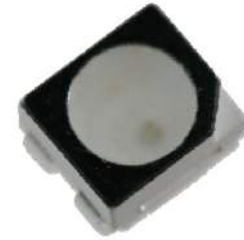


# Full Color PLCC6 LED

## OVSTRGGB1CR8



### Features:

- Full-color red/green/blue
- PLCC package with 6 pins
- Wide viewing angle
- High performance
- Tuneable color mix
- 120° viewing angle

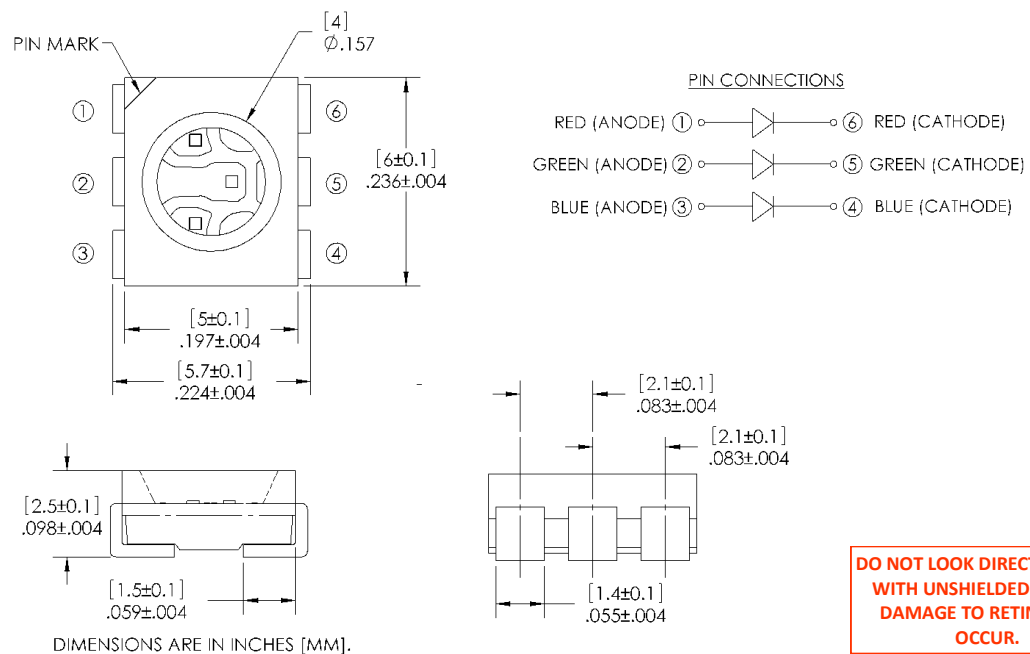
### Description:

The **OVSTRGGB1CR8** package design provides wide viewing angle, low power consumption, and high luminous intensity. Color on demand is made possible by isolated chip circuits, allowing each LED to be driven individually or in tunable color combinations.

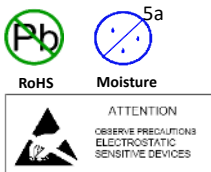
### Applications:

- Amusement equipment
- Information boards
- Automotive interior lighting
- Portable appliances
- Indoor and outdoor displays
- Backlighting
- RGB full-color displays

Part Number	Chip				Lens Color
	Type	Material	Emitted Color	Intensity Typ. mcd	
OVSTRGGB1CR8	R	AlInGaP	Red	700	Diffused
	G	InGaN	Green	1800	
	B	InGaN	Blue	400	



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



General Note  
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### Electrical Specifications

**Absolute Maximum Ratings**  $T_A = 25^\circ\text{C}$  unless otherwise noted

PARAMETER	RATING			UNIT
	R	G	B	
Storage Temperature	-40 ~ +100			$^\circ\text{C}$
Operating Temperature	-40 ~ +100			$^\circ\text{C}$
Reverse Voltage	5			V
Continuous Forward Current (1 chip on)	50	50	50	mA
Peak Forward Current (10% Duty Cycle, $PW \leq 100 \mu\text{sec}$ , 1 chip on)	200	100	100	mA
Power Dissipation	130	200	200	mW
Junction Temperature	110	110	110	$^\circ\text{C}$
Junction/ambient (1 chip on)	450	400	450	$^\circ\text{C}/\text{W}$
Junction/ambient (3 chips on)	650	580	680	$^\circ\text{C}/\text{W}$
Junction/solder point (1 chip on)	300	280	300	$^\circ\text{C}/\text{W}$
Junction/solder point (3 chips on)	450	430	480	$^\circ\text{C}/\text{W}$
Electrostatic Discharge Classification (JEDEC-JESD22-A114F)				Class 1C
Moisture Sensitivity Level (IPC/JEDEC J-STD-020C)				5a / 24 Hrs

