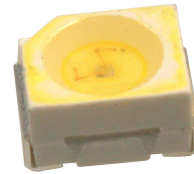


White PLCC2 Surface Mount LED

OVS9WBCR4

- High luminous intensity
- High efficiency
- Emission color: $x = 0.315$, $y = 0.335$
- Pb-free

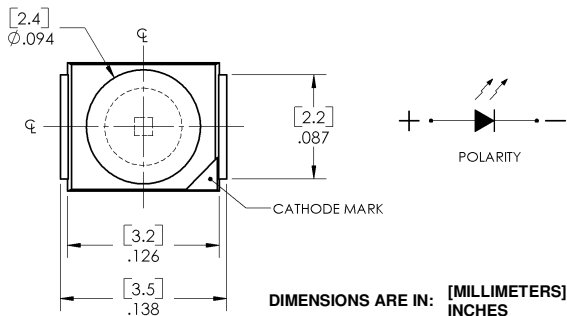


The **OVS9WBCR4** provides high intensity light from a surface mount package. Light output is optimized by an interior reflector and the wide viewing angle adds flexibility for applications ranging from hand-held appliances to automotive interiors.

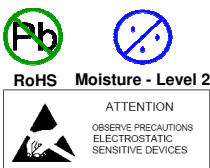
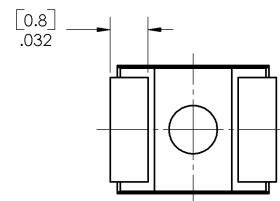
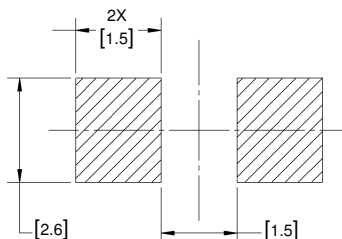
Applications

- 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	750	Water Clear



RECOMMENDED SOLDER PADS



**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.

White PLCC2 Surface Mount LED

OVS9WBCR4



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)	200 mA
Electrostatic Discharge (ESD Threshold [HBM])	2000 V
Power Dissipation (at room temperature)	85 mW
LED Junction Temperature	125°C

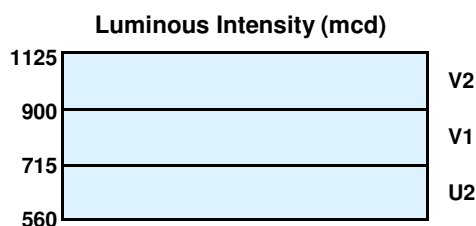
Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
I_V	Luminous Intensity	560	750	1125	mcd	$I_F = 20 \text{ mA}$
V_F	Forward Voltage	2.9	3.2	3.8	V	$I_F = 20 \text{ mA}$
I_R	Reverse Current	----	----	10	μA	$V_R = 5 \text{ V}$
$2\theta_{1/2}$	50% Power Angle	----	120	----	deg	$I_F = 20 \text{ mA}$
Chromaticity Coordinates	x	----	0.3150	----	----	$I_F = 20 \text{ mA}$
	y	----	0.3354	----	----	$I_F = 20 \text{ mA}$

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

Lamps are sorted to luminous intensity (I_V) and chromaticity coordinates (x, y) bins shown. Orders for OVS9WBCR4 may be filled with any or all bins contained as below.



Notes:

