

Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[TT Electronics/Optek Technology](#)
[OVSTRGBB1CR8](#)

For any questions, you can email us directly:

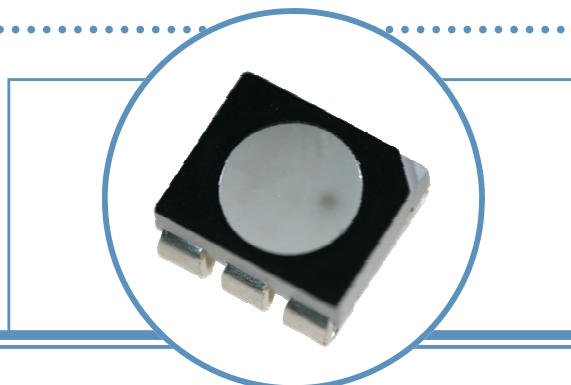
sales@integrated-circuit.com

Full Color PLCC6 LED



OVSTRGGB1CR8

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

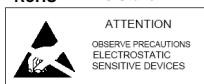
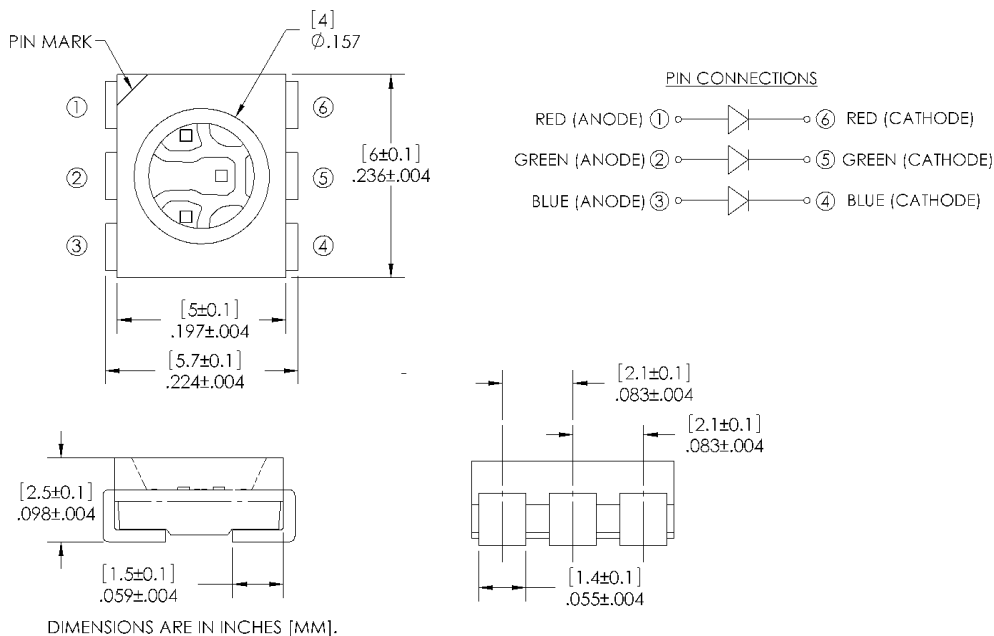


The **OVSTRGGB1CR8** package design provides wide viewing angle, low power consumption, and high luminous intensity. Color on demand is made possible by isolated chip circuits, allowing each LED to be driven individually or in tunable color combinations.

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	AllnGaP	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.

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

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Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

PARAMETER	RATING			UNIT
	R	G	B	
Storage Temperature	-40 ~ +100			°C
Operating Temperature	-40 ~ +100			°C
Reverse Voltage	5			V
Continuous Forward Current (1 chip on)	50	50	50	mA
Peak Forward Current (10% Duty Cycle, PW ≤ 100 μsec, 1 chip on)	200	100	100	mA
Power Dissipation	130	200	200	mW
Junction Temperature	110	110	110	°C
Junction/ambient (1 chip on)	450	400	450	°C/W
Junction/ambient (3 chips on)	650	580	680	°C/W
Junction/solder point (1 chip on)	300	280	300	°C/W
Junction/solder point (3 chips on)	450	430	480	°C/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°C unless otherwise noted

