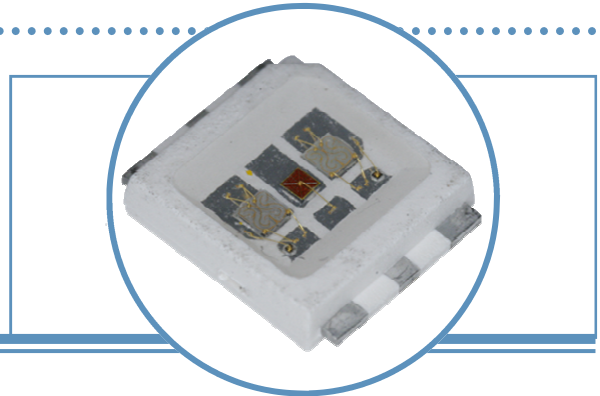


# Full-color Power SMD 6mm (130° Viewing Angle)

## OVSPRGBCR4

- Surface mount RGB designed for high current drive
- Low thermal resistance—20K/W
- Ultra low profile of 1.5mm
- High flux output

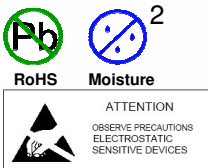
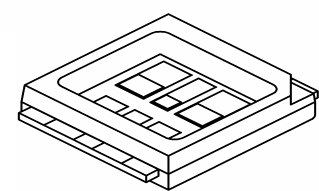
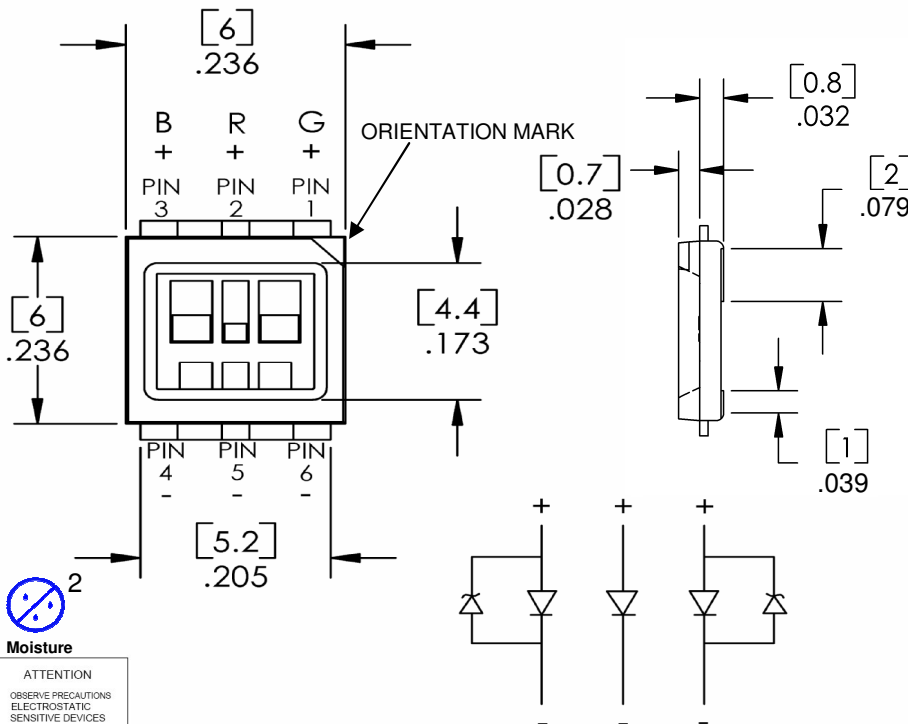


The **OVSPRGBCR4** is an energy-efficient packaged LED source that offers high luminance, and a long operating lifespan. This full-color power device offers a 130° viewing angle and an ultra-low profile (1.5mm) making it highly suitable for conventional lighting and specialized applications. Optional optics are offered to suit application. Please contact OPTEK for more information.

