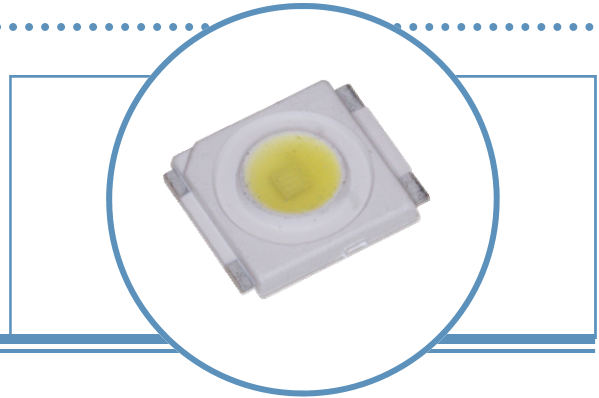


.5-Watt SMD 6mm White (120° Viewing Angle)

OVS5WBCR4

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

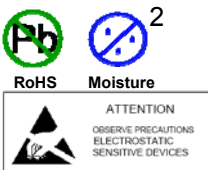
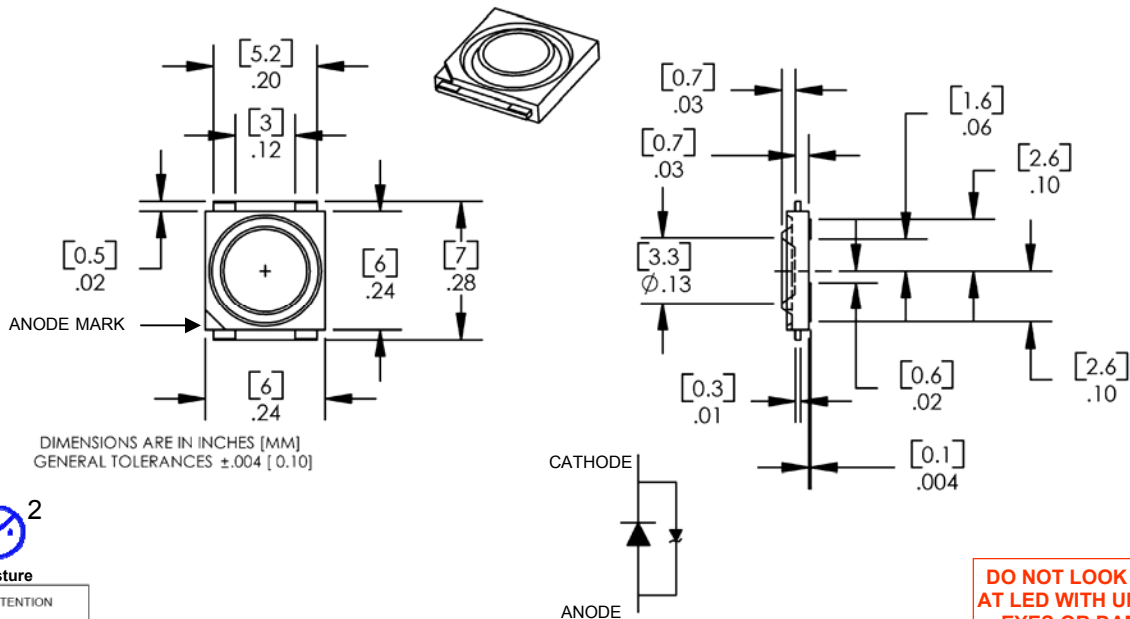


The **OVS5WBCR4** is an energy-efficient packaged LED source that offers high luminance, and a long operating lifespan. This device offers a 120° viewing angle and an ultra-low profile (1.5mm) making it highly suitable for conventional lighting and specialized applications. Optional optics are offered to suit application. Please contact OPTEK for more information.

Applications

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

Part Number	Viewing Angle	Emitted Color	Typical Luminous Flux (lm)	Lens Color
OVS5WBCR4	120°	White	25	Water Clear



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.

