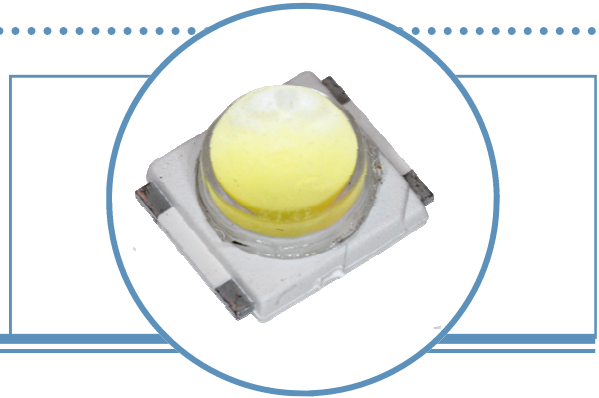


1-Watt SMD 6x6mm

With Dome Lens

OVSPxBCR44 Series

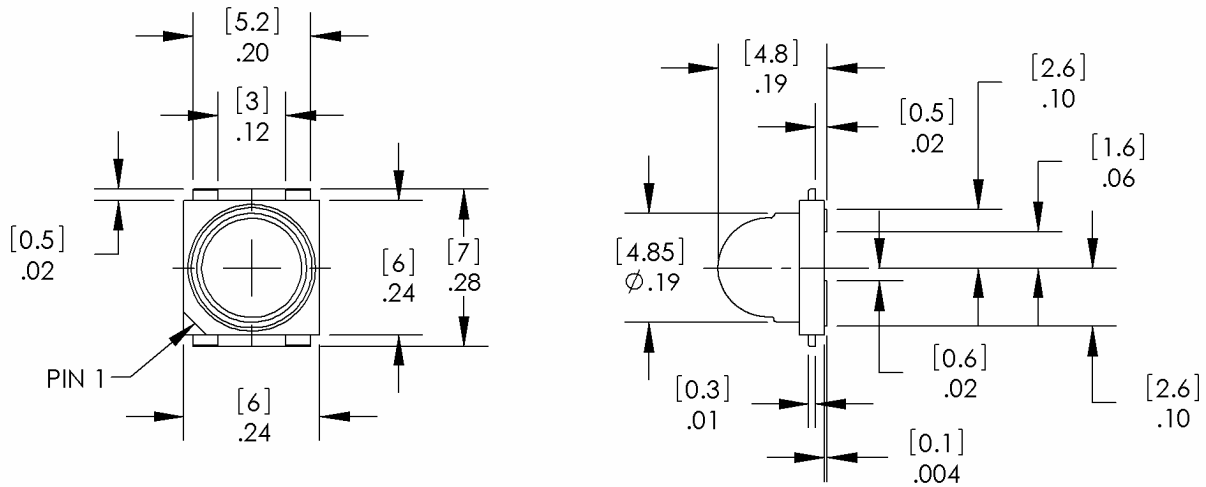
- Robust energy-efficient design with long operating life
- Low thermal resistance
- Medium beam angle
- High luminous intensity



Applications

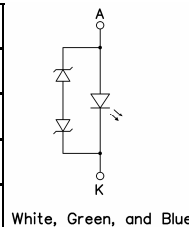
- Automotive interior lighting
- Architectural indoor and outdoor lighting
- Electronic signs and signals

Part Number	Beam Angle	Emitted Color	Typical Dominant Wavelength (nm)	Typical Luminous Intensity (cd)	Lens Color
OVSPBBCR44	45°	Blue	470	16.8	Water Clear
OVSPGBCR44	45°	Green	525	46	Water Clear
OVSPW1BCR44	60°	White	N/A	70	Water Clear

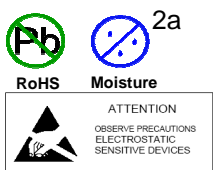


DIMENSIONS ARE IN INCHES [MM]
GENERAL TOLERANCES ±.008 [0.20]

Part Number	Color	Function	
		Pin 1	Pin 2
OVSPBBCR44	Blue	Cathode	Anode
OVSPGBCR44	Green	Cathode	Anode
OVSPW1BCR44	White	Anode	Cathode



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



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1-Watt SMD 6x6mm Dome Lens

OVSPxBCR44 Series



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

Storage Temperature Range		-40 ~ +100 °C
Operating Temperature Range		-40 ~ +100 °C
Reverse Voltage		Not designed for reverse bias
Continuous Forward Current		350 mA
Peak Forward Current (Pulse width ≤ 10 msec, duty cycle $\leq 10\%$)	Blue, Green	1000 mA
	White	500 mA
Power Dissipation		1200 mW
Thermal Resistance Junction to Solder		20° C/W
Electrostatic Discharge Classification (JEDEC-JESD22-A114F)		Class 1C
Moisture Sensitivity Level (IPC/JEDEC J-STD-020C)		2a / 672 hrs
LED Junction Temperature	Blue, Green	120° C
	White	125° C

Optical and Electrical Characteristics

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	
V_F	Forward Voltage	Blue	----	3.6	4.0	V
		Green				
I_V	Luminous Intensity	Blue	11250	16800	22400	mcd
		Green	35500	46000	71500	mcd
λ_D	Dominant Wavelength	Blue	464	470	476	nm
		Green	520	525	535	nm
$2\theta_{1/2}$	50% Power Angle	----	45	----	deg	

