462
Forward voltage (V) @ $I_F = 20$ mA	Min.	1.75	2.5	2.5
	Typ.	1.95	2.75	3.0
	Max.	2.75	3.5	3.5
Angle of half intensity (°)		120		
Technology		AlInGaP	InGaN	InGaN

### Availability:

Samples and production quantities of the VLMRGB6122.. are available now, with lead times of 17 weeks.

To access the product datasheet on the Vishay Website, go to

<http://www.vishay.com/ppg?80526> (VLMRGB6122...)

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