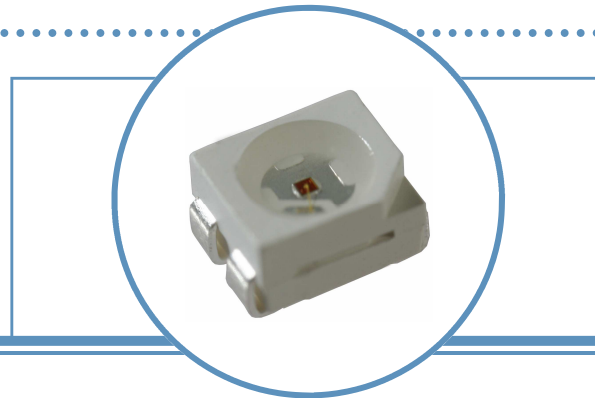


PLCC4 Surface Mount LED

OVSA1xBC2R8 Series

- High intensity with low power consumption
- PLCC4 packaged in 8 mm tape on 7" diameter reel
- Compatible with automatic placement equipment
- Dimensions: 3.5 x 2.8 x 1.95 mm
- 120° viewing angle



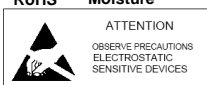
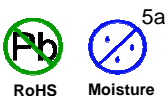
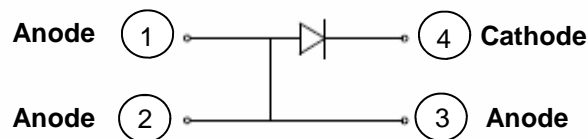
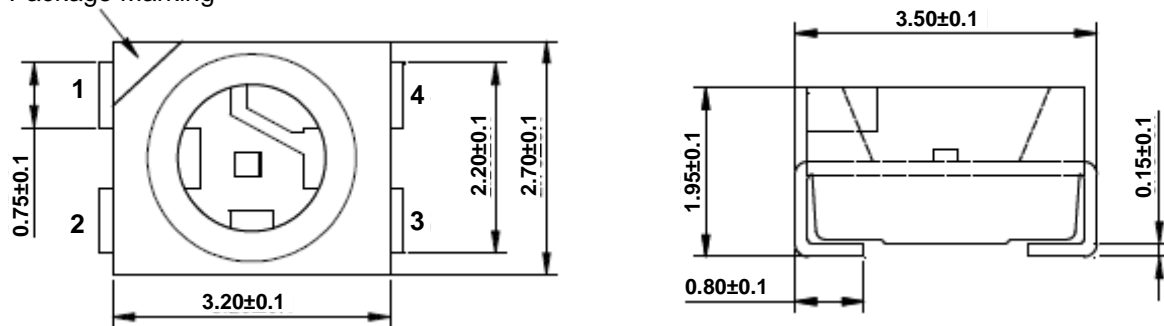
The **OVSA1xBC2R8** series is designed for wide angle, uniform light output. Its internal reflector and colorless clear lens optimize luminous intensity and make it ideal for backlighting applications and for coupling with light guides.

Applications

- Traffic lights
- Signal and symbol luminaire
- Mono-color indicators
- Backlighting (LCD, switches, displays, illuminated advertising)
- Interior automotive lighting (instrumentation clusters)
- Safety marker lights (steps, exit ways)

Part Number	Material	Emitted Color	Intensity Typ. mcd	Lens Color
OVSA1ABC2R8	AllnGaP	Amber	1500	Water Clear
OVSA1BBC2R8	InGaN	Blue	550	Water Clear
OVSA1GBC2R8	InGaN	Green	1800	Water Clear
OVSA1SBC2R8	AllnGaP	Red	1600	Water Clear

Package Marking



DO NOT LOOK DIRECTLY AT RED 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.

