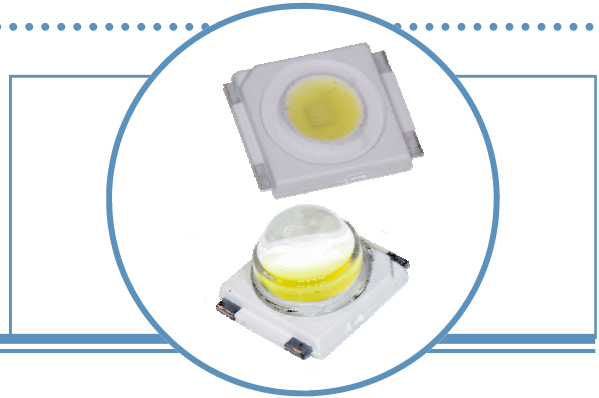


.3-Watt SMD 6x6mm White

OVS3W Series

- Robust energy-efficient design with long operating life
- Low thermal resistance
- Exceptional spatial uniformity
- Optional optics to suit application



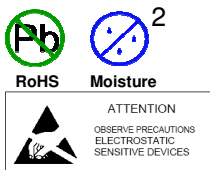
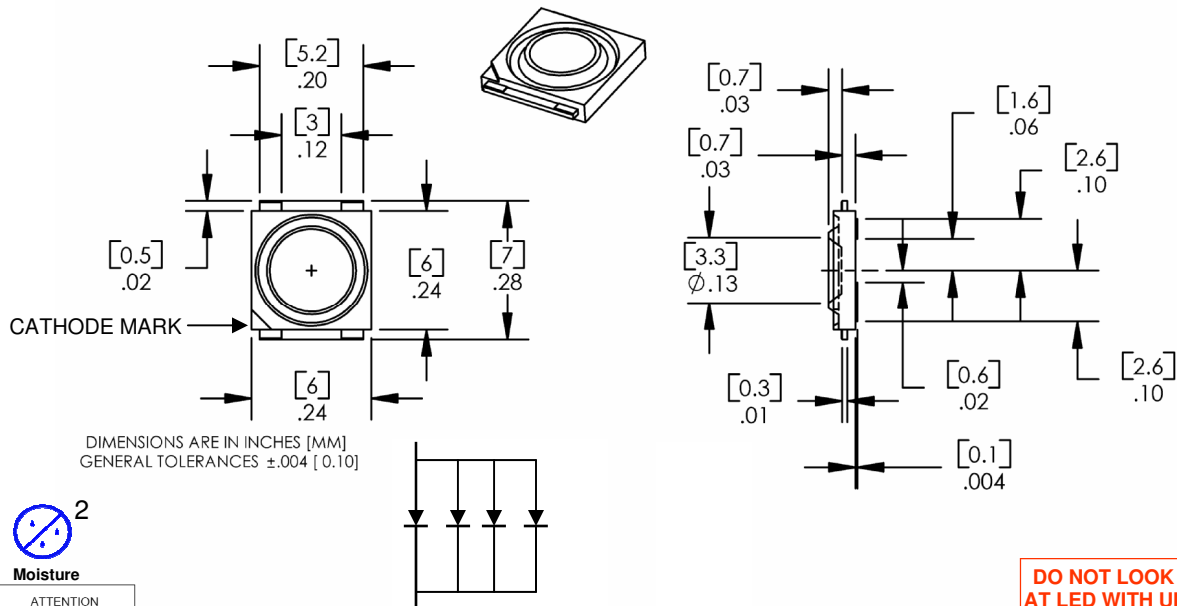
The **OVS3W Series** features energy-efficient packaged LEDs that offer high luminance, and a long operating lifespan. This series includes a flat-lens, ultra-low profile (1.5mm) package with a 120° viewing angle, and a domed lens package with a 60° viewing angle, making them highly suitable for conventional 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

Part Number	Viewing Angle	Emitted Color	Typical Luminous Flux (lm)	Typical On-Axis Intensity (cd)	Lens
OVS3WBCR4	120°	White	7	3.2	Water Clear/Flat
OVS3WBCR44	60°	White	7	9	Water Clear/Dome