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V_F	Forward Voltage	3.0	3.5	4.0	V
Φ	Luminous Flux	----	90	----	lm
I_V	Luminous Intensity	56	70	90	cd
$2\theta_{1/2}$	50% Power Angle	----	60	----	deg

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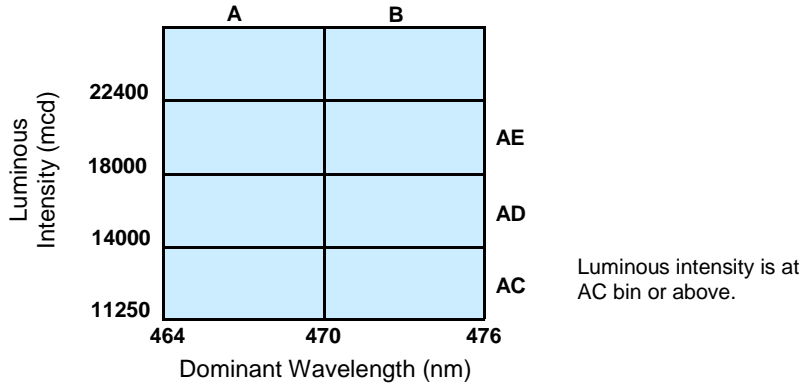
1-Watt SMD 6x6mm Dome Lens

OVSPxBCR44 Series

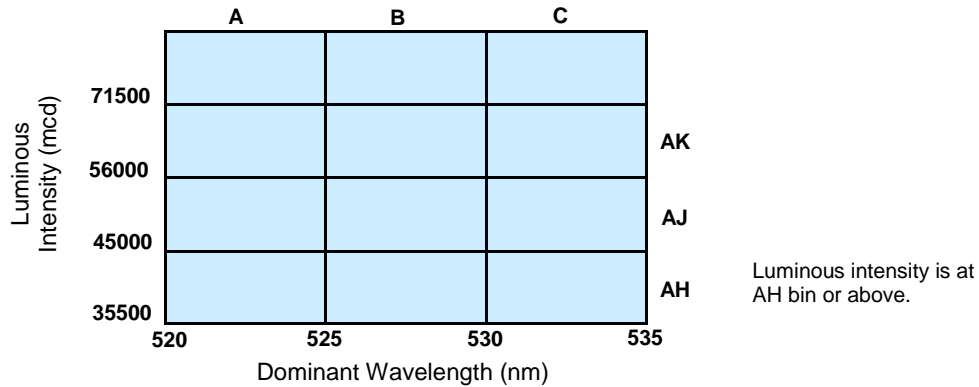
Standard Bins

LEDs are sorted to luminous flux (Φ), luminous intensity (I_V), dominant wavelength (λ_D) and chromaticity coordinates (x,y) bins shown. Each reel will consist of a single intensity bin and a single color bin. Orders may be filled with any of the intensity bins or color bins listed in the following tables. Optek will not accept orders for single intensity bins nor for single color bins. For custom option inquiries, contact your local Optek sales representative.

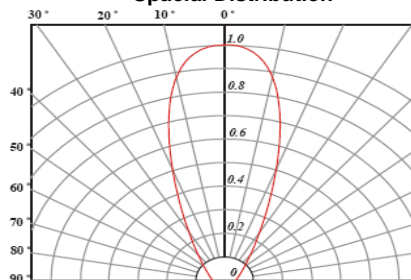
OVSPBBCR44 - Blue



OVSPGBCR44 - Green



Spacial Distribution



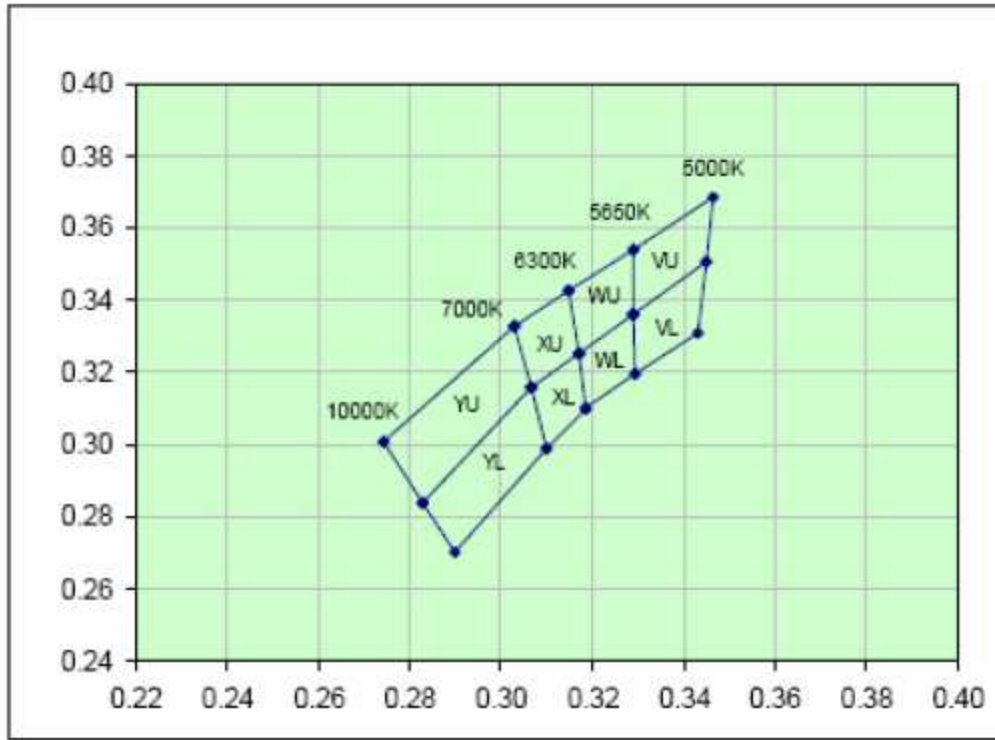
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1-Watt SMD 6x6mm Dome Lens