.5-Watt SMD 6mm White

OVS5WBCR4



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

DC Forward Current	180mA
Peak Pulsed Forward Current ¹	500mA
Reverse Voltage	5V
Junction Temperature ²	125°C
Power Dissipation	700mW
Storage and Operating Temperature	-40° ~ +100 ° C
ESD Threshold (HBM)	2000V

Notes:

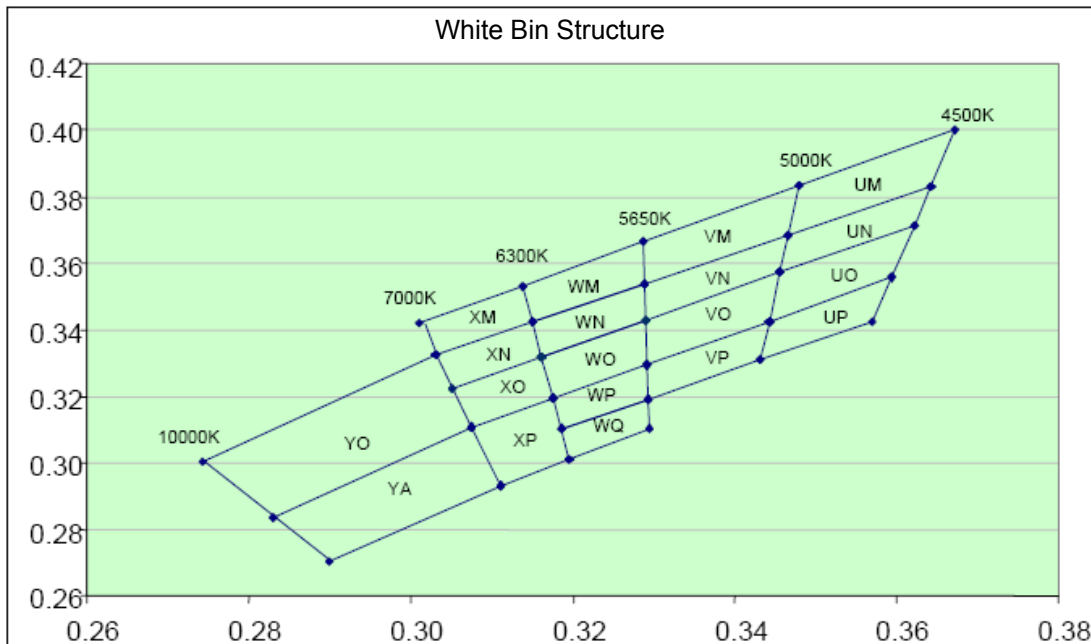
1. Pulse width $t_p \leq 10\mu\text{s}$, Duty cycle = 0.1
2. Thermal conductivity = 18K/W for white

Optical and Electrical Characteristics—White ($I_F = 150\text{ mA}$, $T_A = 25^\circ\text{C}$)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V_F	Forward Voltage	3.0	3.2	3.7	V
Φ	Luminous Flux	16.5	25	30.5	lm
I_R	Reverse Current at 3V	----	10	----	μA
$2\theta_{1/2}$	50% Power Angle	----	120	----	deg

Standard Bins ($I_F = 150\text{ mA}$)

