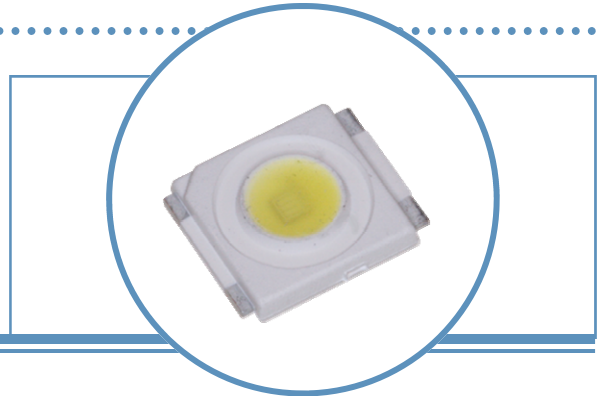


# 1-Watt SMD 6mm (120° Viewing Angle)

## OVSPxBCR4 Series

- Robust energy-efficient design with long operating life
- Low thermal resistance
- Exceptional spatial uniformity
- Optional optics to suit application
- Available in yellow, blue, green, red and white

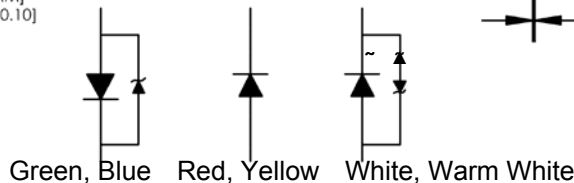
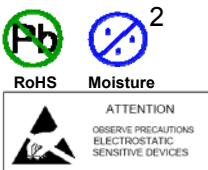
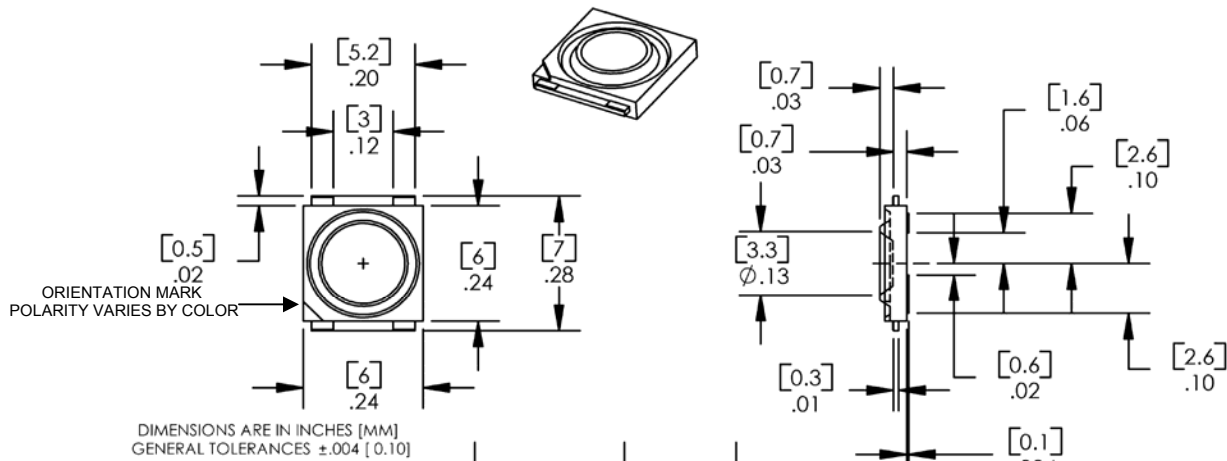


The **OVSPxBCR4 Series** is an energy-efficient packaged LED source that offers high luminance, and a long operating lifespan. These devices offer a 120° viewing angle and an ultra-low profile (1.5mm) making them highly suitable for conventional lighting and specialized applications. Optional optics are offered to suit application. Please contact OPTEK for more information.

## Applications

- Automotive exterior and interior lighting
- Architectural indoor and outdoor lighting
- General lighting
- Electronic signs and signals

Part Number	Viewing Angle	Emitted Color	Typical Luminous Flux (lm)	Typical On-Axis Intensity (cd)	Lens Color
OVSPBBCR4	120°	Blue	9	3.4	Water Clear
OVSPGBCR4		Green	48	18.2	Water Clear
OVSPRBCR4		Red	26	9	Water Clear
OVSPYBCR4		Yellow	35	11.25	Water Clear
OVSPWBCR4		White	75	na	Water Clear
OVSPWWBCR4		Warm White	50	na	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.