OVSPxBCR44 Series



Color Bin - Cool White



Φ	Luminous Intensity (cd)	
	Bin	Max
AK	56.0	71.5
AL	71.5	90.0

Bin		1	2	3	4
YU	Cx	0.274	0.283	0.307	0.303
	Cy	0.301	0.284	0.316	0.333
YL	Cx	0.283	0.290	0.310	0.307
	Cy	0.284	0.270	0.299	0.316
XU	Cx	0.303	0.307	0.317	0.315
	Cy	0.333	0.316	0.325	0.343
XL	Cx	0.307	0.310	0.319	0.317
	Cy	0.316	0.299	0.310	0.325
WU	Cx	0.315	0.317	0.329	0.329
	Cy	0.343	0.325	0.336	0.354
WL	Cx	0.317	0.319	0.329	0.329
	Cy	0.325	0.310	0.319	0.336
VU	Cx	0.329	0.329	0.345	0.347
	Cy	0.354	0.336	0.350	0.368
VL	Cx	0.329	0.329	0.343	0.345
	Cy	0.336	0.319	0.331	0.350

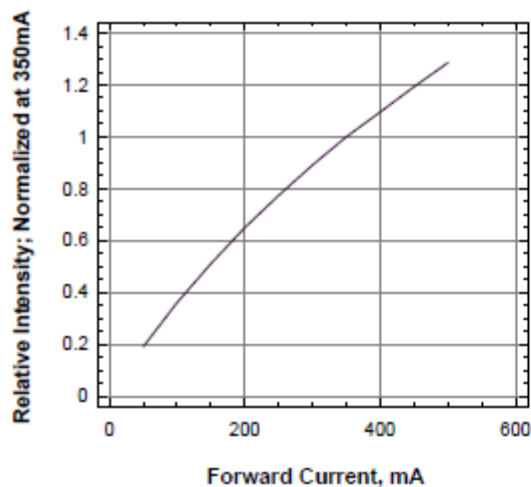
OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