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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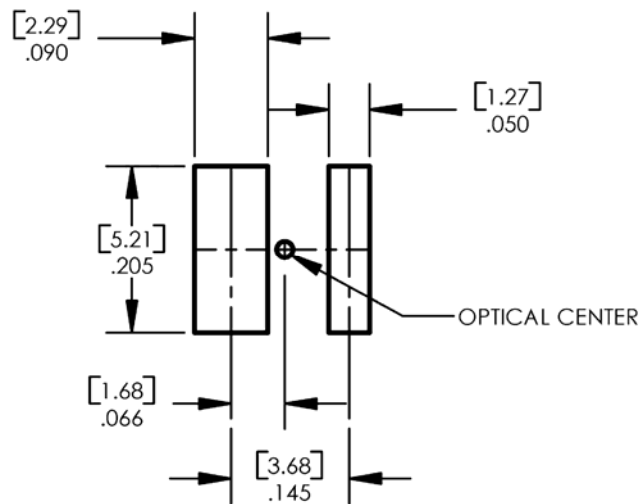
Bin		1	2	3	4
YO	Cx	0.274	0.303	0.308	0.283
	Cy	0.301	0.333	0.311	0.284
YA	Cx	0.283	0.308	0.311	0.290
	Cy	0.284	0.311	0.293	0.270
XM	Cx	0.301	0.314	0.315	0.303
	Cy	0.342	0.353	0.343	0.333
XN	Cx	0.303	0.315	0.316	0.305
	Cy	0.333	0.343	0.332	0.322
XO	Cx	0.305	0.316	0.318	0.308
	Cy	0.322	0.332	0.319	0.311
XP	Cx	0.308	0.318	0.320	0.311
	Cy	0.311	0.319	0.301	0.293
WM	Cx	0.314	0.329	0.329	0.315
	Cy	0.353	0.366	0.354	0.343
WN	Cx	0.315	0.329	0.329	0.316
	Cy	0.343	0.354	0.343	0.332
WO	Cx	0.316	0.329	0.329	0.318
	Cy	0.332	0.343	0.330	0.319
WP	Cx	0.318	0.329	0.329	0.319
	Cy	0.319	0.330	0.319	0.310
WQ	Cx	0.319	0.329	0.330	0.320
	Cy	0.310	0.319	0.311	0.301
VM	Cx	0.329	0.348	0.347	0.329
	Cy	0.366	0.383	0.368	0.354
VN	Cx	0.329	0.347	0.346	0.329
	Cy	0.354	0.368	0.357	0.343
VO	Cx	0.329	0.346	0.344	0.329
	Cy	0.343	0.357	0.343	0.330
VP	Cx	0.329	0.344	0.343	0.329
	Cy	0.330	0.343	0.331	0.319
UM	Cx	0.348	0.367	0.364	0.347
	Cy	0.383	0.400	0.383	0.368
UN	Cx	0.347	0.364	0.362	0.346
	Cy	0.368	0.383	0.372	0.357
UO	Cx	0.346	0.362	0.359	0.344
	Cy	0.357	0.372	0.356	0.343
UP	Cx	0.344	0.359	0.357	0.343
	Cy	0.343	0.356	0.343	0.331

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Φ	Luminous Flux (lm)	
	Bin	Max
N2	16.5	20
N3	20	23
P2	23	26
P3	26	30.5

Solder Pad Design

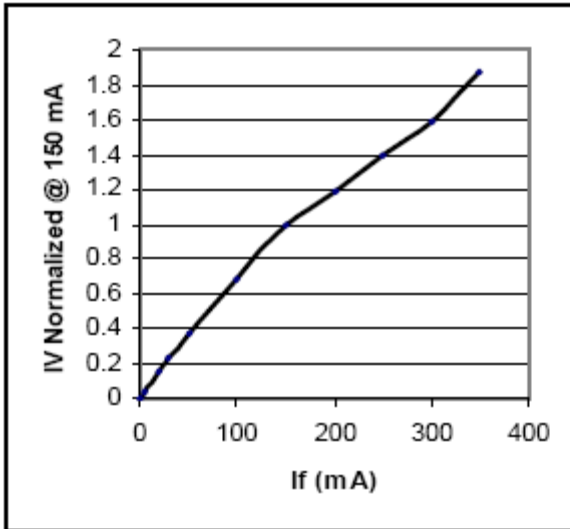
Note: Metal core circuit board (MCPCB) is highly recommended for high density applications. Please consult sales and marketing for additional information.



