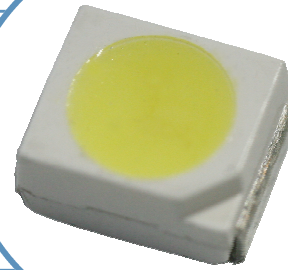


# White PLCC2 SMD (120° Beam Angle)

## OVS9WBCR4

- High luminous intensity
- High efficiency
- Compatible to both IR reflow soldering
- Pb-Free

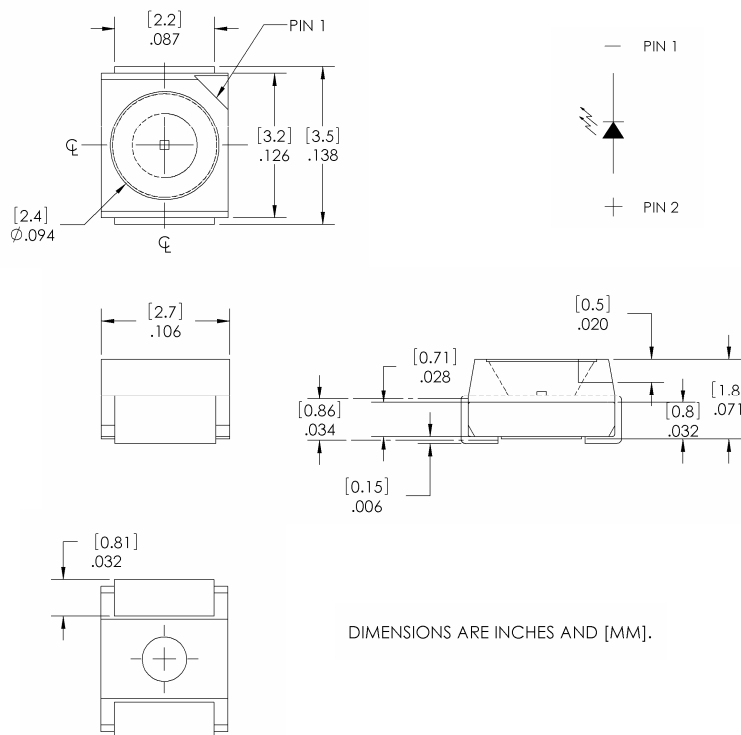


The **OVS9WBCR4** provides high intensity light from a surface mount package. Light output is optimized by an interior reflector and the wide viewing angle adds flexibility for applications ranging from hand-held appliances to automotive interiors.

### Applications

- Backlighting of full color LCD
- Automotive interior lighting
- General lighting
- Coupling into light guides
- Entertainment equipment

Part Number	Material	Emitted Color	Intensity Typ. mcd	Lens Color
OVS9WBCR4	InGaN	White	2240	Water Clear



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

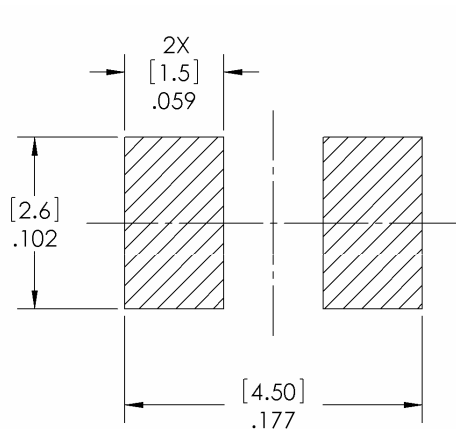
OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