1-Watt SMD 6x6mm Dome Lens

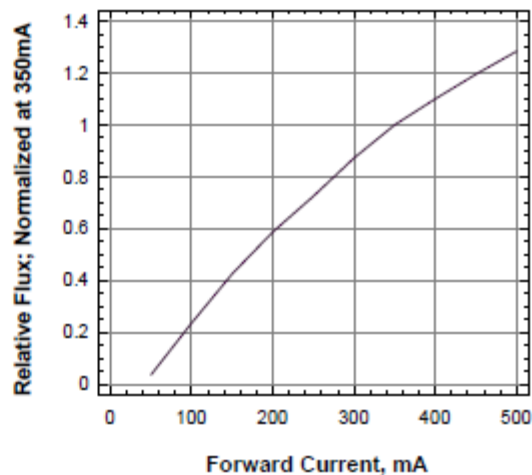
OVSPxBCR44 Series

Typical Electro-Optical Characteristics Curves—Blue

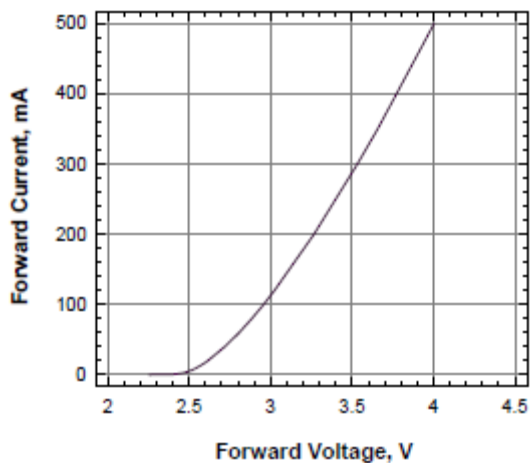
Relative Intensity Vs Forward Current



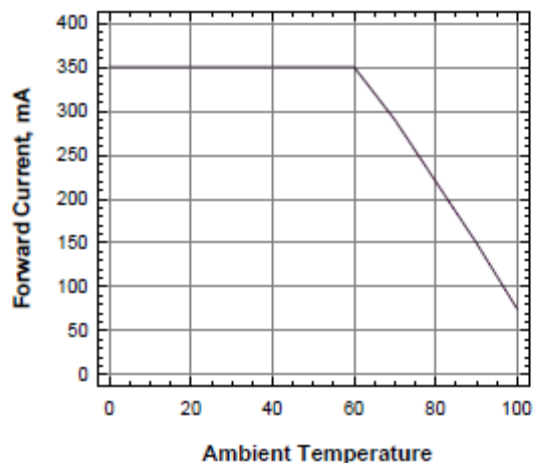
Relative Flux Vs Forward Current



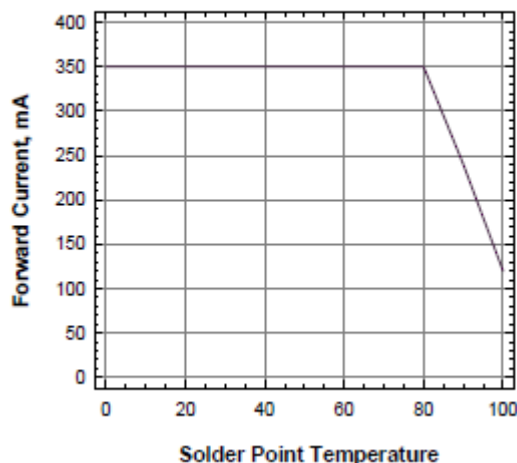
Forward Current Vs Forward Voltage



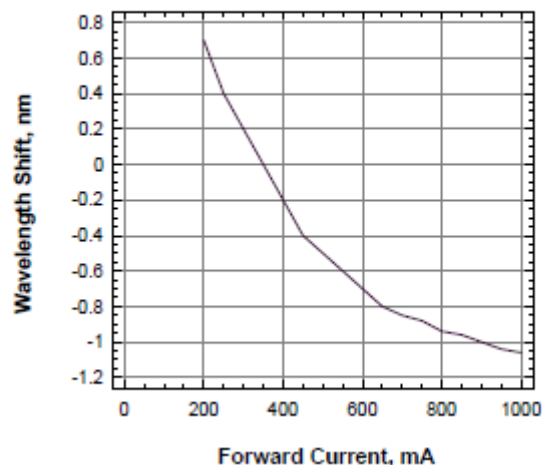
Forward Current Vs Ambient Temperature (R_{ja}=40K/W)



Forward Current Vs Solder Point Temperature



Dominant Wavelength Shift Vs Forward Current



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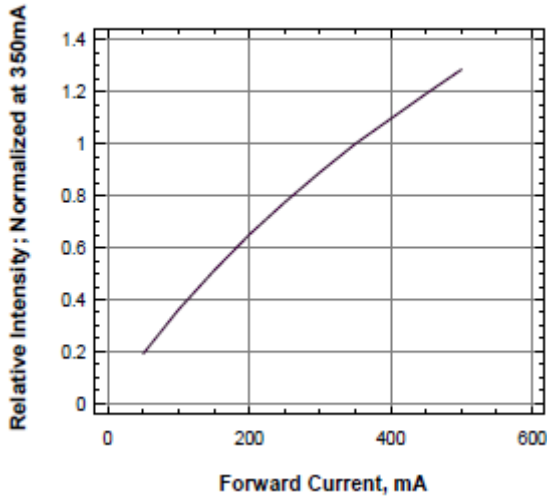
1-Watt SMD 6x6mm Dome Lens