PLCC4 Surface Mount LED

OVSA1xBC2R8 Series



Absolute Maximum Ratings

T_A = 25° C unless otherwise noted

Storage Temperature Range		-40 ~ +100 °C
Operating Temperature Range		-40 ~ +100 °C
Reverse Voltage		5 V
Continuous Forward Current	Blue, Green	30 mA
	Red, Amber	70 mA
Peak Forward Current (Pulse width ≤10 msec, duty cycle ≤10%)	Blue, Green	100 mA
	Red, Amber	200 mA
Power Dissipation	Blue, Green	130 mW
	Red, Amber	210 mW
Thermal Resistance Junction to Solder ¹ :	Blue, Green	200°C/W
	Red, Amber	150°C/W
Electrostatic Discharge Classification (MIL-STD-883E)	Blue, Green	Class 2
	Red, Amber	
LED Junction Temperature		110°C
Lead Soldering Temperature		250°C / 10 seconds

Note:

1. R_{th} test condition: Mounted on PC board FR 4 (pad size ≥16 mm²)

Electrical Characteristics

T_A = 25° C unless otherwise noted

SYMBOL	PARAMETER	COLOR	MIN	TYP	MAX	UNITS	CONDITIONS
I _V	Luminous Intensity	Blue	355	550	----	mcd	I _F = 30 mA
		Green	1400	1800	----		
		Red	1120	1600	----		I _F = 50 mA
		Amber	1120	1500	----		
V _F	Forward Voltage	Blue	----	3.6	4.2	V	I _F = 30 mA
		Green	----	3.6	4.2		
		Red	----	2.4	3.0		I _F = 50 mA
		Amber	----	2.4	3.0		
I _R	Reverse Current	Blue	----	----	10	μA	V _R = 5 V
		Green	----	----	10		
		Red	----	----	10		
		Amber	----	----	10		
λ _D	Dominant Wavelength	Blue	460	470	480	nm	I _F = 30 mA
		Green	515	527	535		I _F = 50 mA
		Red	618	624	630		
		Amber	584	591	599		
2Θ _½ H-H	50% Power Angle	Blue & Green		120		deg	I _F = 30 mA
		Red & Amber					I _F = 50 mA

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

PLCC4 Surface Mount LED

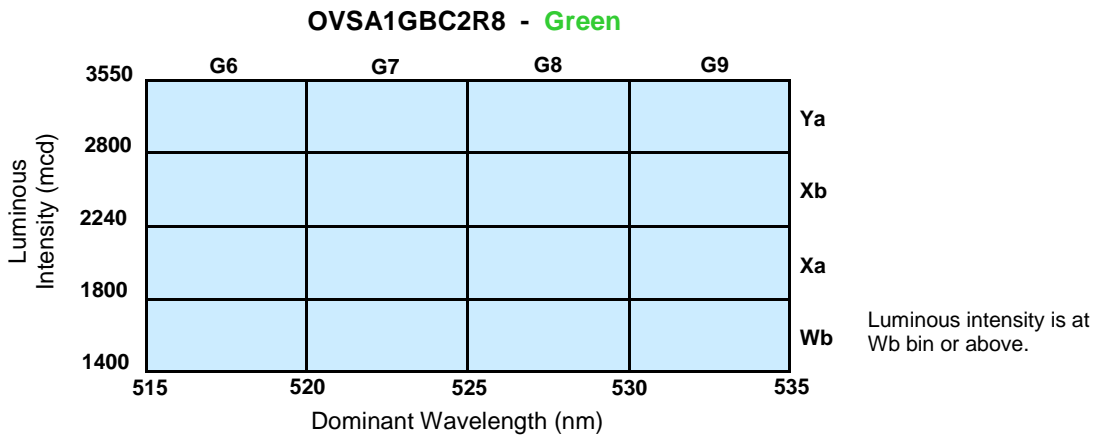
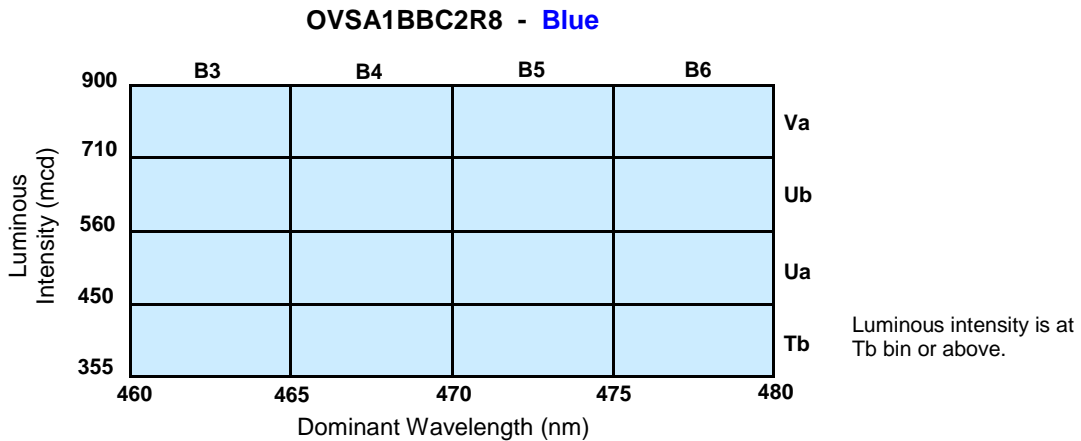
OVSA1xBC2R8 Series