**Electrical Characteristics**  $T_A = 25^\circ\text{C}$  unless otherwise noted

SYMBOL	PARAMETER	VALUES				UNIT	CONDITIONS
			R	G	B		
$I_V$	Luminous Intensity	Min	560	1120	280	mcd	$I_F = 50 \text{ mA}$
		Avg	700	1600	400		
$V_F$	Forward Voltage	Avg	2.0	3.2	3.2	V	$I_F = 50 \text{ mA}$
		Max	2.6	4.0	4.0		
$I_R$	Reverse Current (max)		10	10	10	$\mu\text{A}$	$V_R = 5 \text{ V}$
$\lambda_D$	Dominant Wavelength		619-624	520-540	460-480	nm	$I_F = 50 \text{ mA}$
$\lambda_P$	Wavelength at Peak Emission		630	527	470	nm	$I_F = 50 \text{ mA}$
$2\theta_{\frac{1}{2}}$	Beam Angle		120	120	120	deg	$I_F = 50 \text{ mA}$
$\Delta\lambda$	Spectral Radiation Bandwidth		24	38	28	nm	$I_F = 50 \text{ mA}$

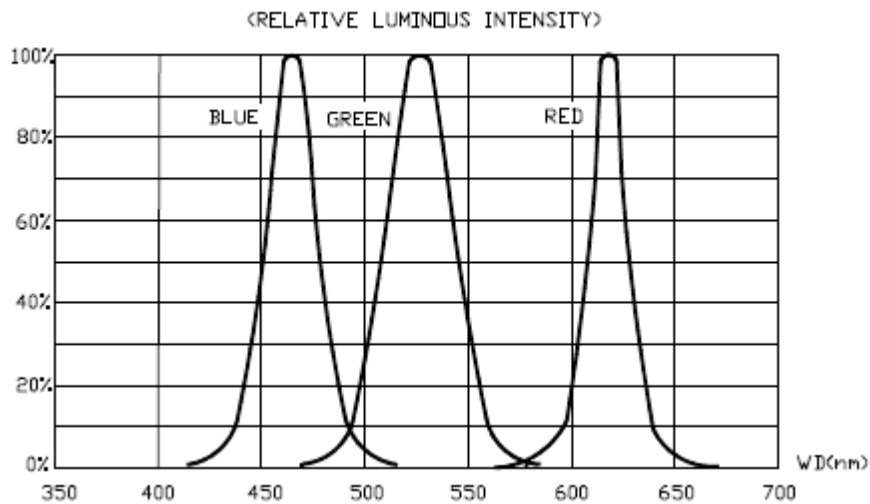
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# Full Color PLCC6 LED

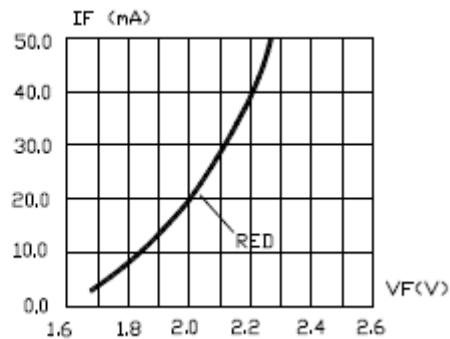
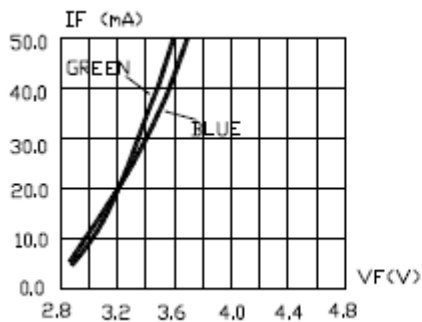
OVSTRGGB1CR8