OVS3WBCR4

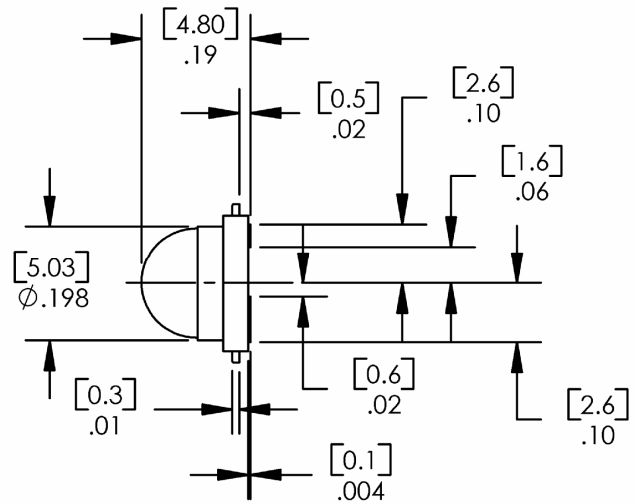
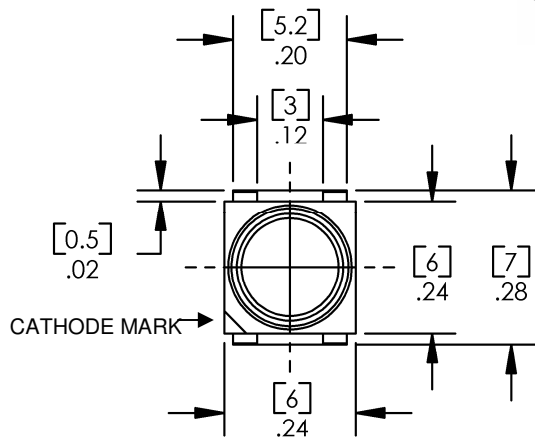
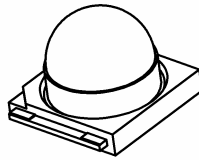


DO NOT LOOK DIRECTLY AT LED WITH UNSHIELDED EYES OR DAMAGE TO RETINA MAY OCCUR.

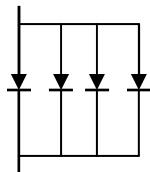
OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

.3-Watt SMD 6mm White OVS3W Series

OVS3WBCR44



DIMENSIONS ARE IN INCHES [MM]
GENERAL TOLERANCES \pm .004 [0.10]



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

DC Forward Current	120mA
Peak Pulsed Forward Current ¹	500mA
Reverse Voltage	5V
Junction Temperature ²	125°C
Power Dissipation	450mW
Storage and Operating Temperature	-40° ~ +100 °C
ESD Threshold (HBM)	>1000V

Notes:

1. Pulse width $t_p \leq 10\mu\text{s}$, Duty cycle = 0.1
2. Thermal conductivity = 20K/W for white

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

Optical and Electrical Characteristics—Flat Lens ($I_F = 120 \text{ mA}$, $T_A = 25^\circ \text{ C}$)

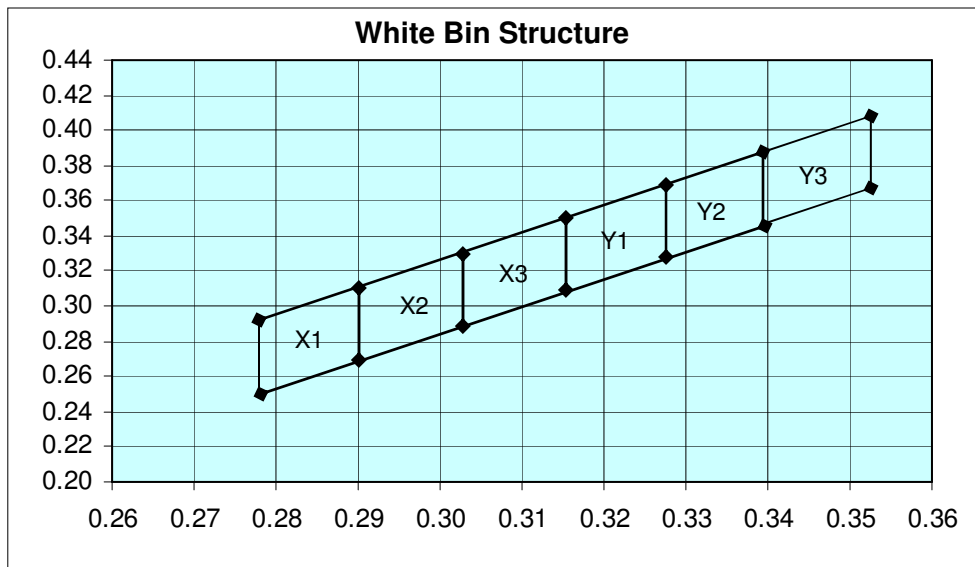
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V_F	Forward Voltage	----	3.6	4.2	V
Φ	Luminous Flux	----	7	----	lm
I_F	Luminous Intensity	2.8	3.2	4.5	cd
I_R	Reverse Current at 5V	----	10	----	μA
$2 \Theta_{1/2}$	50% Power Angle	----	120	----	deg