Standard Bins ($I_F = 30 \text{ mA}$)

Lamps are sorted to luminous intensity (I_V) and dominant wavelength (λ_D) bins shown.

Orders for OVSA1BBC2R8 (Blue) & OVSA1GBC2R8 (Green) may be filled with any or all bins contained as below.



Important Notes:

1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
2. To designate luminous intensity ranks, please contact OPTEK.

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

PLCC4 Surface Mount LED

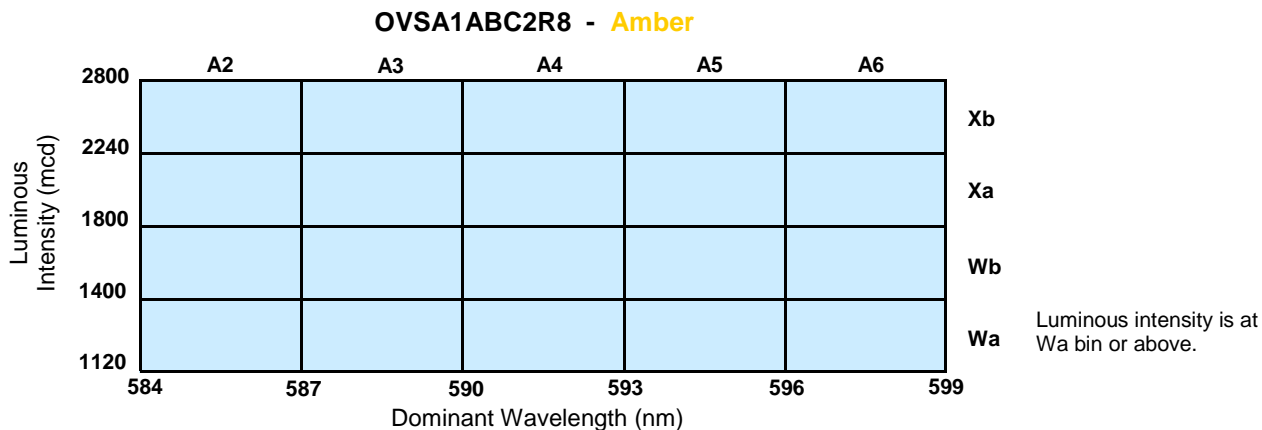
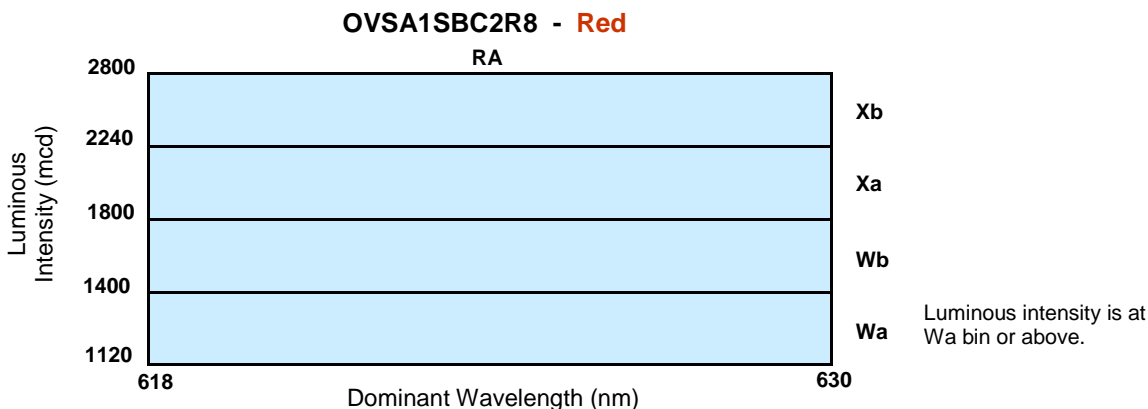
OVSA1xBC2R8 Series