# 1-Watt SMD 6mm

## OVSPxBCR4 Series



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

	Red, Yellow	Green, Blue	White	Warm White
DC Forward Current	400mA	350mA	350mA	350mA
Peak Pulsed Forward Current <sup>1</sup>	500mA	1000mA	1000mA	1000mA
Reverse Voltage	12V	Not designed for reverse bias		
Junction Temperature <sup>2</sup>	125°C	120°C	125°C	120°C
Power Dissipation	1200mW			
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 conductivity = 20K/W for red, yellow, green, blue; and 18K/W for white

### Optical and Electrical Characteristics—Red, Yellow ( $I_F = 400\text{ mA}$ , $T_A = 25^\circ\text{C}$ )

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	
$V_F$	Forward Voltage	2.2	2.5	2.8	V	
$\Phi$	Luminous Flux	Red	21	26	33	lm
		Yellow	27	35	42	lm
$\lambda_D$	Dominant Wavelength	Red	620	625	630	nm
		Yellow	585	587	597	nm
$I_R$	Reverse Current	----	100	----	$\mu\text{A}$	
$2\Theta_{1/2}$	50% Power Angle	----	120	----	deg	

### Optical and Electrical Characteristics—Blue, Green ( $I_F = 350\text{ mA}$ , $T_A = 25^\circ\text{C}$ )

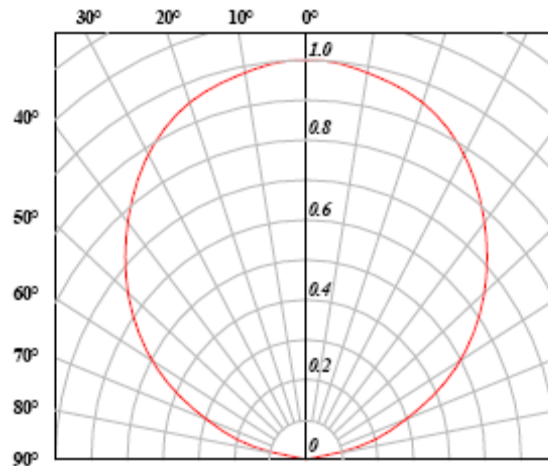
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	
$V_F$	Forward Voltage	----	3.6	4.0	V	
$\Phi$	Luminous Flux	Blue	5.8	9	12	lm
		Green	38	48	60	lm
$\lambda_D$	Dominant Wavelength	Blue	464	470	476	nm
		Green	525	530	535	nm
$2\Theta_{1/2}$	50% Power Angle	----	120	----	deg	

### Optical and Electrical Characteristics—White, Warm White ( $I_F = 350\text{ mA}$ , $T_A = 25^\circ\text{C}$ )

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	
$V_F$	Forward Voltage	3.0	3.5	4.0	V	
$\Phi$	Luminous Flux	White	52	75	87	lm
		Warm White	39	50	67	lm
$I_R$	Reverse Current	----	10	----	$\mu\text{A}$	
$2\Theta_{1/2}$	50% Power Angle	----	120	----	deg	

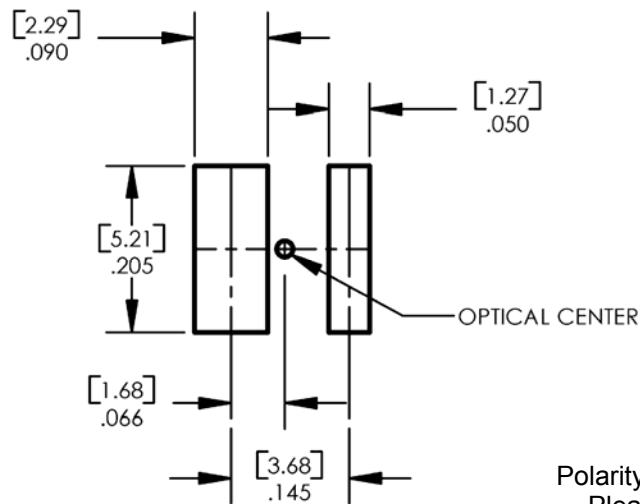
OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