SYMBOL	PARAMETER	VALUES			UNIT	CONDITIONS	
			R	G			B
I _V	Luminous Intensity	Min	560	1120	280	mcd	I _F = 50 mA
		Avg	700	1600	400		
V _F	Forward Voltage	Avg	2.0	3.2	3.2	V	I _F = 50 mA
		Max	2.6	4.0	4.0		
I _R	Reverse Current (max)		10	10	10	μA	V _R = 5 V
λ _D	Dominant Wavelength		619-624	520-540	460-480	nm	I _F = 50 mA
λ _P	Wavelength at Peak Emission		630	527	470	nm	I _F = 50 mA
2 Θ _{1/2}	Beam Angle		120	120	120	deg	I _F = 50 mA
Δλ	Spectral Radiation Bandwidth		24	38	28	nm	I _F = 50 mA

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Standard Bins

LEDs are sorted to luminous intensity (I_v) and dominant wavelength (nm) bins shown. Each reel consists of a single intensity bin and a single color bin. Orders are filled using all intensity and color bins listed in the following tables. Optek will not accept orders for single intensity bins or single color bins.

Luminous Intensity (I_v) @ 50mA

RED		
Code	Min (mcd)	Max (mcd)
K	560	710
M	710	900
N	900	1120

GREEN		
Code	Min (mcd)	Max (mcd)
P	1120	1400
Q	1400	1800
R	1800	2240

BLUE		
Code	Min (mcd)	Max (mcd)
G	280	355
H	355	450
J	450	560

Dominant Wavelength (nm)

RED		
Code	Min (nm)	Max (nm)
RB	619	624

GREEN		
Code	Min (nm)	Max (nm)
G7	520	525
G8	525	530
G9	530	535
Ga	535	540

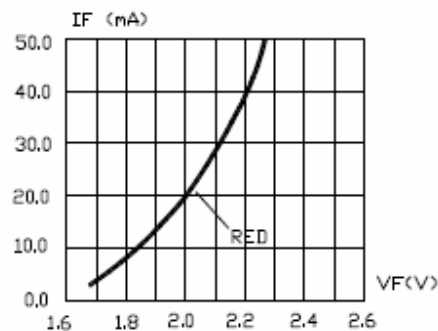
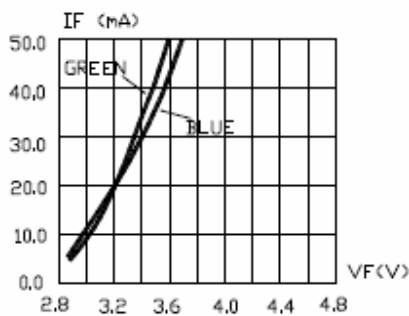
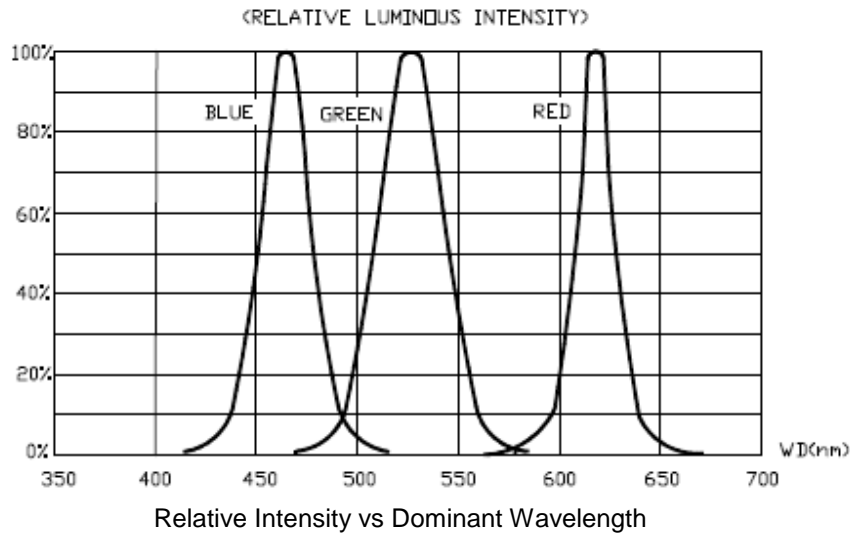
BLUE		
Code	Min (nm)	Max (nm)
B3	460	465
B4	465	470
B5	470	475
B6	475	480