Standard Bins ($I_F = 50 \text{ mA}$)

Lamps are sorted to luminous intensity (I_V) and dominant wavelength (λ_D) bins shown.

Orders for OVSA1SBC2R8 (Red) & OVSA1ABC2R8 (Amber) may be filled with any or all bins contained as below.



Important Notes:

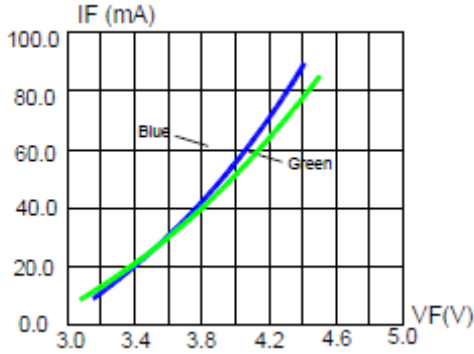
1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
2. To designate luminous intensity ranks, please contact OPTEK.

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

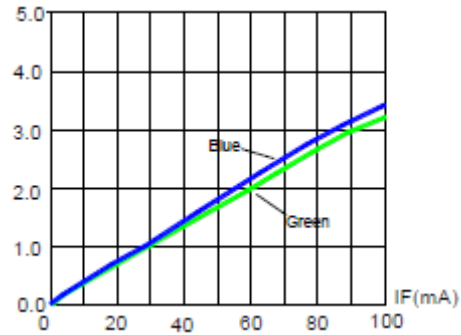
PLCC4 Surface Mount LED

OVSA1xBC2R8 Series

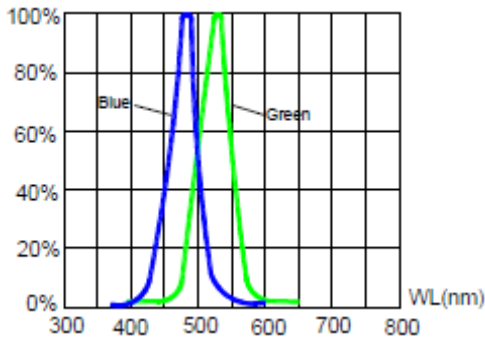
Typical Electro-Optical Characteristics Curves OVSA1BBC2R8 (Blue) & OVSA1GBC2R8 (Green)