### Radiation Pattern—All Colors



### Solder Pad Design

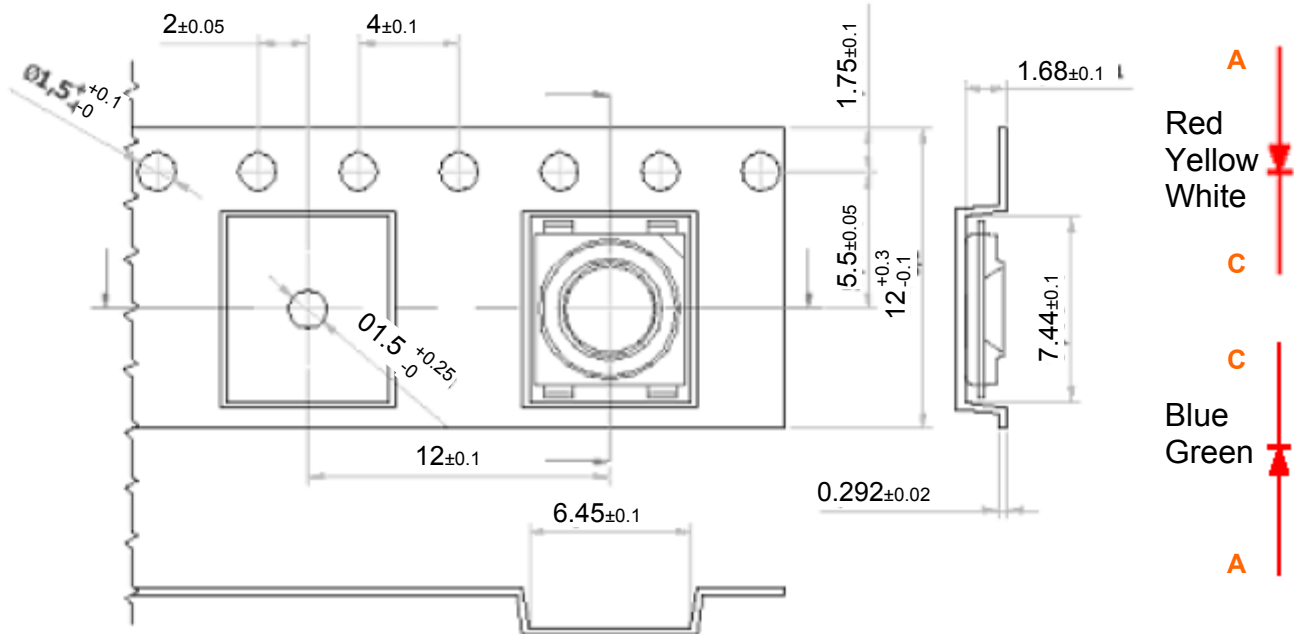
Note: Metal core circuit board (MCPCB) is highly recommended for high density applications. Please consult sales and marketing for additional information.



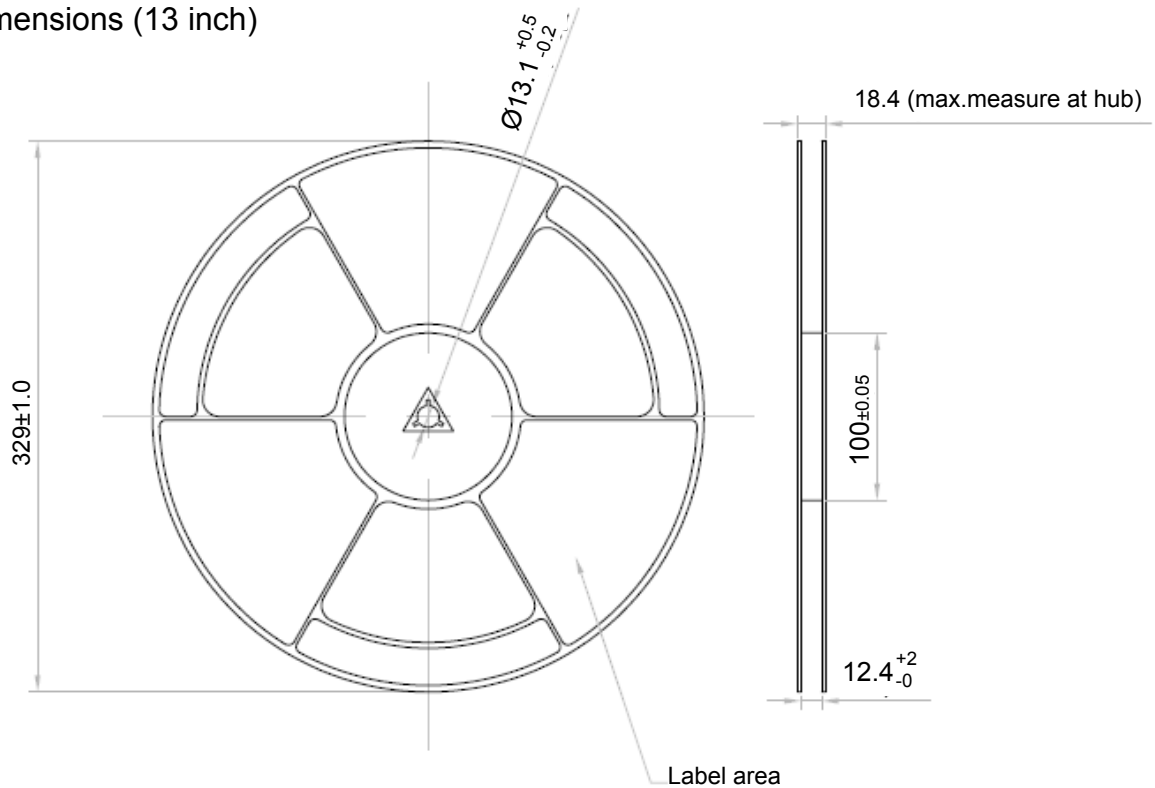
Polarity varies with color.  
Please see Page 1.

# 1-Watt SMD 6mm OVSPxBCR4 Series

Taping and Orientation  
Loaded quantity 2000 pieces per reel



## Reel Dimensions (13 inch)



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