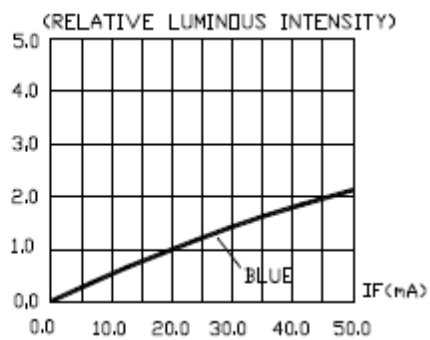
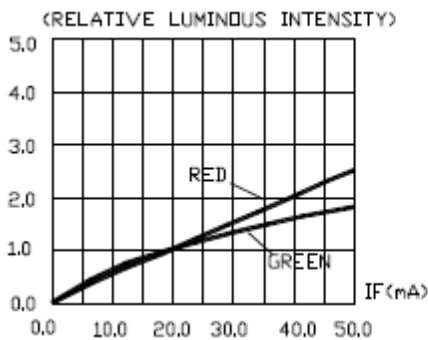
## Typical Electro-Optical Characteristics Curves



Relative Intensity vs Dominant Wavelength



Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current

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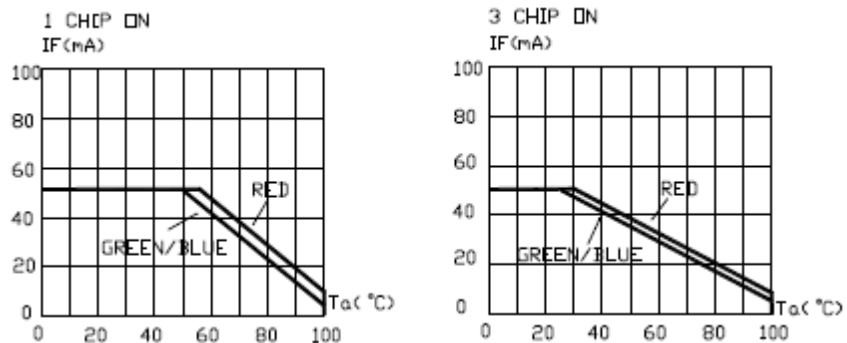
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# Full Color PLCC6 LED

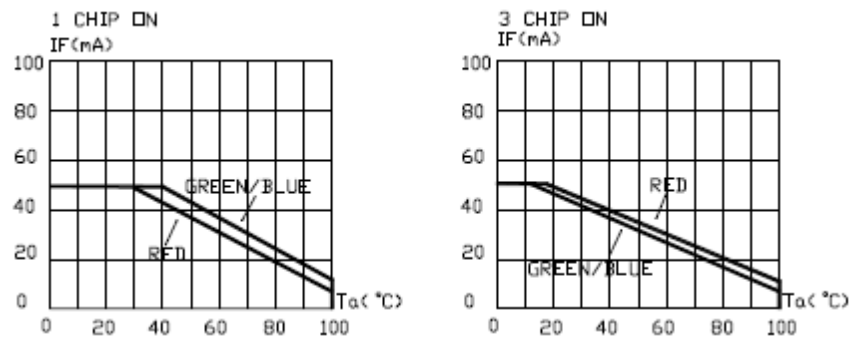
OVSTRGGB1CR8



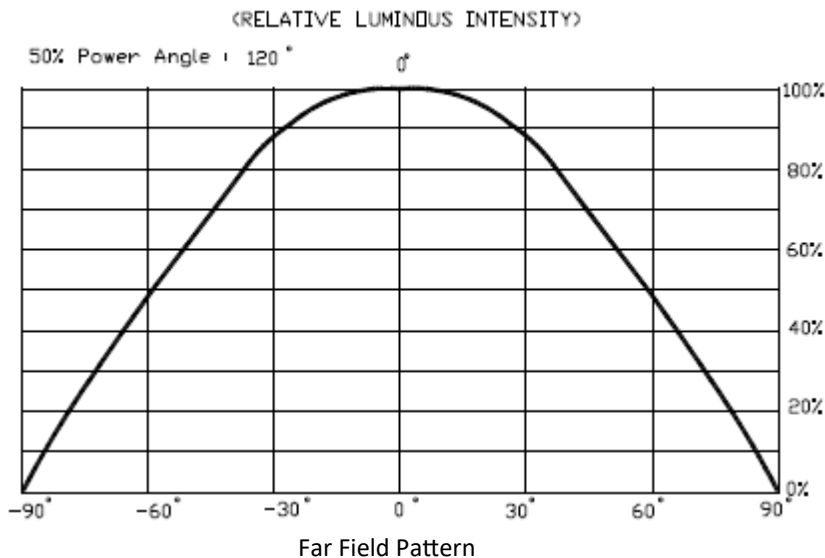
## Typical Electro-Optical Characteristics Curves