Optical and Electrical Characteristics—Dome Lens ($I_F = 120 \text{ mA}$, $T_A = 25^\circ \text{ C}$)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V_F	Forward Voltage	----	3.6	4.0	V
Φ	Luminous Flux	----	7	----	lm
I_V	Luminous Intensity	7	9	14	cd
I_R	Reverse Current at 5V	----	10	----	μA
$2 \Theta_{1/2}$	50% Power Angle	----	60	----	deg

Standard Bins

Lamps are sorted to luminous flux (Φ), chromaticity coordinates, and correlated color temperature (CCT) bins shown. Orders may be filled with any or all bins contained as below.



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.3-Watt SMD 6mm White

OVS3W Series



Standard Bins

Lamps are sorted to chromaticity coordinates and intensity (I_v) bins shown. Orders may be filled with any or all bins contained as below.

Chromaticity Coordinates

Bin		1	2	3	4
X 1	C_x	0.2775	0.290	0.290	0.2775
	C_y	0.243	0.265	0.310	0.288
X2	C_x	0.290	0.3025	0.3025	0.290
	C_y	0.265	0.286	0.331	0.310
X3	C_x	0.3025	.0315	0.315	0.3025
	C_y	0.286	0.308	0.353	0.331
Y1	C_x	0.315	0.3275	0.3275	0.315
	C_y	0.308	0.330	0.375	0.353
Y2	C_x	0.3275	0.340	0.340	0.3275
	C_y	0.330	0.351	0.396	0.375
Y3	C_x	0.34	0.3525	0.3525	0.34
	C_y	0.351	0.373	0.418	0.396

Correlated Color Temperature (CCT)

Color Bin	Minimum CCT (K)	Maximum CCT (K)
Y3	4500	5000
Y2	5000	5500
Y1	5500	6000
X3	6000	7000
X2	7000	8000
X1	8000	10000

OVS3WBCR4 Flat Lens

I_v	Luminous Intensity (cd)		
	Bin	Min	Max
Y1	2.8	3.5	
Y2	3.5	4.5	

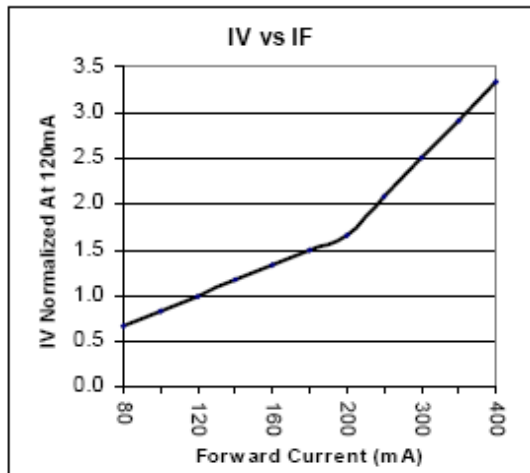
OVS3WBCR44 Dome Lens

I_v	Luminous Intensity (cd)		
	Bin	Min	Max
AA	7.1	9	
AB	9	11	
AC	11	14	

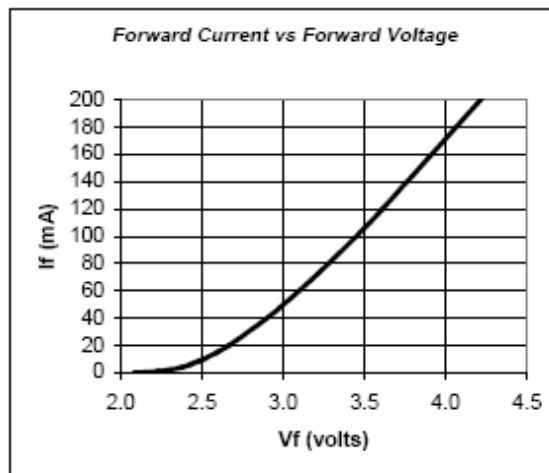
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Typical Electro-Optical Characteristics Curves

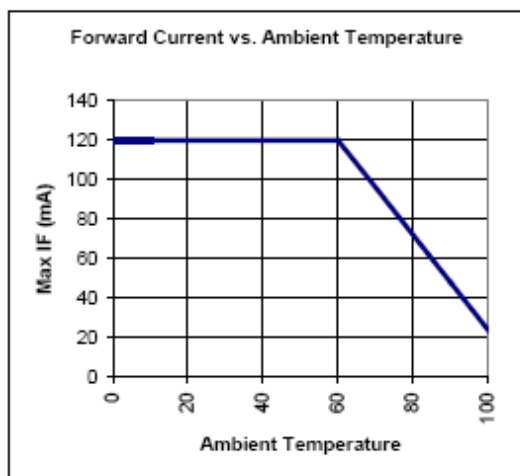
Luminous intensity vs. forward current.