### Applications

- Automotive exterior and interior lighting
- Architectural indoor and outdoor lighting
- General lighting
- LED backlighting

Part Number	Viewing Angle	Emitted Color	Typical Luminous Flux (lm)	Typical On-Axis Intensity (cd)	Lens Color
OVSPRGBCR4	130°	Red	21	7	Water Clear
		Green	32	11	Water Clear
		Blue	7.5	2.8	Water Clear



**DO NOT LOOK DIRECTLY AT LED WITH UNSHIELDED EYES OR DAMAGE TO RETINA MAY OCCUR.**

OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

# Full-color Power SMD 6mm OVSPRGBCR4



## Absolute Maximum Ratings $T_A = 25^\circ\text{C}$

DC Forward Current (per chip)	250mA
Peak Pulsed Forward Current (per chip) <sup>1</sup>	500mA
Reverse Voltage	Not designed for reverse bias drive
Junction Temperature	125°C
Storage and Operating Temperature	-40° ~ +100 °C
ESD Threshold (HBM)	2000V

Notes:

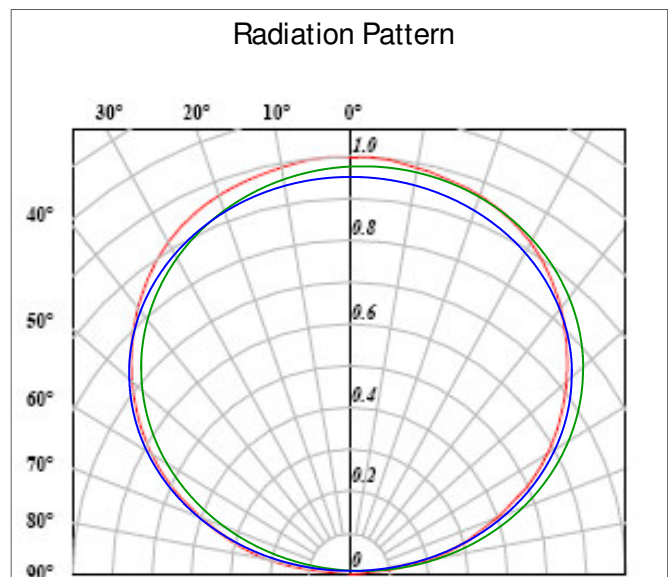
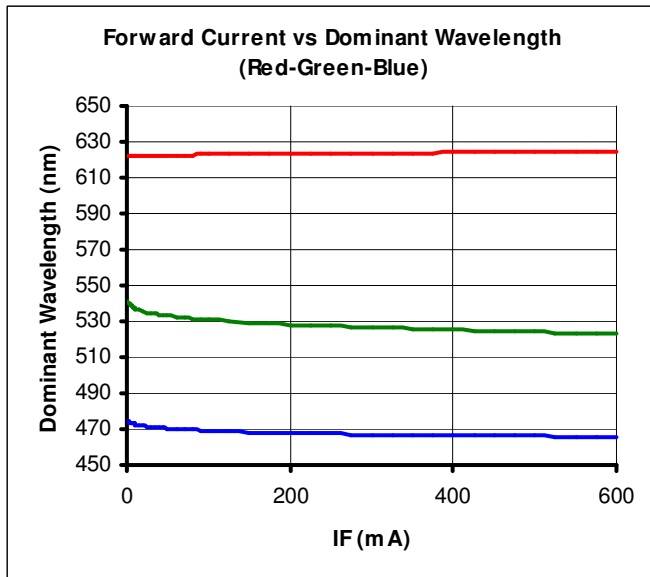
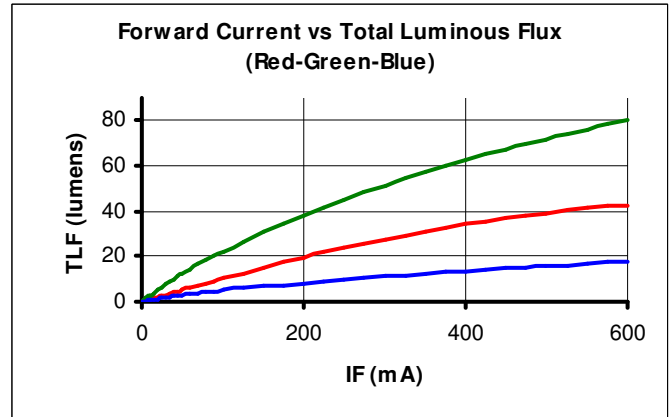
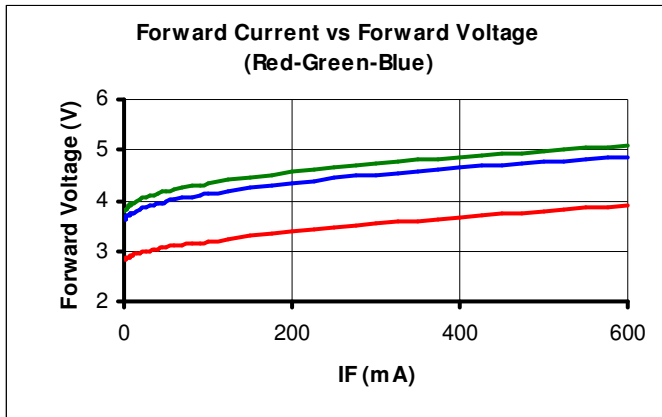
1. Pulse width  $t_p \leq 10\mu\text{s}$ , Duty cycle = 0.1
2. Thermal resistance = 20K/W