**Absolute Maximum Ratings** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

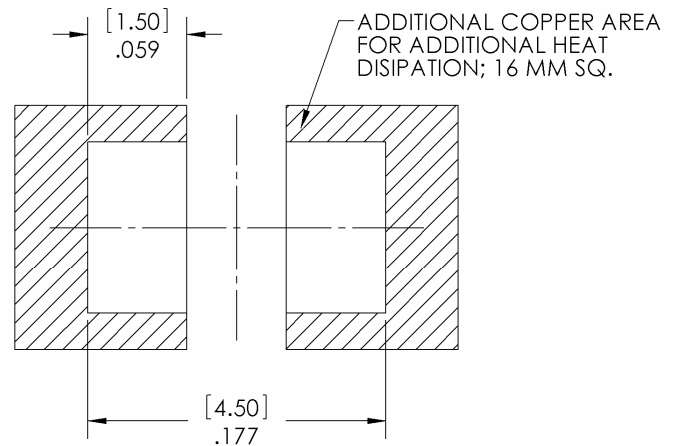
Storage Temperature Range	-40 ~ +100°C
Operating Temperature Range	-40 ~ +100°C
Soldering Temperature (10 - 30 seconds maximum)	260°C
Reverse Voltage	5 V
Continuous Forward Current	20 mA
Peak Forward Current ( $T_P \leq 10 \mu\text{s}$ , Duty Cycle = 0.005)	100 mA
Electrostatic Discharge (ESD Threshold [HBM])	Class 2
Moisture Sensitivity Level (IPC/JEDEC J-STD-020C)	2a / 672 Hrs
Power Dissipation (at room temperature)	85 mW
LED Junction Temperature	125°C

**Electrical Characteristics** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
$I_V$	Luminous Intensity	1800	2240	2850	mcd	$I_F = 20 \text{ mA}$
$V_F$	Forward Voltage	2.9	3.3	3.8	V	$I_F = 20 \text{ mA}$
$I_R$	Reverse Current	----	----	10	$\mu\text{A}$	$V_R = 5 \text{ V}$
$2 \Theta_{1/2}$	50% Power Angle	----	120	----	deg	$I_F = 20 \text{ mA}$



**RECOMMENDED SOLDERING PAD**

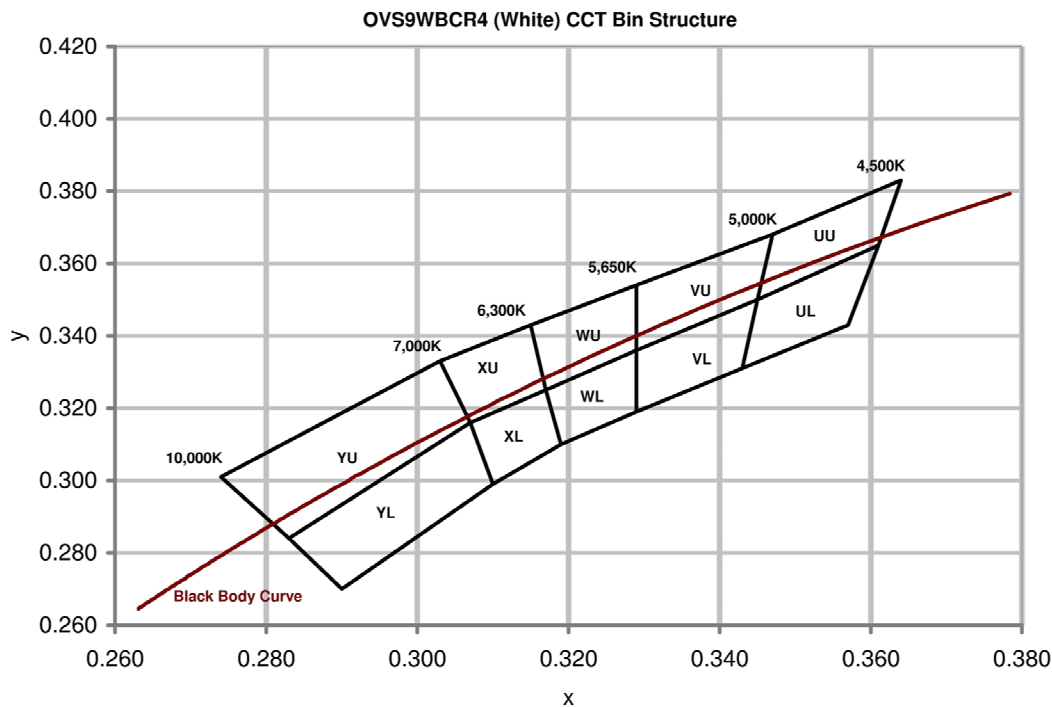


**RECOMMENDED COPPER PATTERN**

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### Standard Bins ( $I_F = 20\text{mA}$ )