OVSPxBCR44 Series

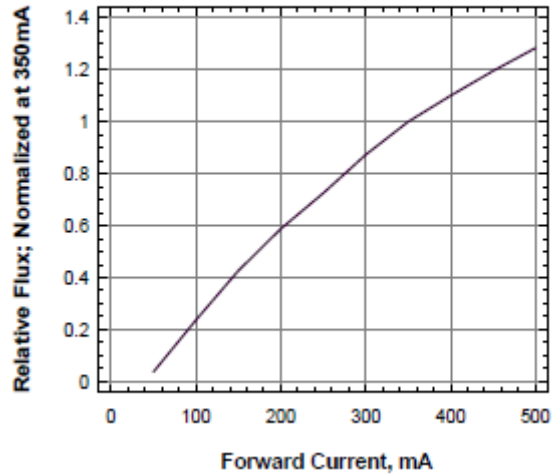


Typical Electro-Optical Characteristics Curves—Green

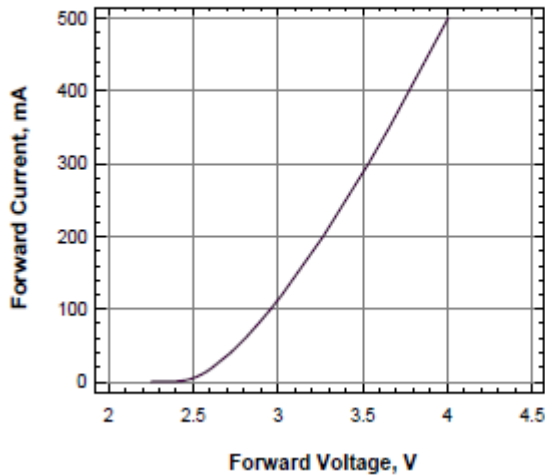
Relative Intensity Vs Forward Current



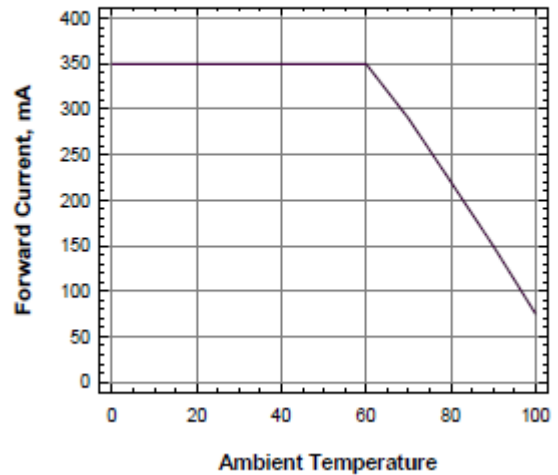
Relative Flux Vs Forward Current



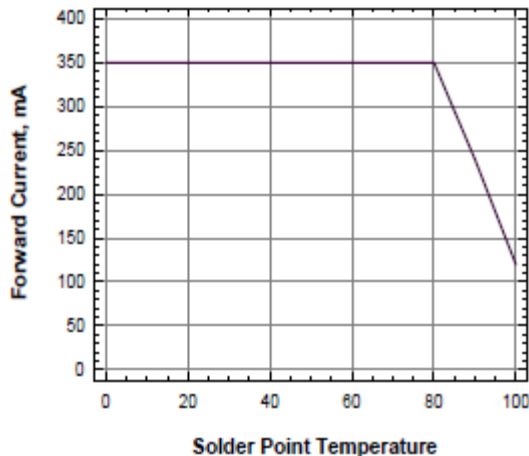
Forward Current Vs Forward Voltage



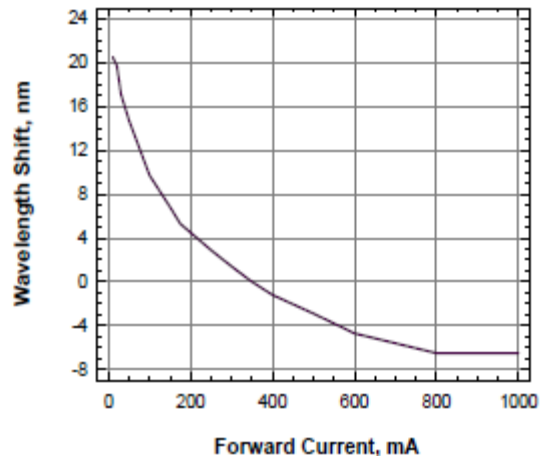
Forward Current Vs Ambient Temperature (R_{ja}=40K/W)



Forward Current Vs Solder Point Temperature



Dominant Wavelength Shift Vs Forward Current



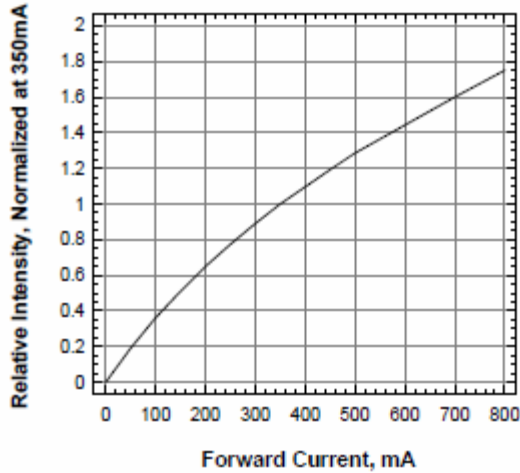
OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

1-Watt SMD 6x6mm Dome Lens

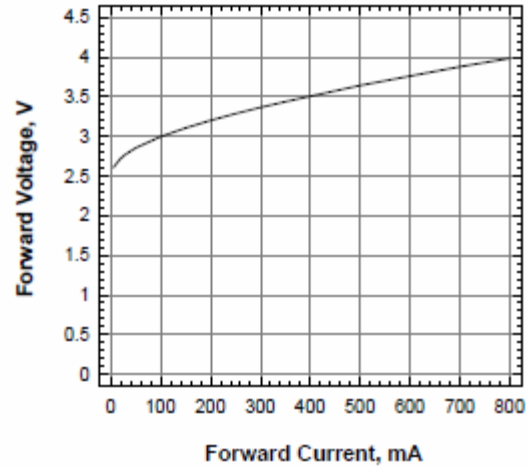
OVSPxBCR44 Series

Typical Electro-Optical Characteristics Curves—White

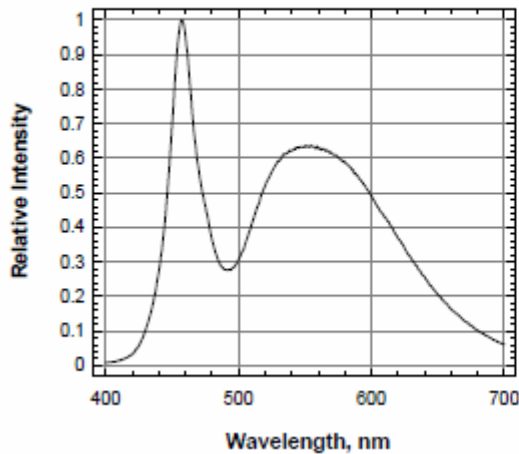
Relative Luminous Intensity Vs Forward Current