Maximum Forward DC Current vs Solder Point Temperature



Maximum Forward DC Current vs Ambient Temperature



Far Field Pattern

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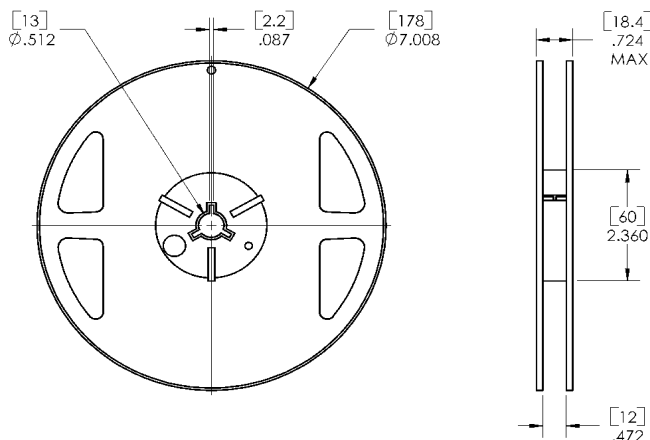
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# Full Color PLCC6 LED

## OVSTRGBB1CR8

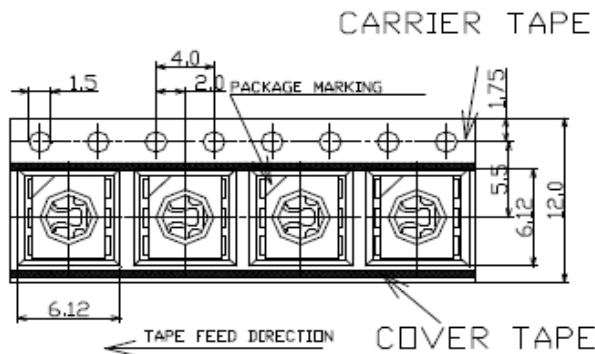


### Reel Dimensions: 7-inch reel

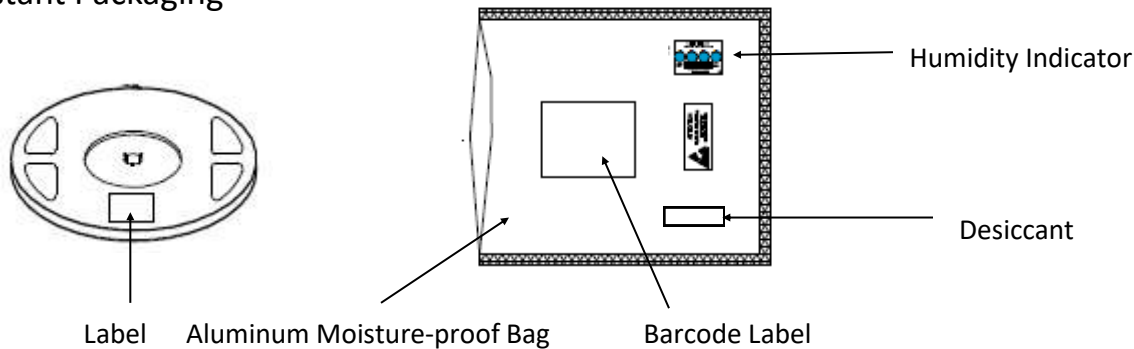


Loaded Quantity—900 pcs per reel

### Carrier Tape Dimensions: Loaded quantity 900 pieces per reel



### Moisture Resistant Packaging



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