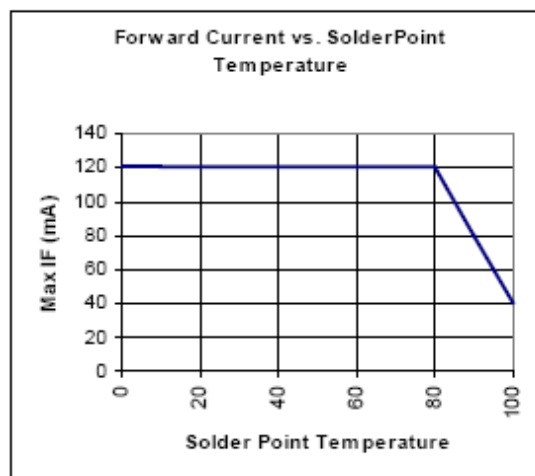
Forward current vs. forward voltage.



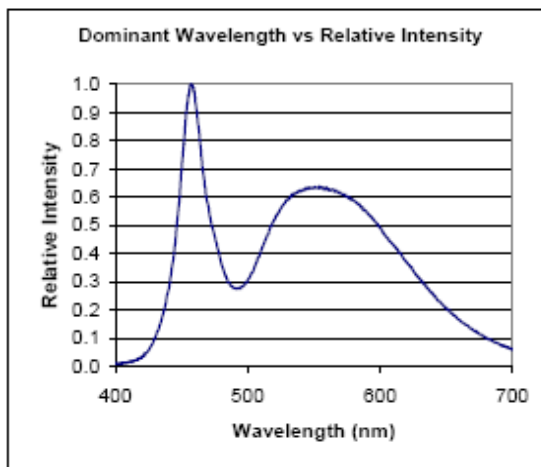
Maximum Permissible Current.



Maximum Permissible Current.