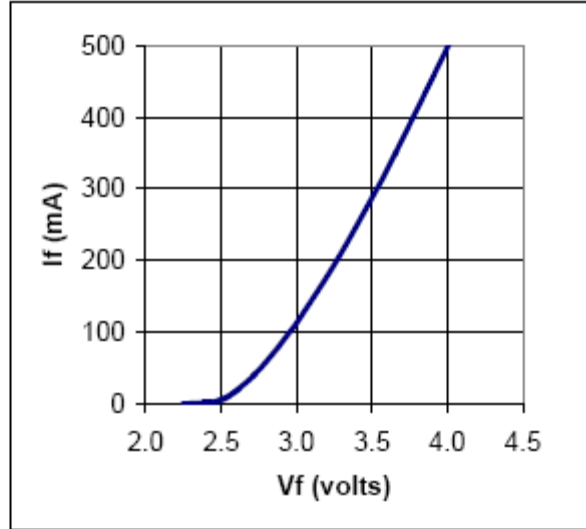
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Typical Electro-Optical Characteristics Curves—White

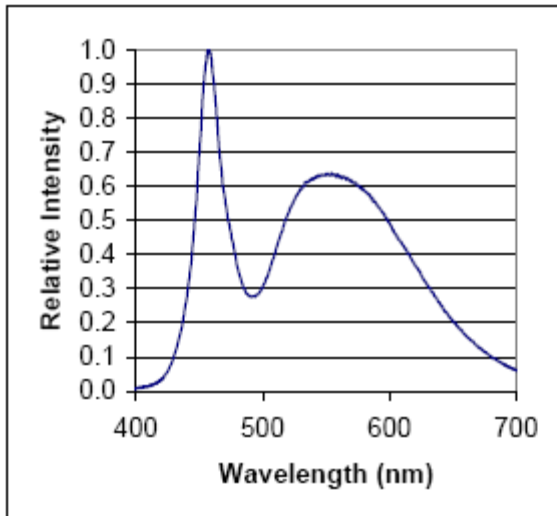
Relative luminous intensity vs. forward current



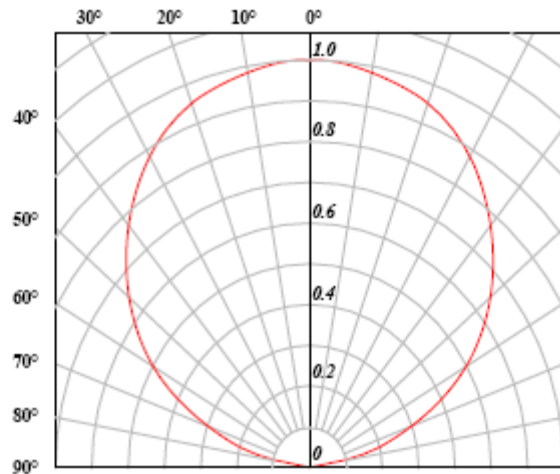
Forward current vs. forward voltage.