LEDs are sorted to luminous intensity (IV) and chromaticity coordinates (x, y) bins shown. Each reel consists of a single intensity bin and a single chromaticity bin. Orders are filled using all intensity and chromaticity bins listed in the following tables. Optek will not accept orders for single intensity bins or single chromaticity bins.



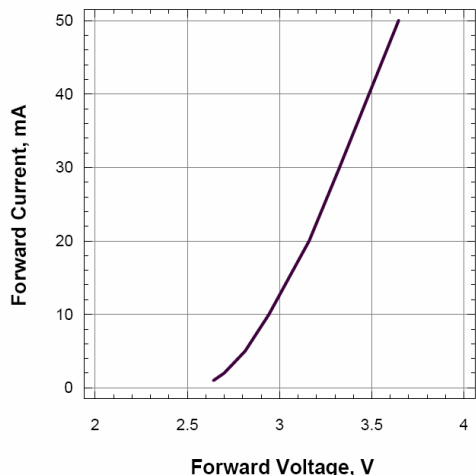
### Chromaticity Coordinates (x, y)

Rank	YU				YL			
Cx	0.274	0.283	0.307	0.303	0.283	0.290	0.310	0.307
Cy	0.301	0.284	0.316	0.333	0.284	0.270	0.299	0.316
Rank	XU				XL			
Cx	0.303	0.307	0.317	0.315	0.307	0.310	0.319	0.317
Cy	0.333	0.316	0.325	0.343	0.316	0.299	0.310	0.325
Rank	WU				WL			
Cx	0.315	0.317	0.329	0.329	0.317	0.319	0.329	0.329
Cy	0.343	0.325	0.336	0.354	0.325	0.310	0.319	0.336
Rank	VU				VL			
Cx	0.329	0.329	0.345	0.347	0.329	0.329	0.343	0.345
Cy	0.354	0.336	0.350	0.368	0.336	0.319	0.331	0.350
Rank	UU				UL			
Cx	0.347	0.345	0.361	0.364	0.345	0.343	0.357	0.361
Cy	0.368	0.350	0.365	0.383	0.350	0.331	0.343	0.365

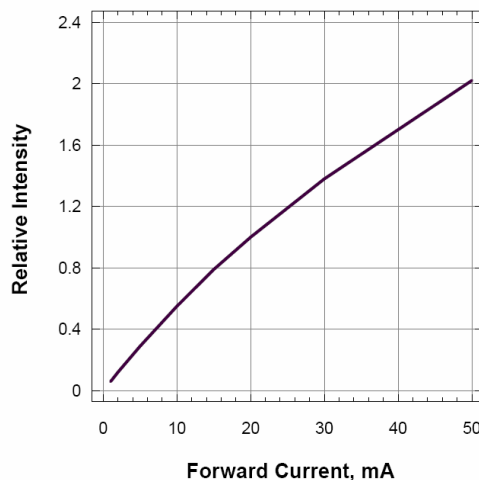
IV	Luminous Intensity (mcd)	
Bin	Min	Max
X1	1800	2240
X2	2240	2850