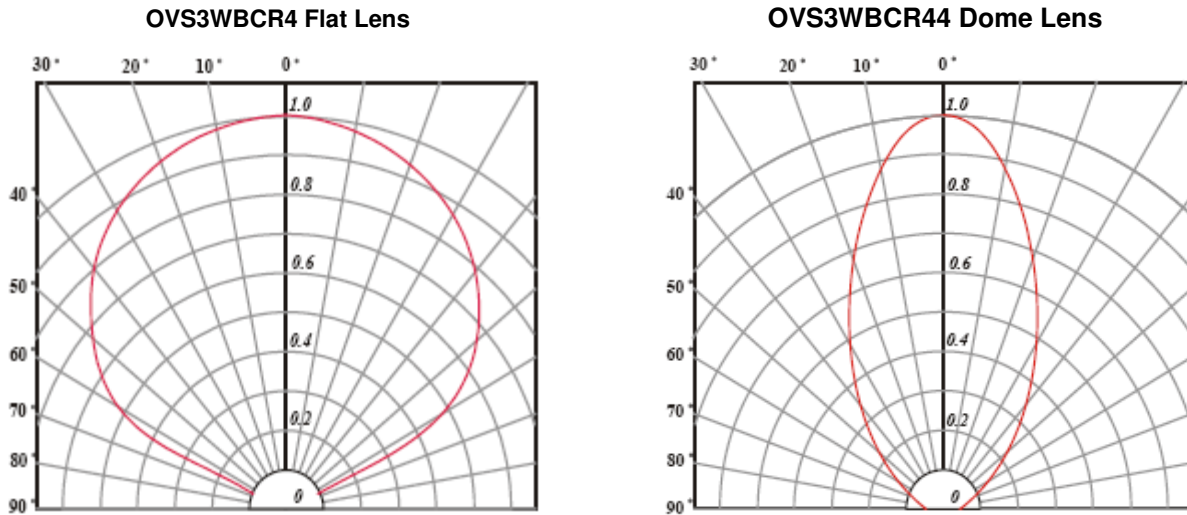
Relative Spectra Emission



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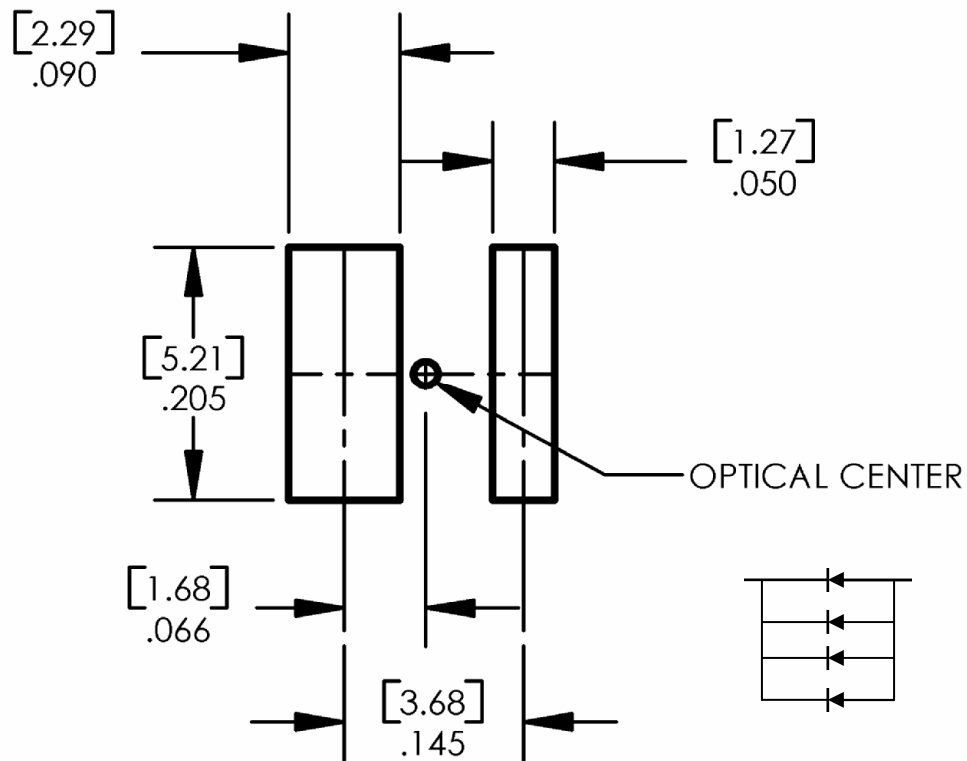
Typical Electro-Optical Characteristics Curves