Relative Spectra Emission

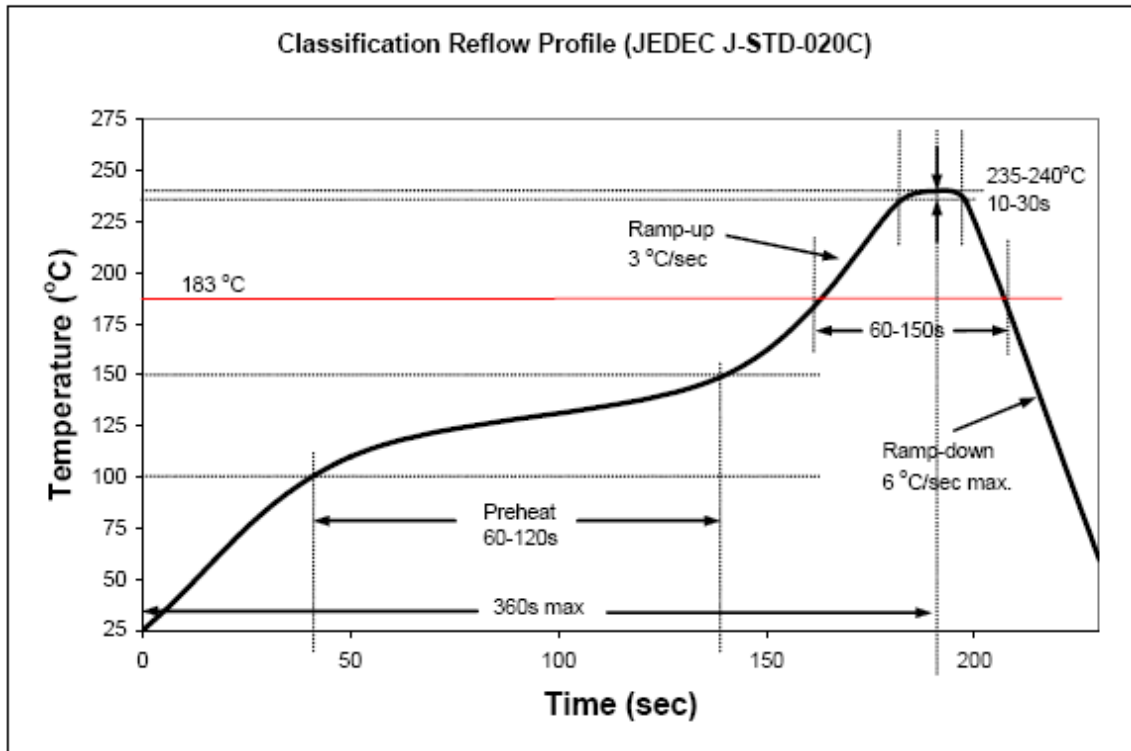


Radiation pattern

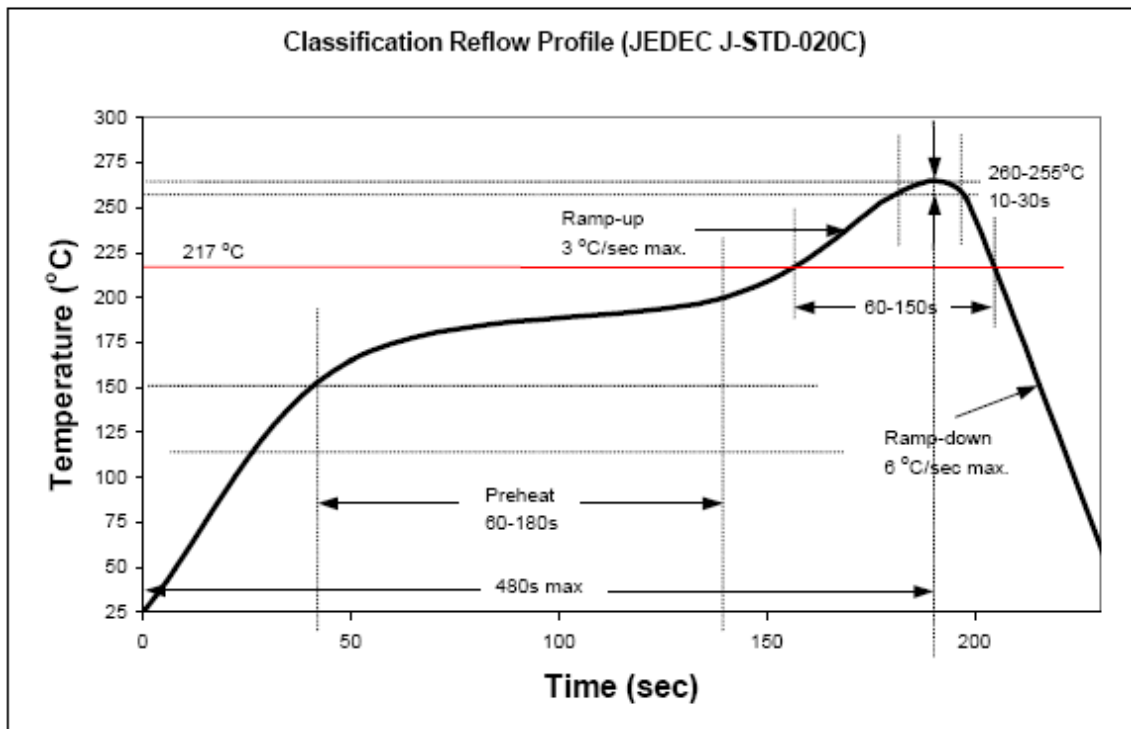


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