## Optical and Electrical Characteristics ( $I_F = 250\text{ mA}$ , $T_A = 25^\circ\text{C}$ )

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	
$V_F$	Forward Voltage	Red	2.2	2.3	2.5	V
		Green	3.3	3.5	3.6	V
		Blue	3.3	3.5	3.6	V
$\Phi$	Luminous Flux	Red	16	21	27	lm
		Green	26	32	40	lm
		Blue	6	7.5	9	lm
$I_v$	Luminous Intensity	Red	5600	7150	9000	mcd
		Green	9000	11250	14000	mcd
		Blue	2240	2850	3550	mcd
$\lambda_D$	Dominant Wavelength	Red	619	—	625	nm
		Green	525	530	535	nm
		Blue	460	465	470	nm
$2\theta_{1/2}$	50% Power Angle	----	130	----	deg	

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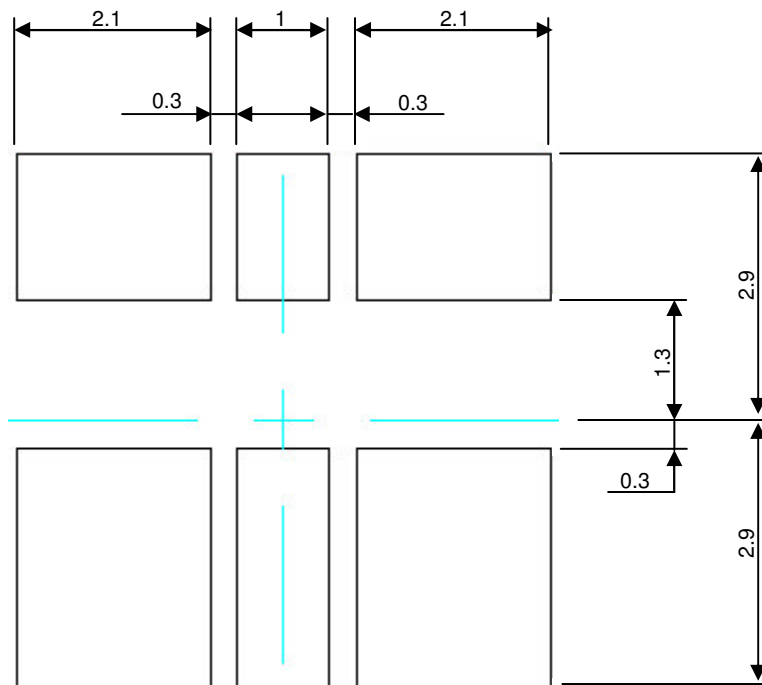
Typical Electro-Optical Characteristics Curves