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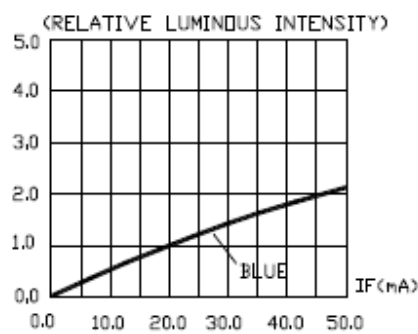
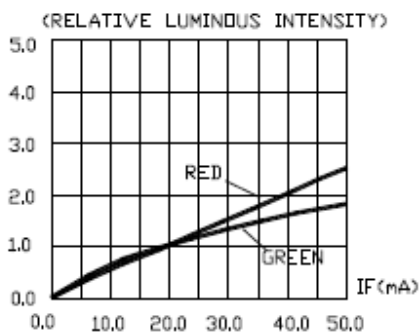
Full Color PLCC6 LED
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Typical Electro-Optical Characteristics Curves



Forward Current vs Forward Voltage



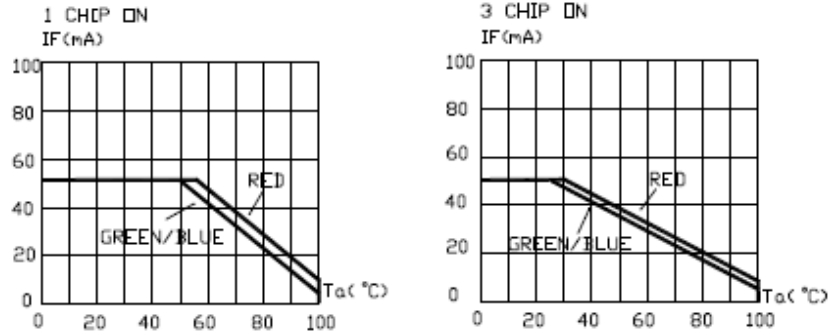
Relative Luminous Intensity vs Forward Current

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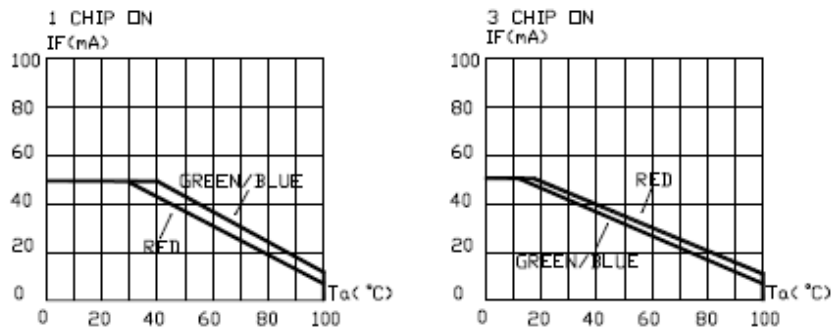
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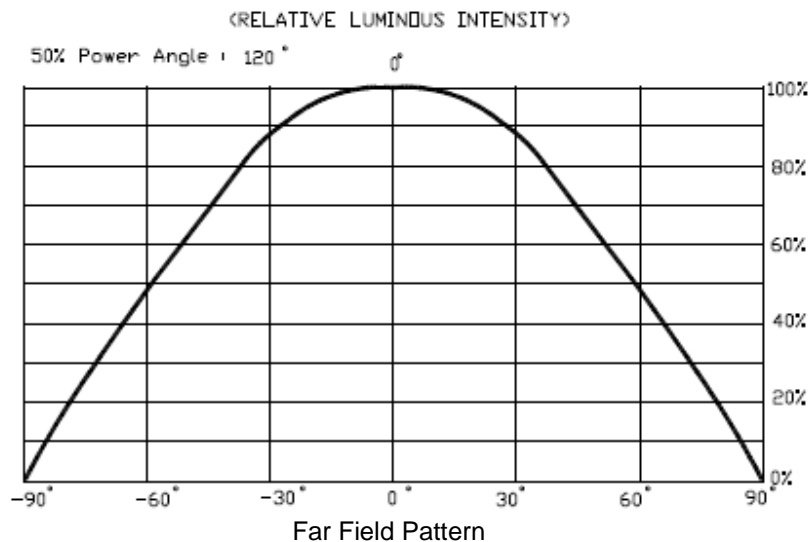
Typical Electro-Optical Characteristics Curves