Radiation Patterns



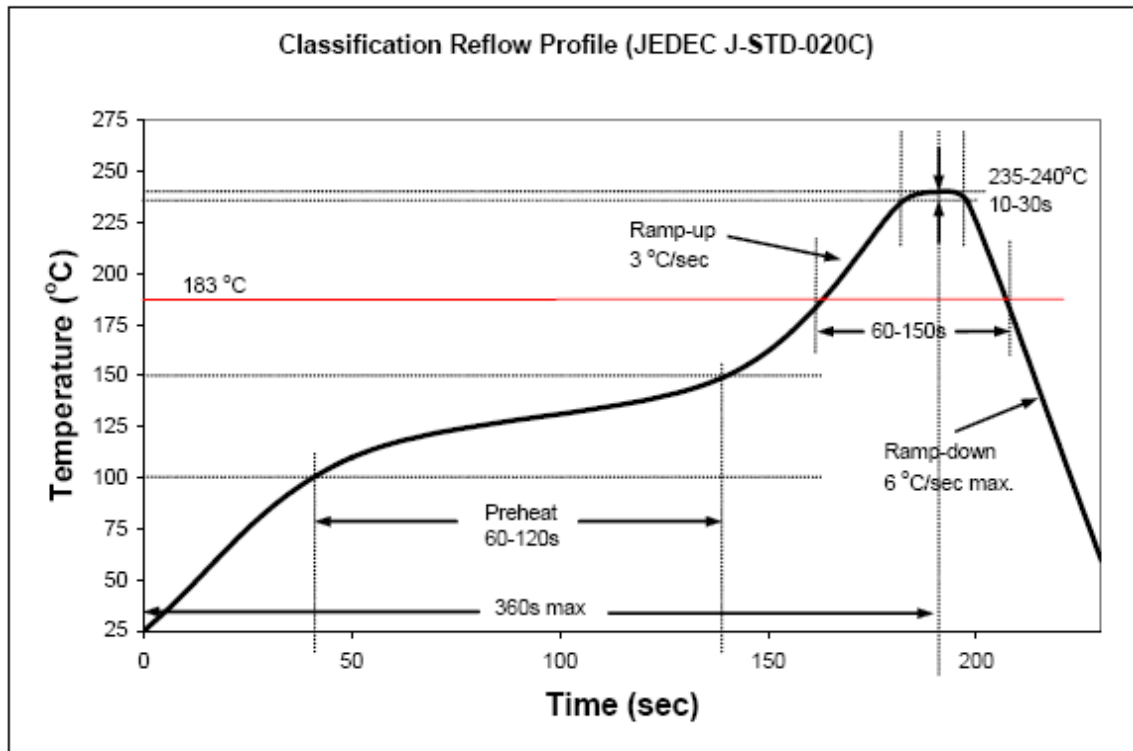
Solder Pad Design

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

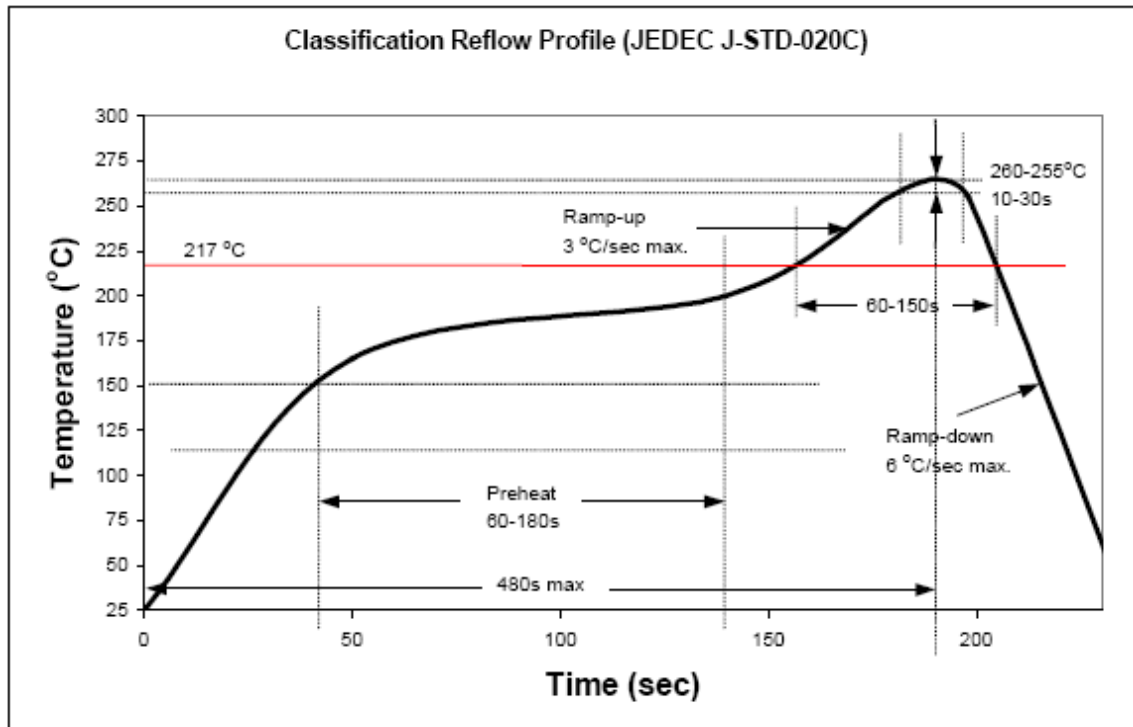


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Recommended Sn-Pb IR-Reflow Soldering Profile.



Recommended Pb Free IR-Reflow Soldering Profile.