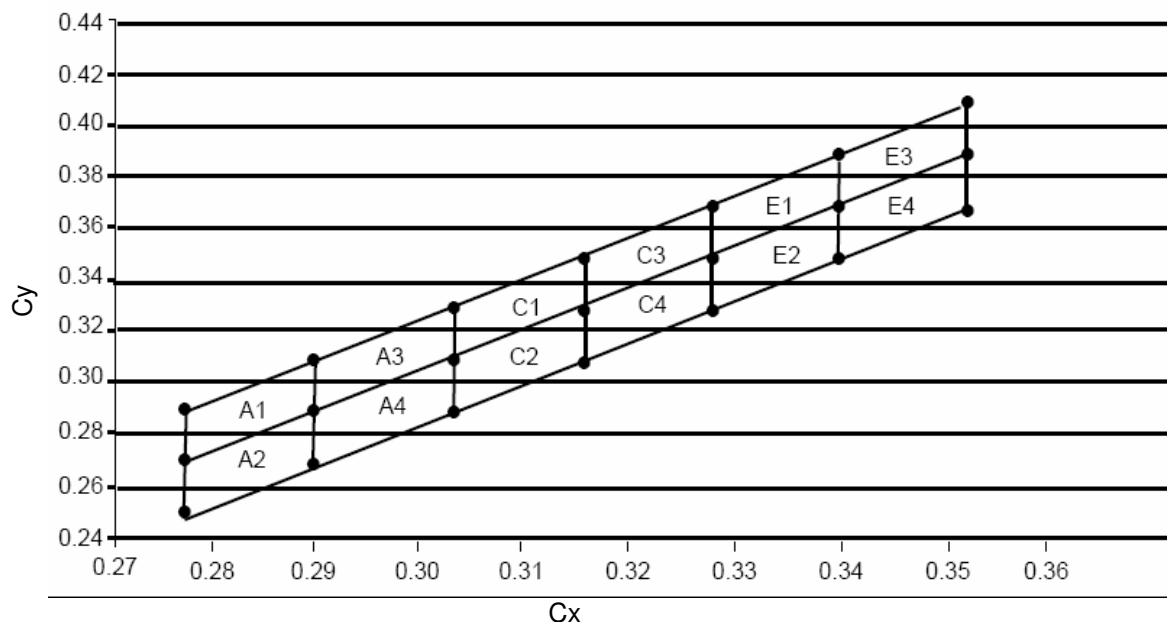
1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
2. Pb content <1000 PPM.
3. To designate luminous intensity ranks or chromaticity bins, please contact OPTEK.
4. Part is sensitive to static electricity and precautions must be used when handling products.

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White PLCC2 Surface Mount LED

OVS9WBCR4

White Color Grouping



Bin					
A1	Cx	0.2775	0.2900	0.2900	0.2775
	Cy	0.2732	0.2939	0.3114	0.2907
A2	Cx	0.2775	0.2900	0.2900	0.2775
	Cy	0.2557	0.2764	0.2939	0.2732
A3	Cx	0.2900	0.3025	0.3025	0.2900
	Cy	0.2939	0.3146	0.3321	0.3114
A4	Cx	0.2900	0.3025	0.3025	0.2900
	Cy	0.2764	0.2971	0.3146	0.2939
C1	Cx	0.3025	0.3150	0.3150	0.3025
	Cy	0.3146	0.3354	0.3529	0.3321
C2	Cx	0.3025	0.3150	0.3150	0.3025
	Cy	0.2971	0.3179	0.3354	0.3146
C3	Cx	0.3150	0.3275	0.3275	0.3150
	Cy	0.3354	0.3561	0.3736	0.3529
C4	Cx	0.3150	0.3275	0.3275	0.3150
	Cy	0.3179	0.3386	0.3561	0.3354

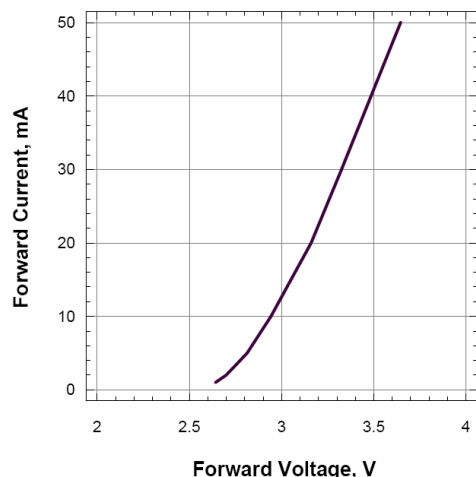
Bin					
E1	Cx	0.3275	0.3400	0.3400	0.3275
	Cy	0.3561	0.3768	0.3943	0.3736
E2	Cx	0.3275	0.3400	0.3400	0.3275
	Cy	0.3386	0.3593	0.3768	0.3561
E3	Cx	0.3400	0.3525	0.3525	0.3400
	Cy	0.3768	0.3975	0.4150	0.3943
E4	Cx	0.3400	0.3525	0.3525	0.3400
	Cy	0.3593	0.3800	0.3975	0.3768

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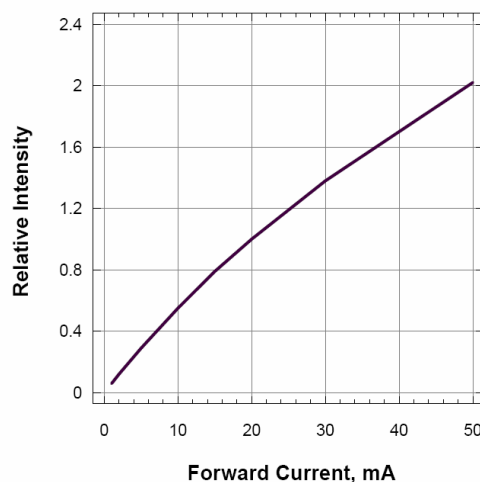
White PLCC2 Surface Mount LED