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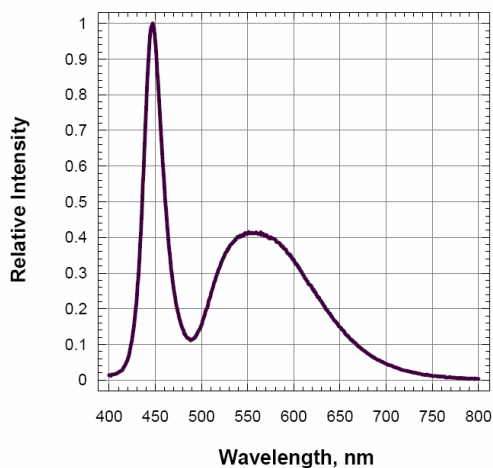
Forward Current Vs Forward Voltage



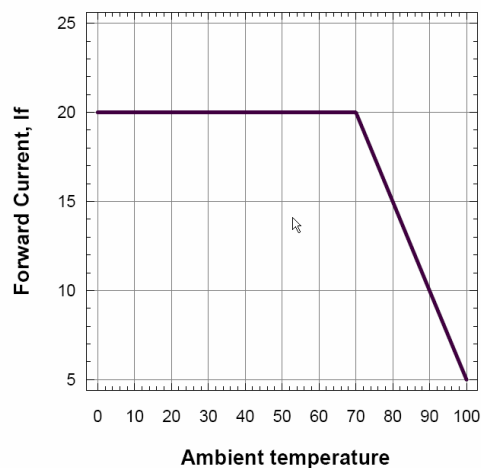
Relative Luminous Intensity Vs Forward Current