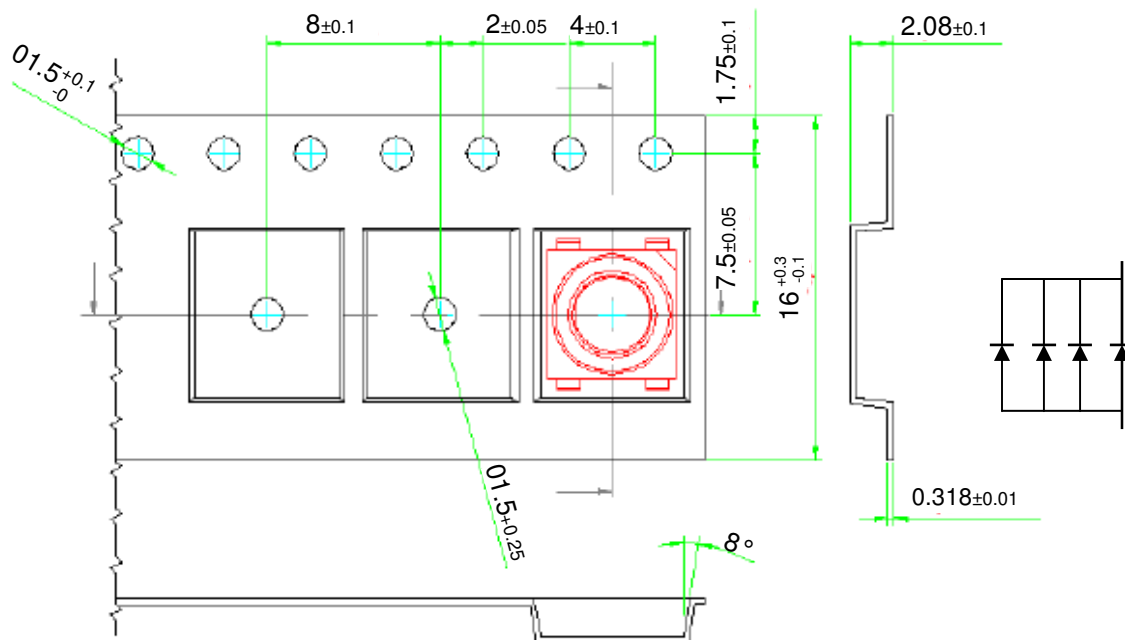


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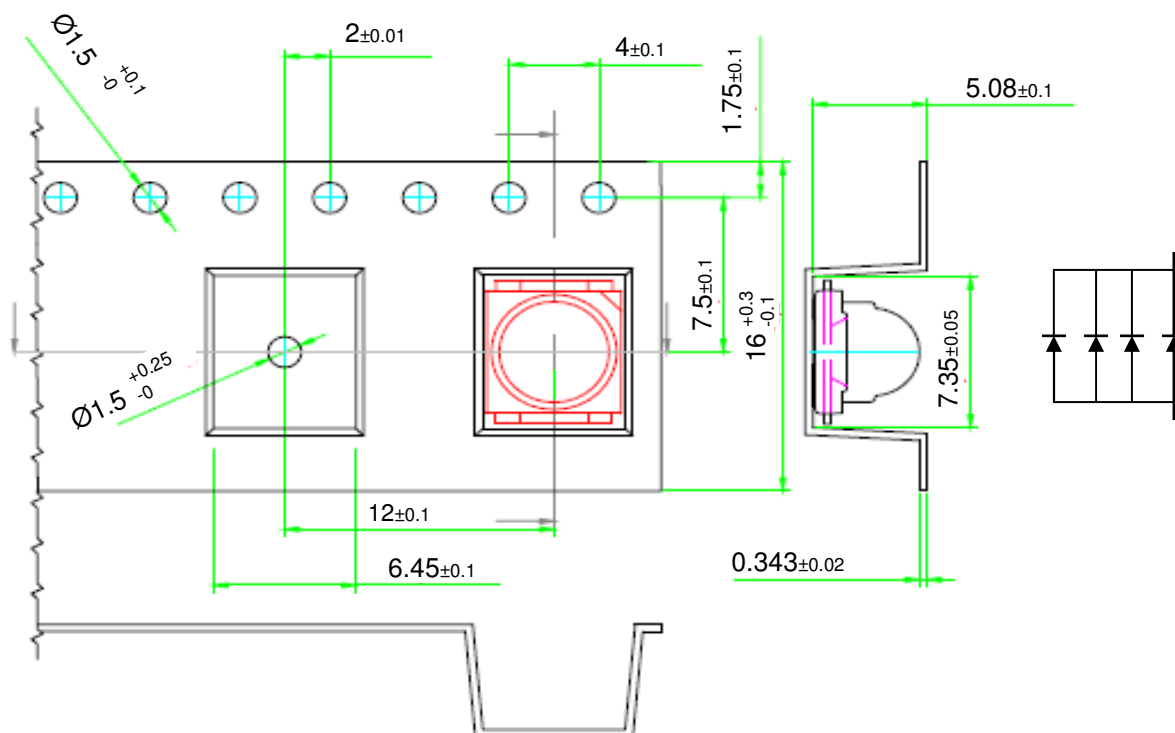
.3-Watt SMD 6mm White