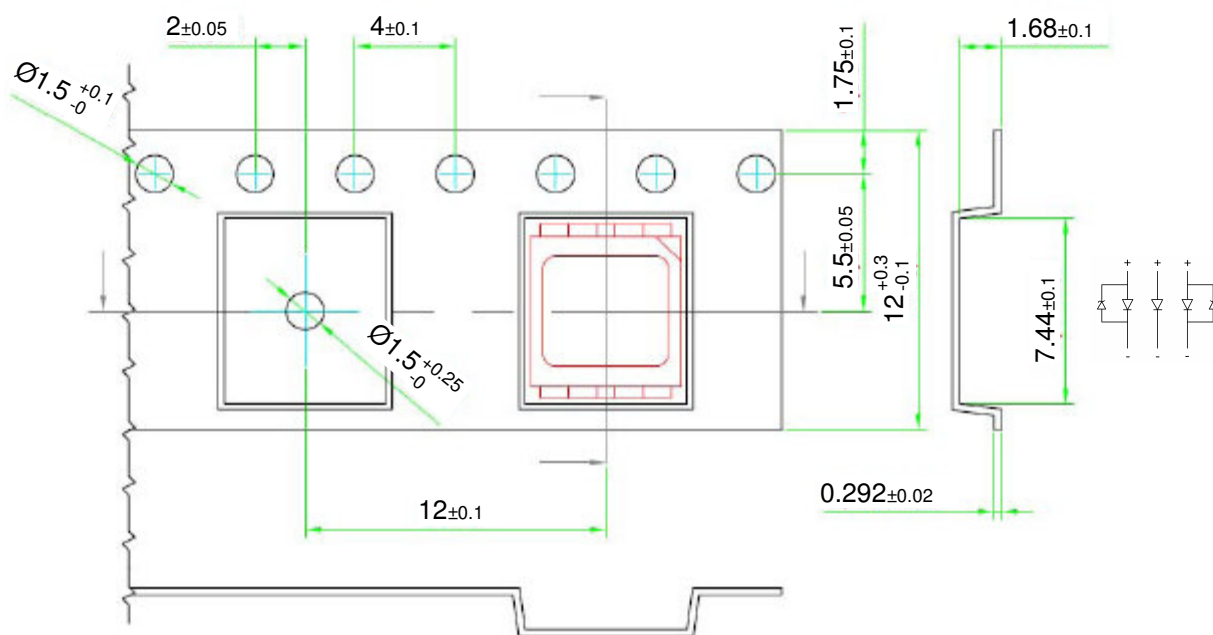
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## Solder Pad Design

Note: Metal core circuit board (MCPCB) is highly recommended for applications.