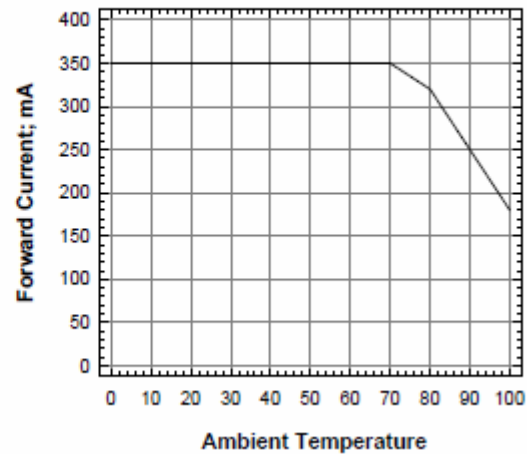
Forward Voltage Vs Forward Current



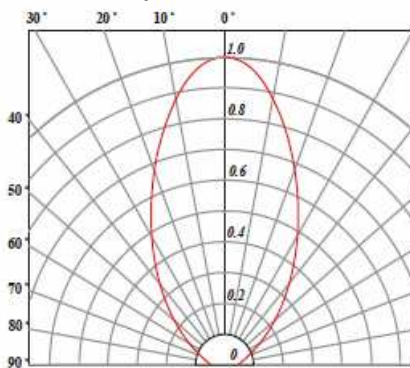
Relative Intensity Vs Wavelength



Forward Current Vs Ambient Temperature (R_{ja}=40 KW)