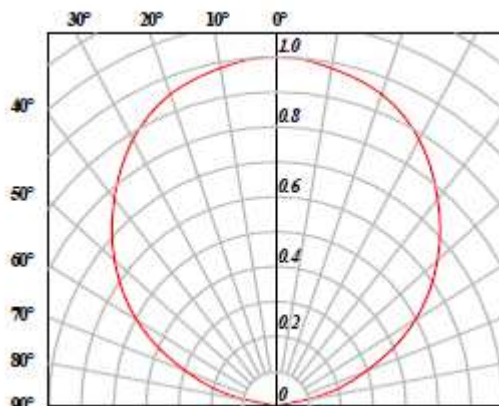
Relative Intensity Vs. Wavelength



Maximum Current Vs Ambient Temperature

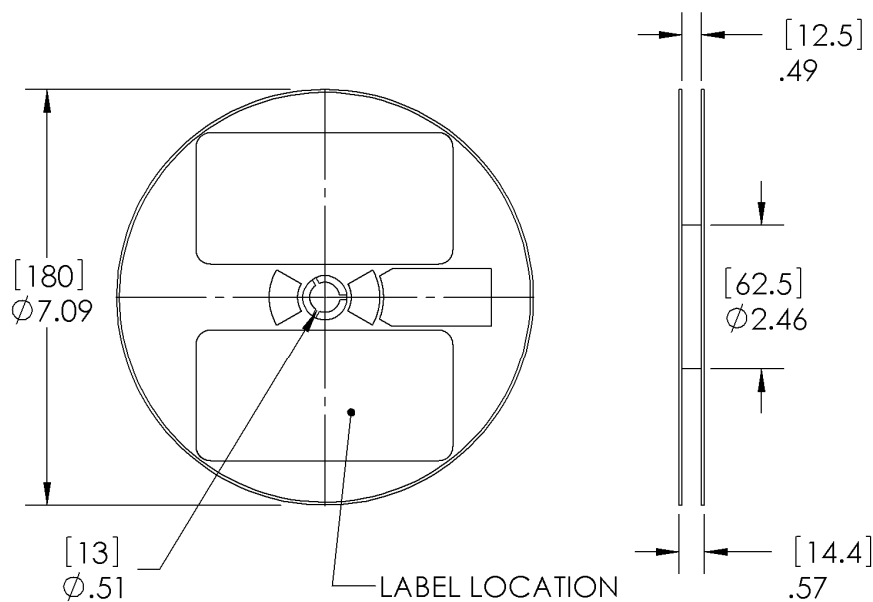


Far Field Pattern



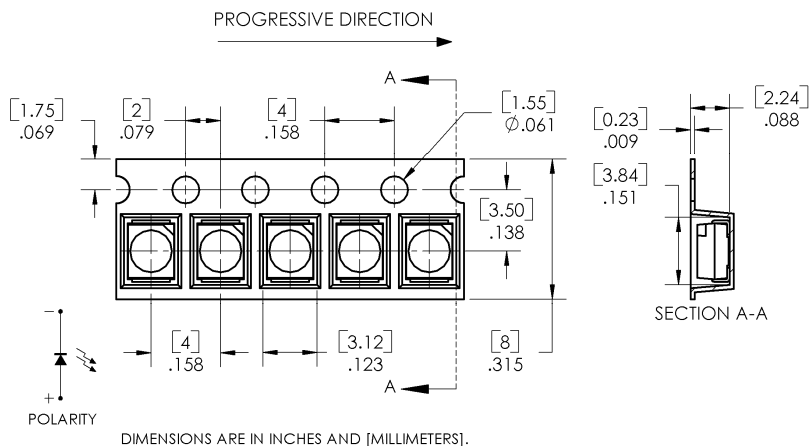
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Reel Dimensions: 7-inch reel