OVS9WBCR4

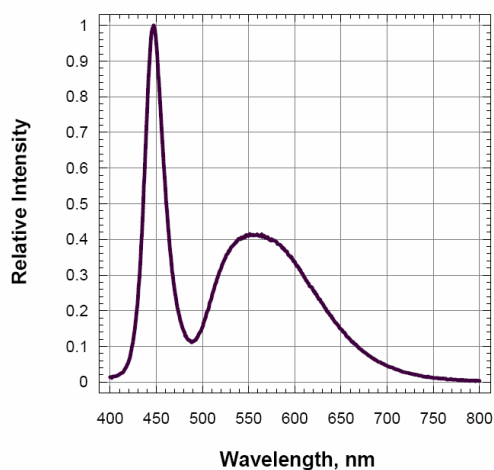
Forward Current Vs Forward Voltage



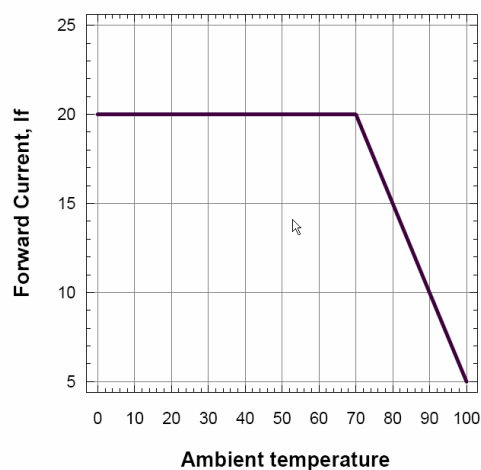
Relative Luminous Intensity Vs Forward Current



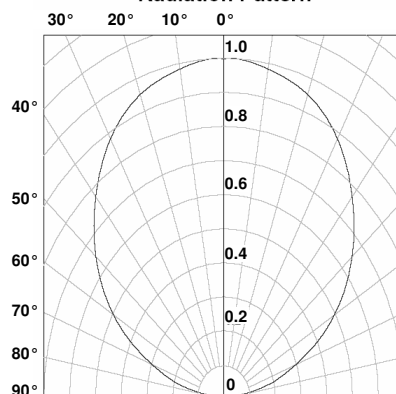
Relative Intensity Vs. Wavelength



Maximum Current Vs Ambient Temperature



Radiation Pattern



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Technical drawing of a circular component. The overall diameter is 180. The central feature is a circular hole with a diameter of $\varnothing 13_{-0.2}^{+0}$. The drawing includes a side view showing the thickness of the component, which is 10.9 (max). The distance from the center to the outer edge is 14.4 (max, measured at hub). The distance from the center to the inner edge is 62.5 ± 2.5 . The distance from the center to the outer edge of the hub is 8.4 ± 1.50 (measured at outer edge). A label area with a depression is indicated by a dashed line.

PROGRESSIVE DIRECTION →

SECTION A-A

POLARITY

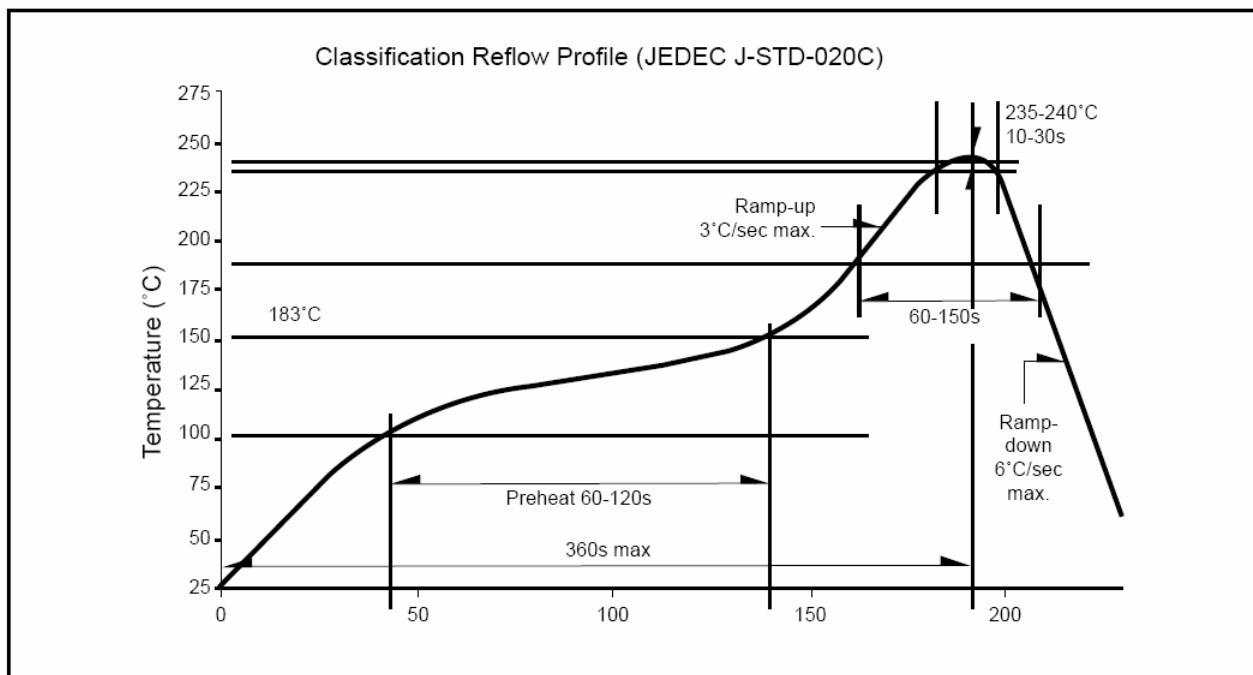
DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