Recommended Sn-Pb IR-Reflow Soldering Profile.



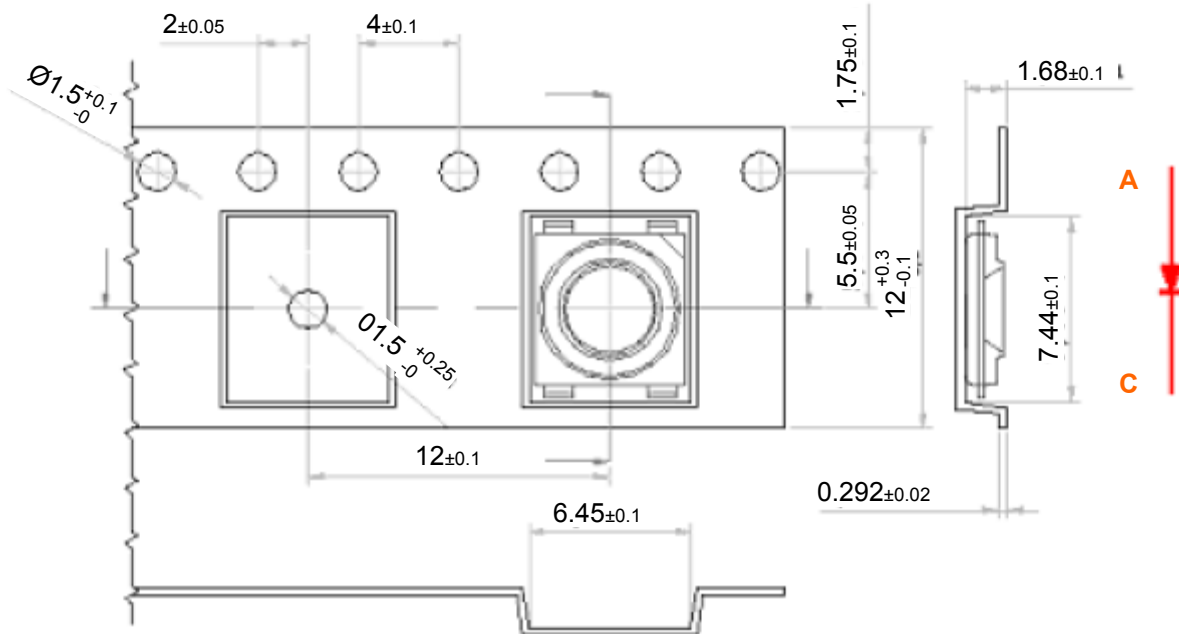
Recommended Pb Free IR-Reflow Soldering Profile.