OVS3W Series

Taping and Orientation—Flat Lens
Loaded quantity 2000 pieces per reel



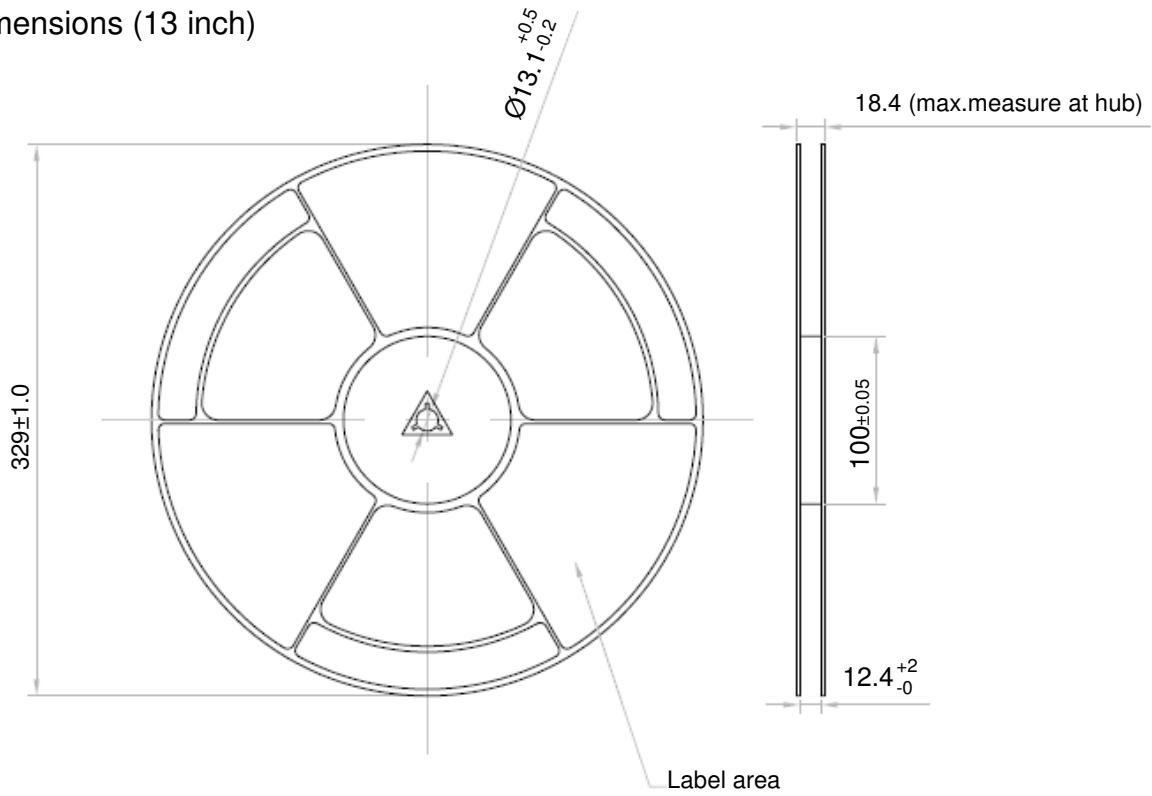
Taping and Orientation—Dome Lens
Loaded quantity 1000 pieces per reel



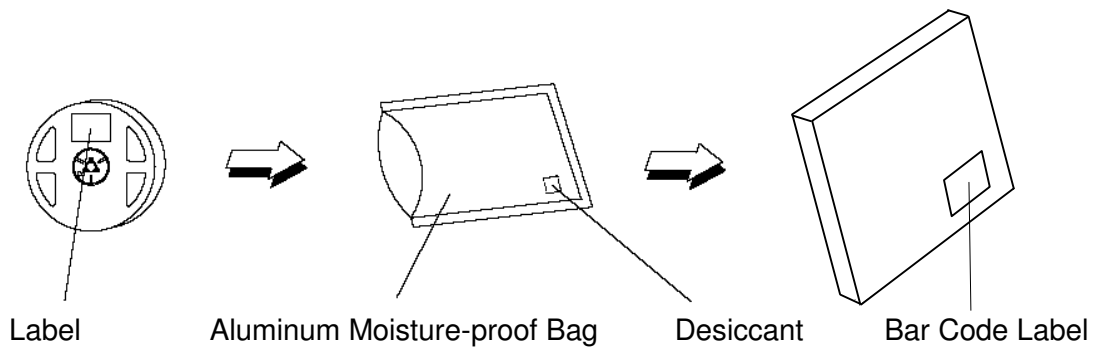
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.3-Watt SMD 6mm White OVS3W Series

Reel Dimensions (13 inch)



Moisture Resistant Packaging



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