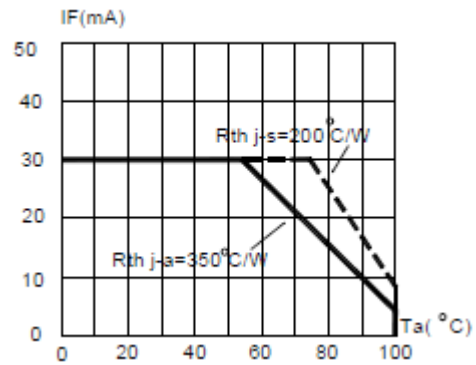
Forward Current vs. Forward Voltage



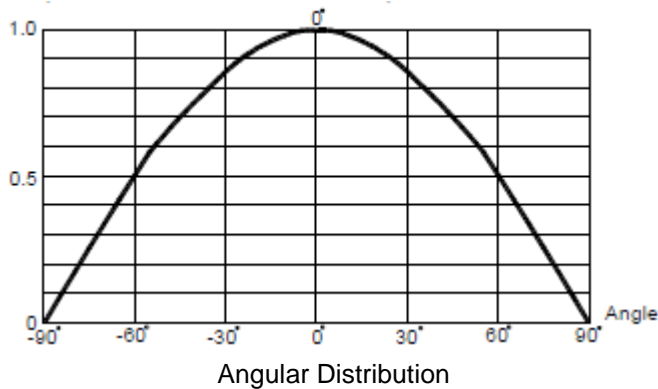
Relative Luminous Intensity vs. Forward Current



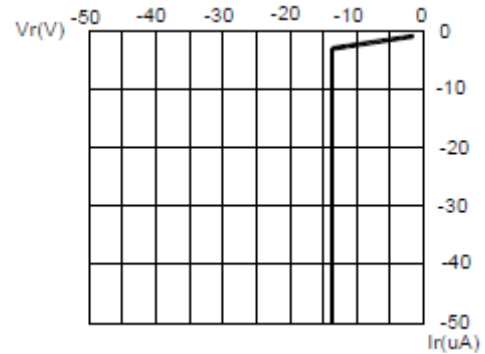
Relative Luminous Intensity vs. Wavelength



Blue & Green Maximum Forward DC Current vs. Ambient Temperature



Angular Distribution



Blue & Green Reverse Current vs. Reverse Voltage

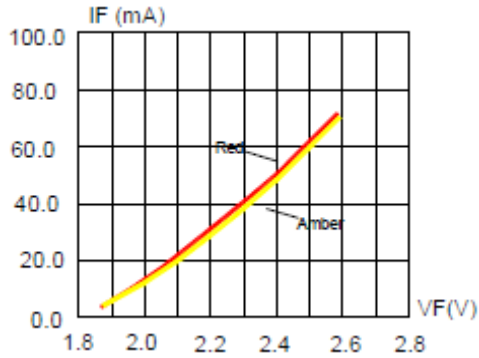
OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

PLCC4 Surface Mount LED

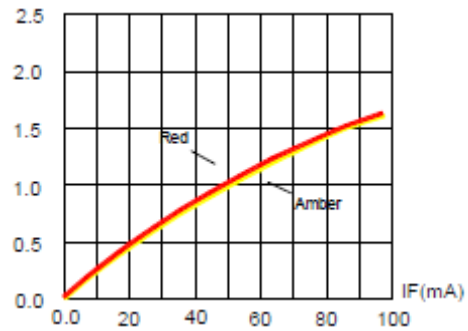
OVSA1xBC2R8 Series



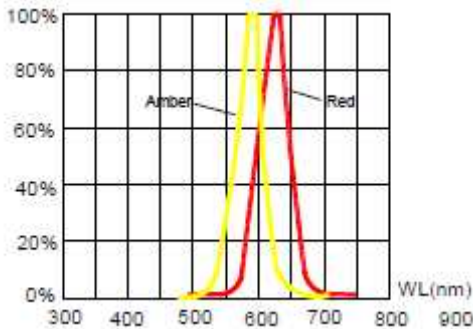
Typical Electro-Optical Characteristics Curves for OVSA1SBC2R8 (Red) & OVSA1ABC2R8 (Amber)



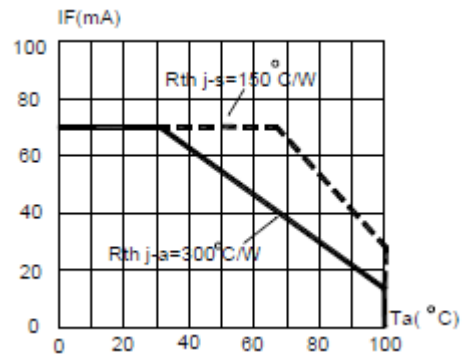
Forward Current vs. Forward Voltage



Relative Luminous Intensity vs. Forward Current



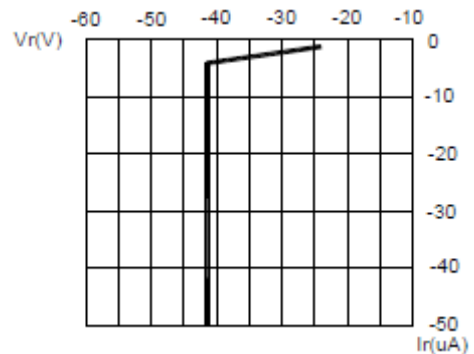
Relative Luminous Intensity vs. Wavelength