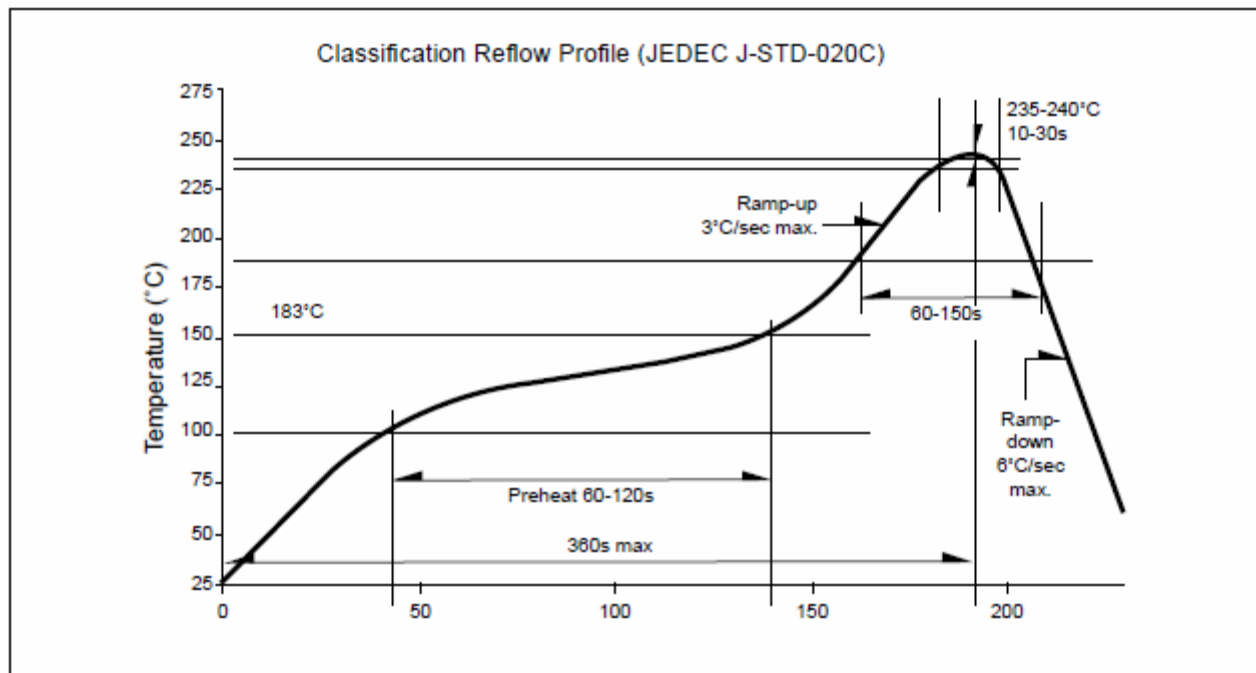


Spatial Distribution

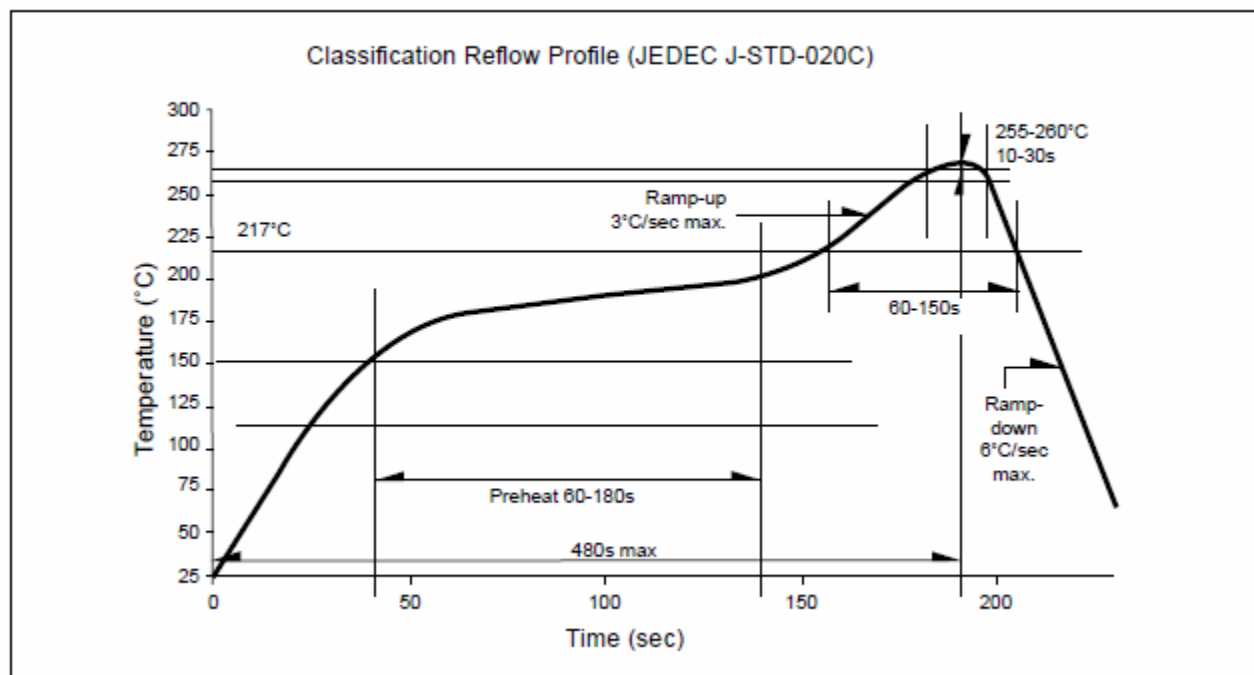


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Recommended Sn-Pb IR-Reflow Soldering Profile



Recommended Pb-free Soldering Profile



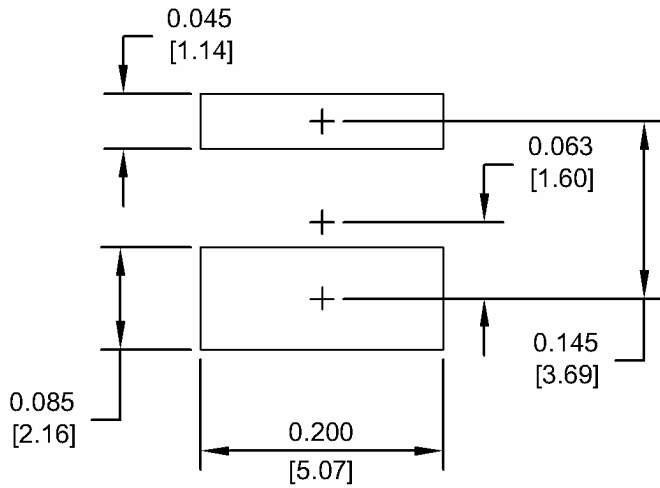
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1-Watt SMD 6x6mm Dome Lens

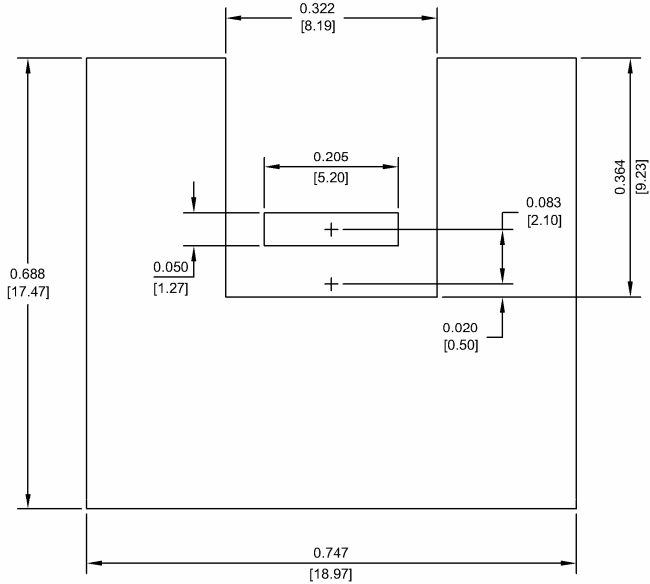
OVSPxBCR44 Series

Solder Pad Design

Metal core circuit board (MCPCB) is highly recommended for high density applications.