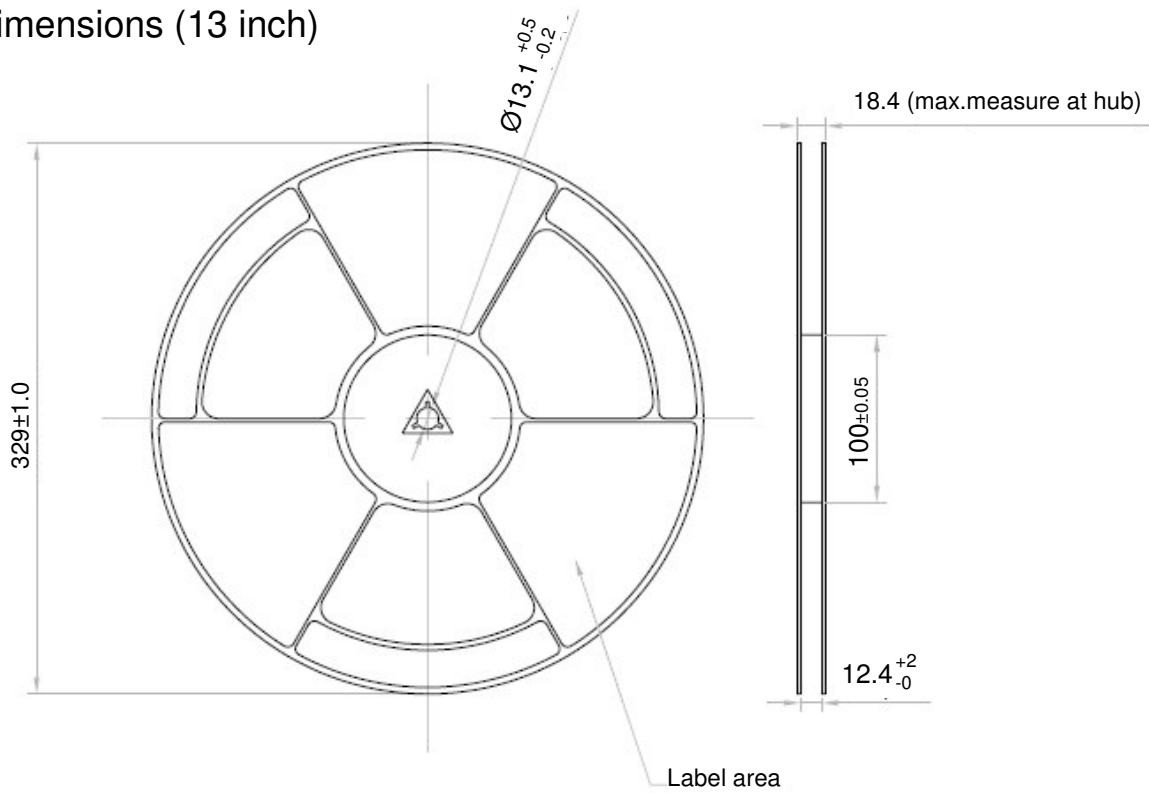
## Taping and Orientation



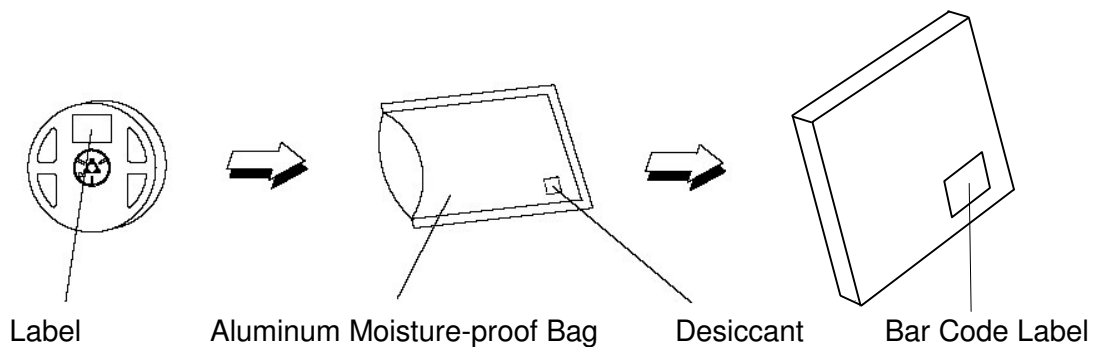
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# Full-color Power SMD 6mm OVSPRGBCR4