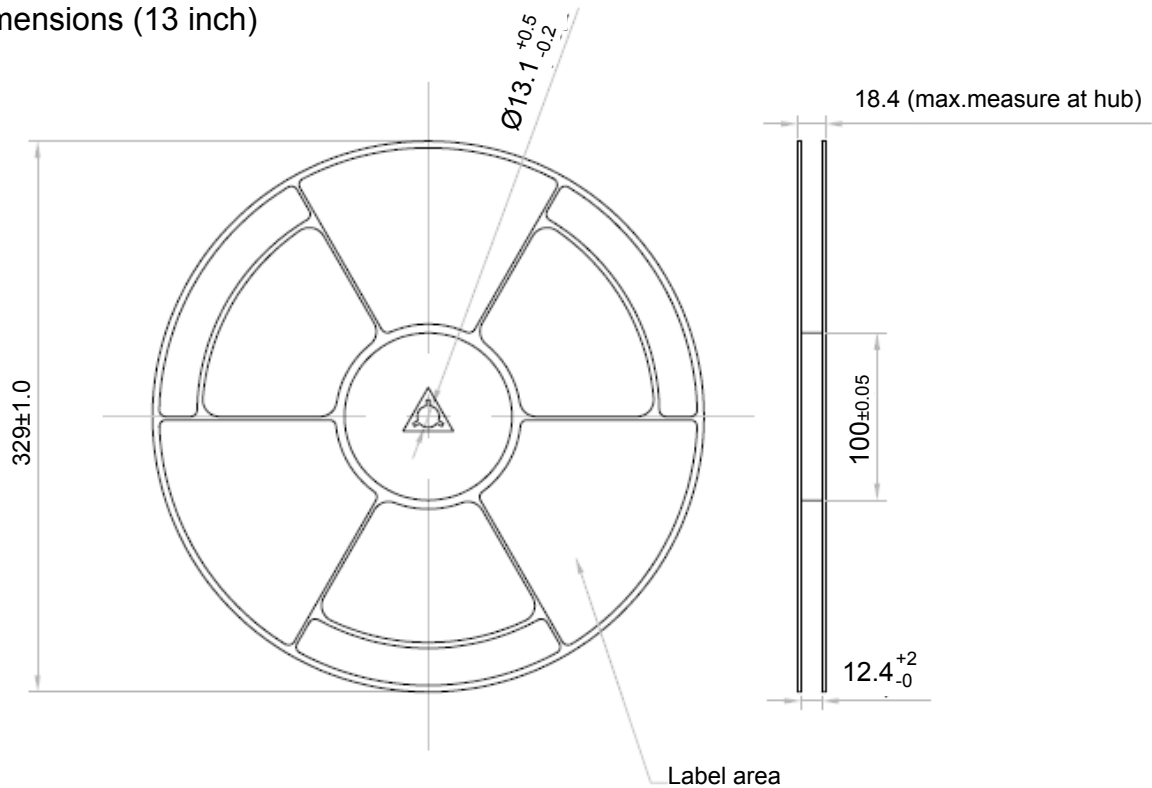
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.5-Watt SMD 6mm White OVS5WBCR4

Taping and Orientation
Loaded quantity 2000 pieces per reel



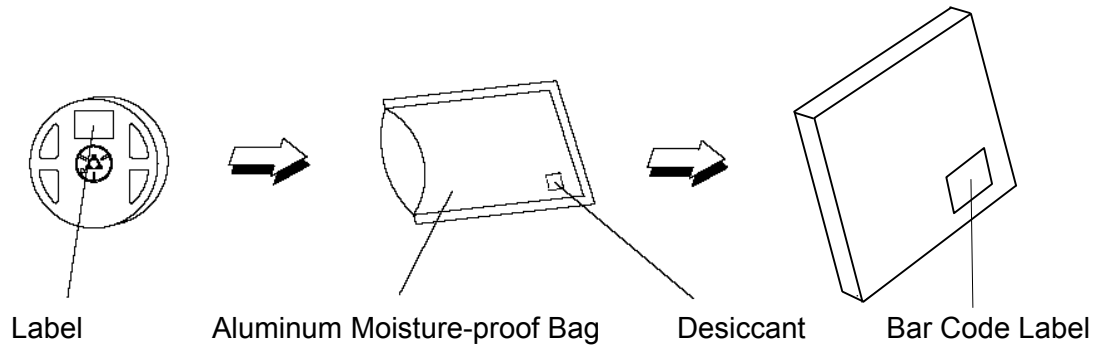
Reel Dimensions (13 inch)



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

.5-Watt SMD 6mm White OVS5WBCR4

Moisture Resistant Packaging



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