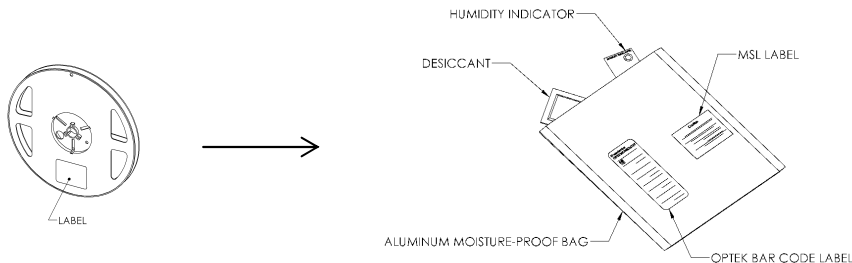


LOADED QUANTITY PER REEL - 2000 PCS PER REEL

Carrier Tape Dimensions

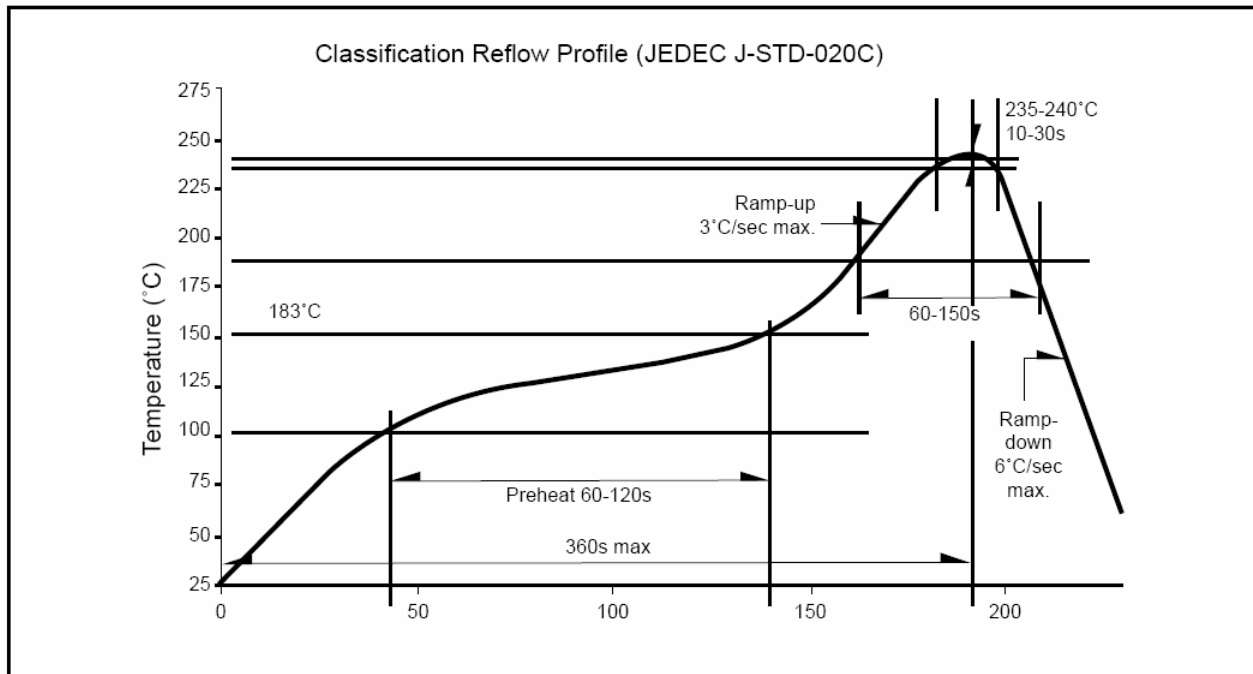


Moisture Resistant Packaging:

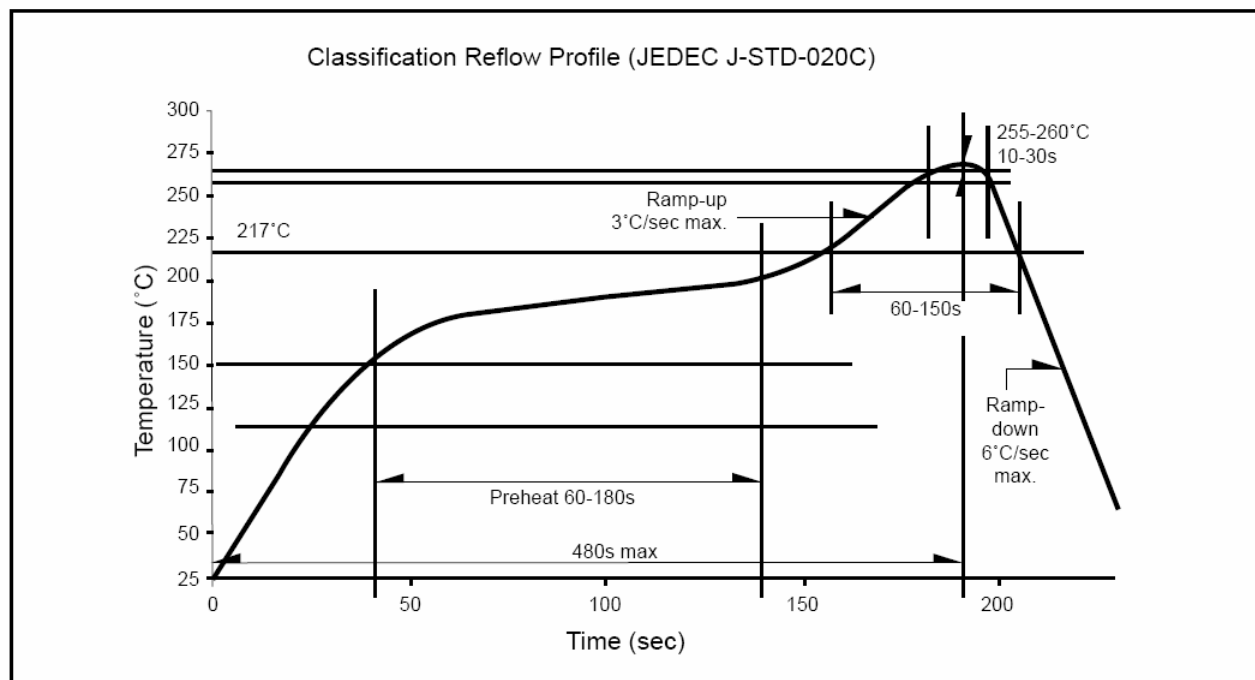


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**Recommended Sn-Pb IR-Reflow Soldering Profile**



**Recommended Pb-free Soldering Profile**



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