Diagram illustrating the moisture-resistant packaging process:

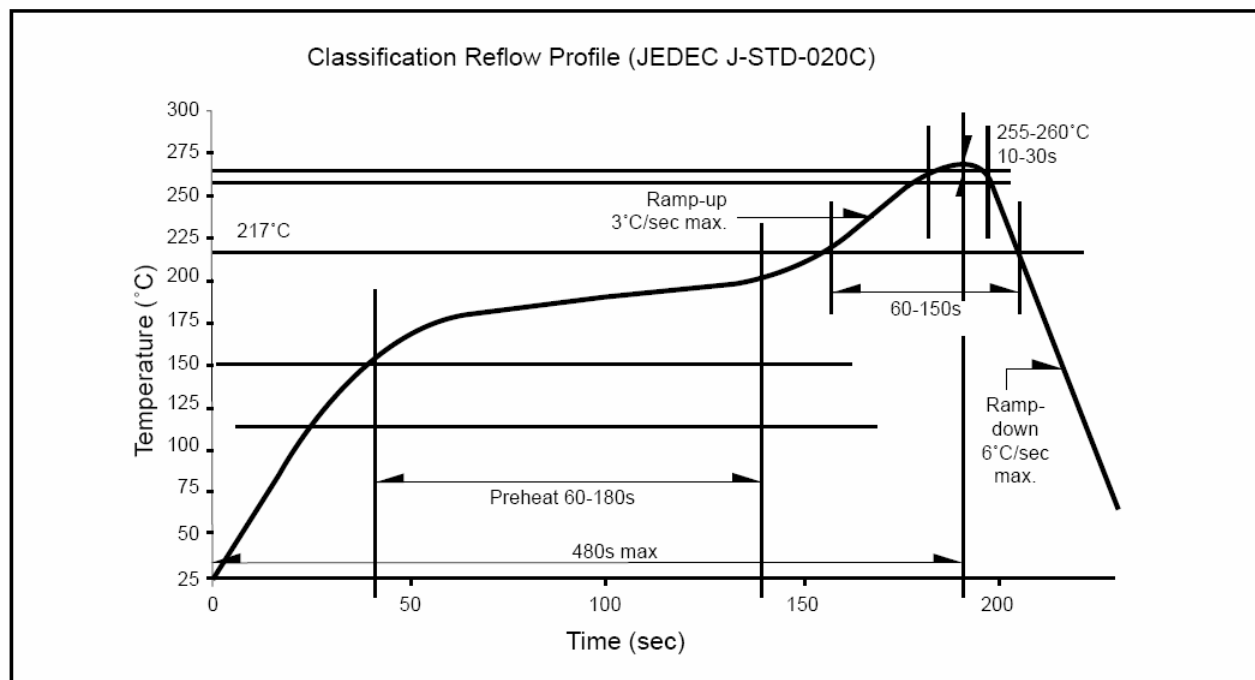
- Label**: A circular tablet with a label.
- Aluminum Moisture-proof Bag**: The tablet is placed inside an aluminum moisture-proof bag.
- Desiccant**: A desiccant is added to the bag to maintain moisture resistance.
- Bar Code Label**: The final packaged product, showing the bar code label.

Issue A.1 11/06
Page 5 of 6

Recommended Sn-Pb IR-Reflow Soldering Profile



Recommended Pb-free Soldering Profile



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