Maximum Forward DC Current vs Solder Point Temperature



Maximum Forward DC Current vs Ambient Temperature



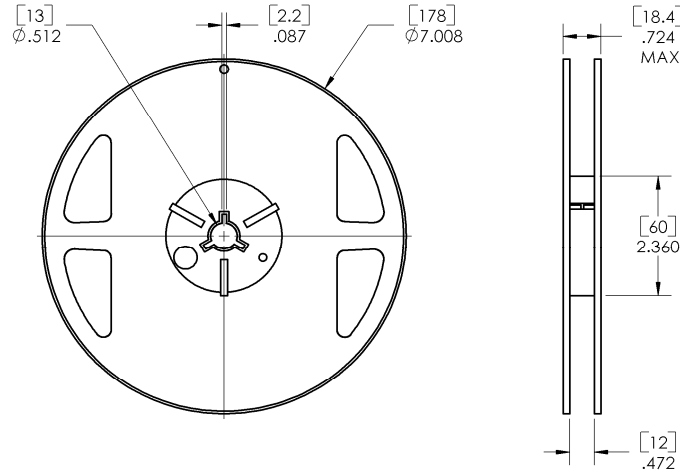
Far Field Pattern

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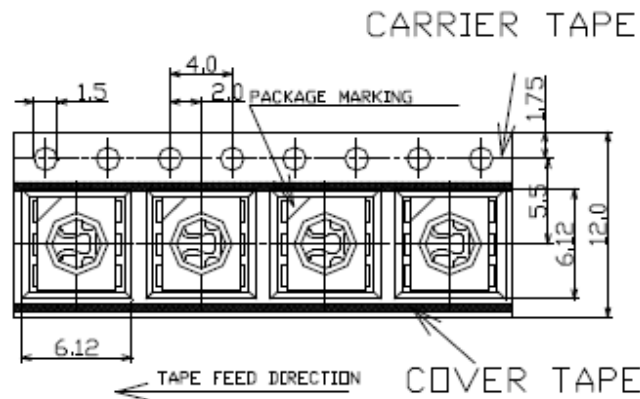


Reel Dimensions: 7-inch reel

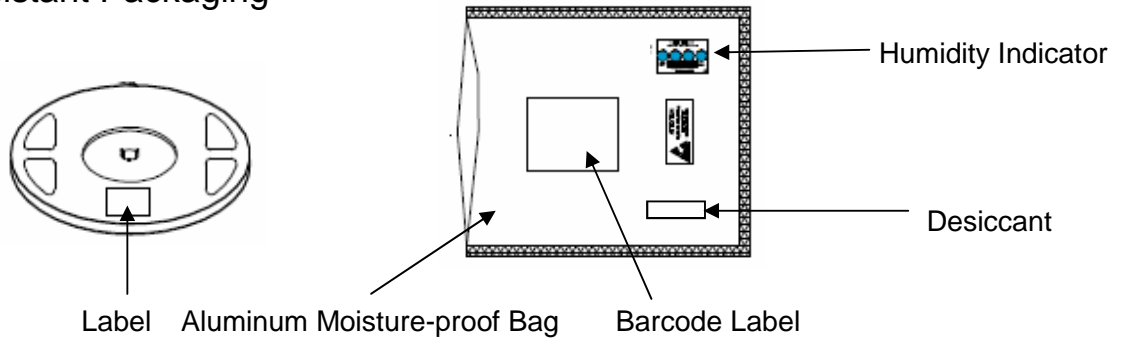


Loaded Quantity—900 pcs per reel

Carrier Tape Dimensions: Loaded quantity 900 pieces per reel



Moisture Resistant Packaging



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