## Reel Dimensions (13 inch)

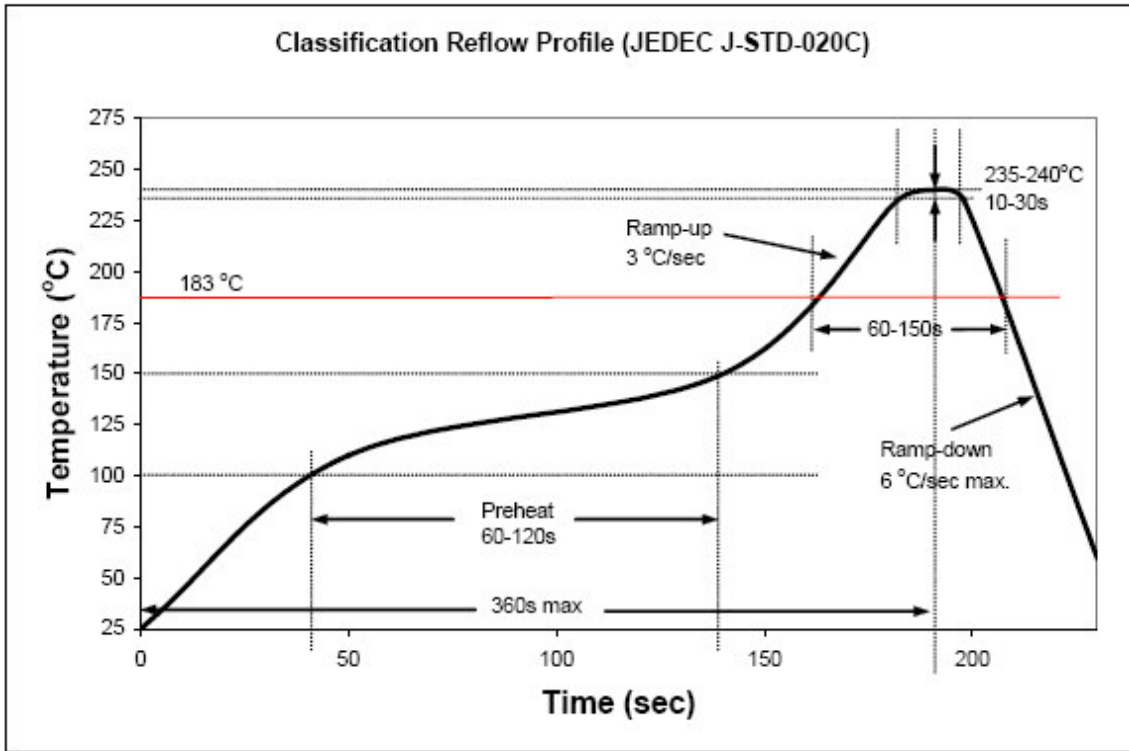


## Moisture Resistant Packaging

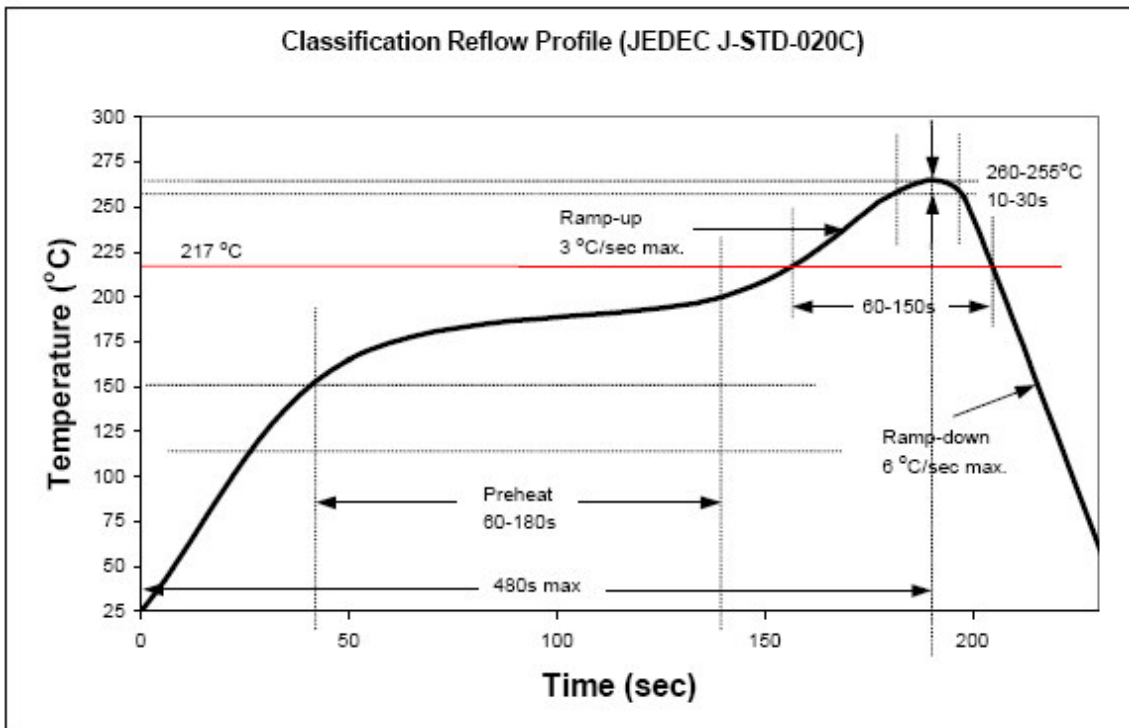


OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

**Recommended Sn-Pb IR-Reflow Soldering Profile.**



**Recommended Pb Free IR-Reflow Soldering Profile.**



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