

White PLCC4 Surface Mount LED (120° Viewing Angle)

OVSAWBCR4

- High luminous intensity
- High efficiency
- Emission color: White
- Wide variety of application possibilities

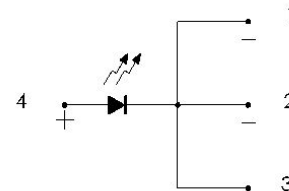
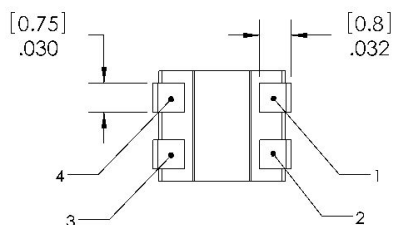
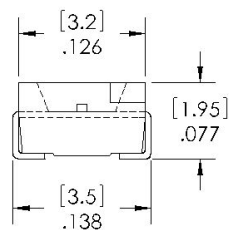
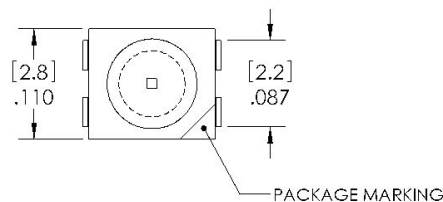


The **OVSAWBCR4** provides high intensity light from a surface mount package. Light output is optimized by an interior reflector and the wide viewing angle adds flexibility for applications ranging from hand-held appliances to automotive interiors.

Applications

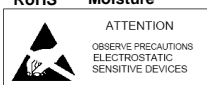
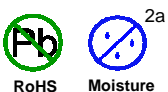
- Backlighting of full color LCD
- Automotive interior lighting
- General; Architectural and Garden lighting
- Special effect lighting
- Coupling into light guides
- Entertainment equipment

| Part Number | Material | Emitted Color | Intensity Typ. | Lens Color |
|-------------|----------|---------------|----------------|------------|
| OVSAWBCR4 | InGaN | White | 2850 mcd | Clear |



1, 2, 3 CATHODE 4 ANODE

DIMENSIONS ARE IN INCHES AND [MILLIMETERS].



**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 PLCC4 Surface Mount LED

OVSABCR4

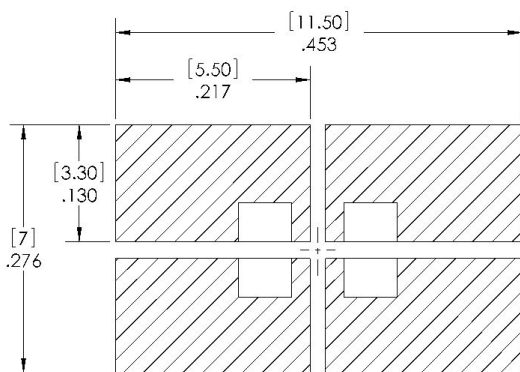


Absolute Maximum Ratings $T_A = 25^\circ\text{C}$

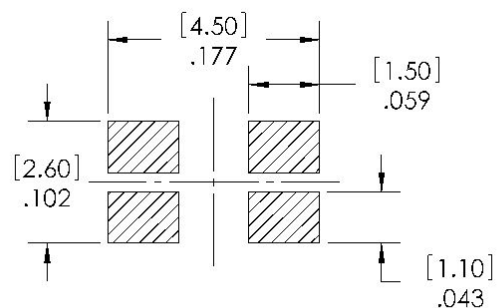
| | |
|---|---------------|
| Storage Temperature Range | -40 ~ + 100°C |
| Operating Temperature Range | -40 ~ + 100°C |
| Soldering Temperature (5 second maximum) | 260°C |
| Forward Current | 50mA |
| Peak Forward Current (10% Duty Cycle, 1 KHz) | 300 mA |
| Reverse Voltage | 5 V |
| Electro Discharge Classification (JEDEC-JESD22-A114F) | Class 2 |
| Moisture Sensitivity Level (IPC/JEDEC J-STD-020C) | 2a / 672 Hrs |
| LED Junction Temperature | 125°C |
| Power Dissipation | 200 mW |

Electrical Characteristics $T_A = 25^\circ\text{C}$

| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | CONDITIONS |
|-----------------|--------------------------|------|------|------|---------------|----------------------|
| I_V | Luminous Intensity | 1800 | 2850 | 3550 | mcd | $I_F = 30\text{ mA}$ |
| V_F | Forward Voltage | 2.9 | 3.4 | 4.0 | V | $I_F = 30\text{ mA}$ |
| I_R | Reverse Current | ---- | ---- | 10 | μA | $V_R = 5\text{ V}$ |
| $2\theta_{1/2}$ | 50% Power Angle | ---- | 120 | ---- | deg | $I_F = 30\text{ mA}$ |
| x | Chromaticity Coordinates | ---- | 0.32 | ---- | ---- | $I_F = 30\text{ mA}$ |
| y | | ---- | 0.33 | ---- | ---- | $I_F = 30\text{ mA}$ |