Red & Amber Maximum Forward DC Current vs. Ambient Temperature



Angular Distribution



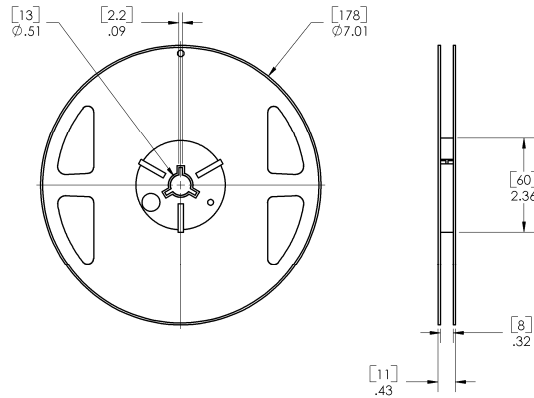
Red & Amber Reverse Current vs. Reverse Voltage

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

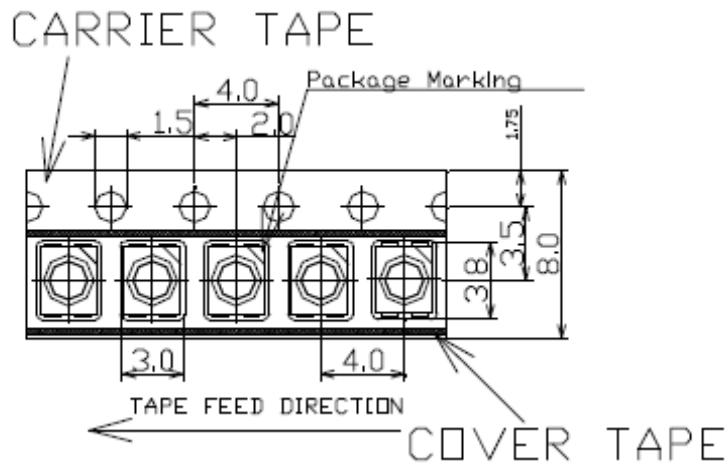
PLCC4 Surface Mount LED

OVSA1xBC2R8 Series

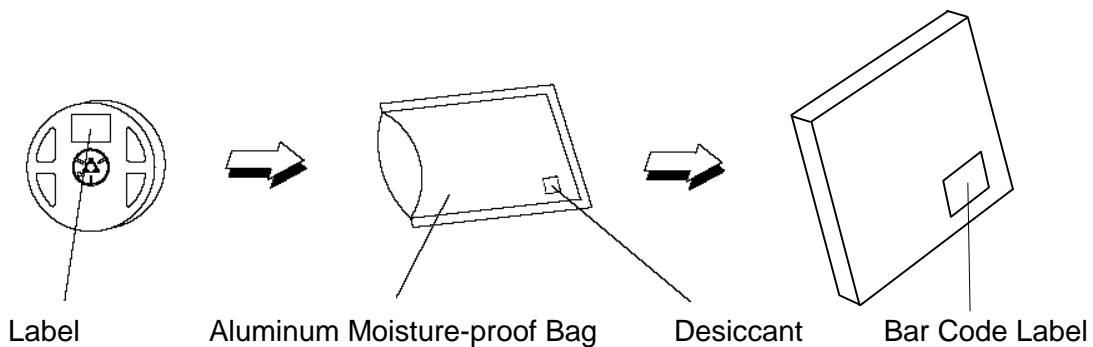
Reel Dimensions: 7-inch reel



Carrier Tape Dimensions: Loaded Quantity 2000 pieces per reel



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.