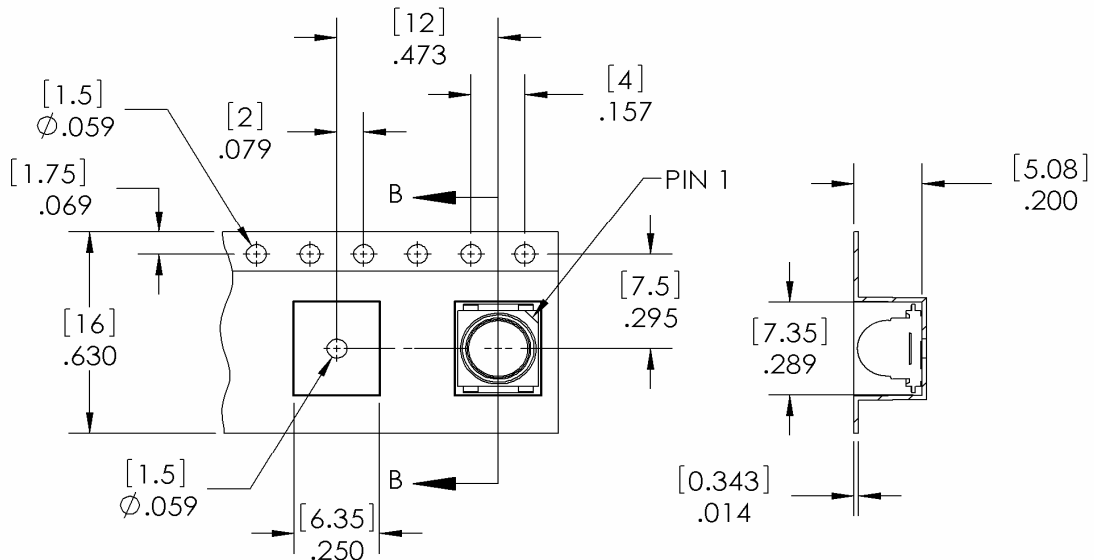
Solder Paste Pattern



Copper Pattern

Taping and Orientation

Loaded quantity 1000 pieces per reel



DIMENSIONS ARE IN INCHES [MM]
TOLERANCES ARE ±.004 [.10] UNLESS OTHERWISE SPECIFIED

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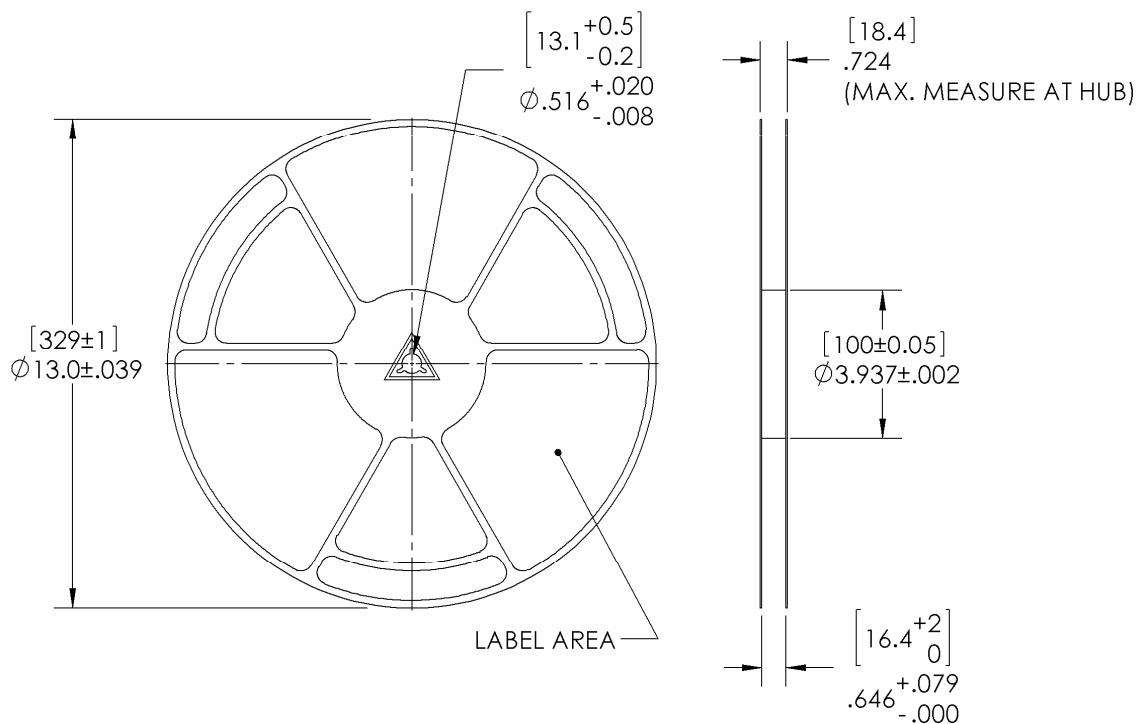
1-Watt SMD 6x6mm Dome Lens

OVSPxBCR44 Series

Taping and Orientation

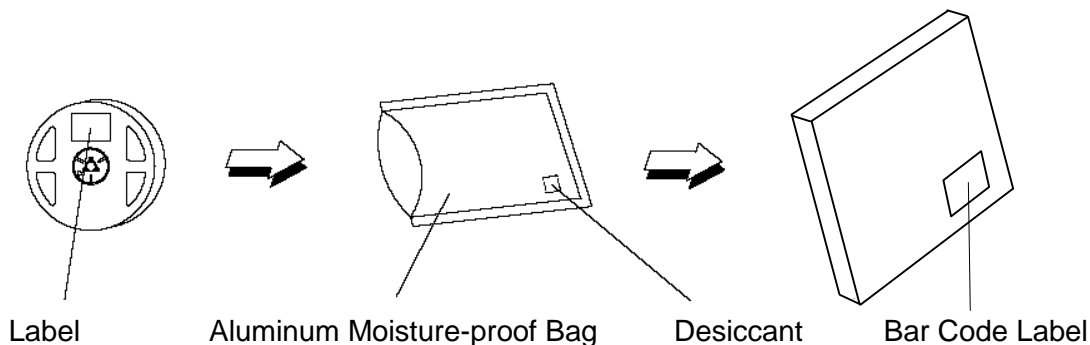
Loaded quantity 1000 pieces per reel

REEL DIMENSIONS (ϕ 13 INCH [329])



DIMENSIONS ARE IN INCHES [MM]

Moisture Resistant Packaging



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