RECOMMENDED COPPER PATTERN



RECOMMENDED SOLDERING PAD

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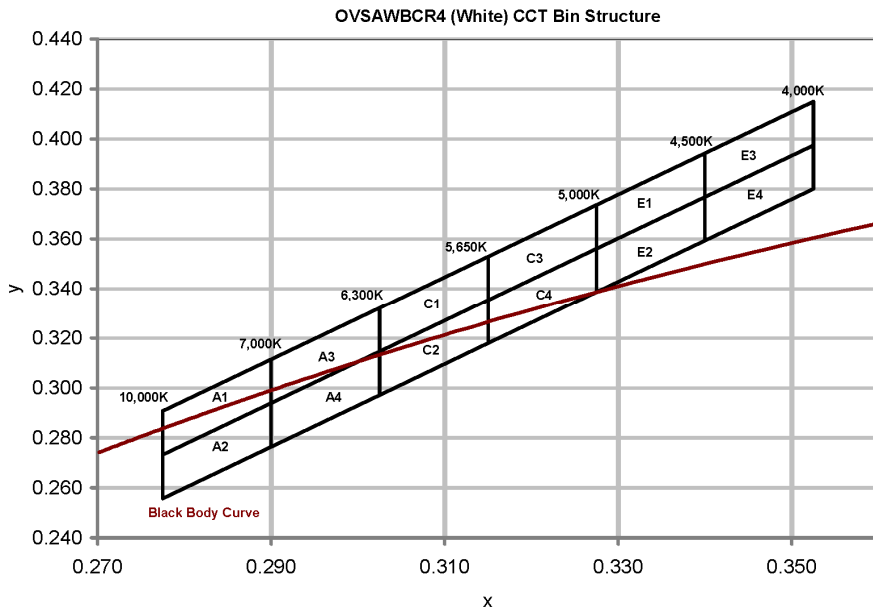
White PLCC4 Surface Mount LED

OVSAWBCR4



Standard Bins ($I_F = 30 \text{ mA}$)

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



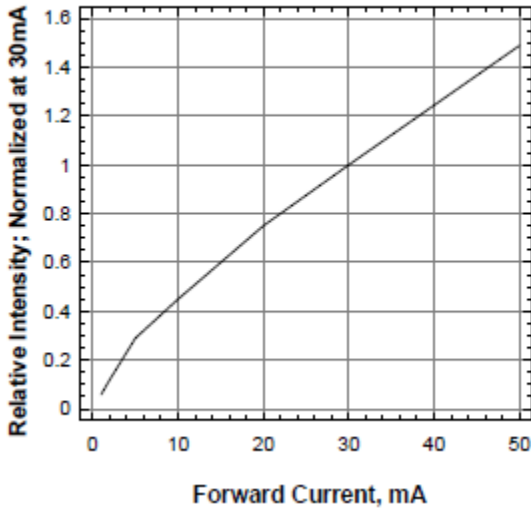
| IV | Luminous Intensity | |
|----|--------------------|-----------|
| | Code | Min (mcd) |
| X1 | 1800 | 2240 |
| X2 | 2240 | 2850 |
| Y1 | 2850 | 3550 |

Chromaticity Coordinates (x, y)

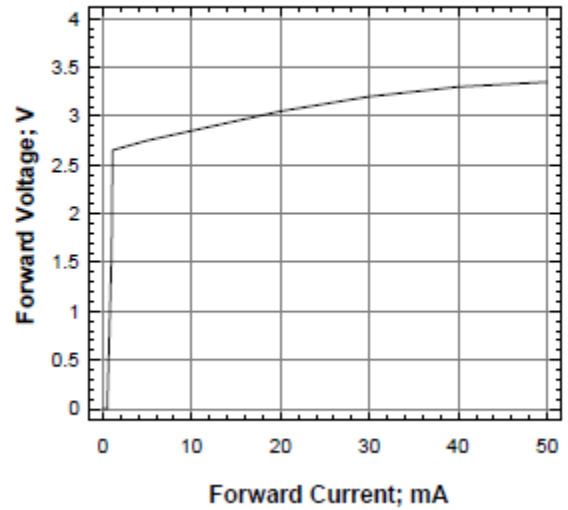
| Rank | A1 | | | | A2 | | | | A3 | | | | A4 | | | |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cx | 0.2775 | 0.2900 | 0.2900 | 0.2775 | 0.2775 | 0.2900 | 0.2900 | 0.2775 | 0.2900 | 0.3025 | 0.3025 | 0.2900 | 0.2900 | 0.3025 | 0.3025 | 0.2900 |
| Cy | 0.2732 | 0.2939 | 0.3114 | 0.2907 | 0.2557 | 0.2764 | 0.2939 | 0.2732 | 0.2939 | 0.3146 | 0.3321 | 0.3114 | 0.2764 | 0.2971 | 0.3146 | 0.2939 |
| Rank | C1 | | | | C2 | | | | C3 | | | | C4 | | | |
| Cx | 0.3025 | 0.3150 | 0.3150 | 0.3025 | 0.3025 | 0.3150 | 0.3150 | 0.3025 | 0.3150 | 0.3275 | 0.3275 | 0.3150 | 0.3150 | 0.3275 | 0.3275 | 0.3150 |
| Cy | 0.3146 | 0.3354 | 0.3529 | 0.3321 | 0.2971 | 0.3179 | 0.3354 | 0.3146 | 0.3354 | 0.3561 | 0.3736 | 0.3529 | 0.3179 | 0.3386 | 0.3561 | 0.3354 |
| Rank | E1 | | | | E2 | | | | E3 | | | | E4 | | | |
| Cx | 0.3275 | 0.3400 | 0.3400 | 0.3275 | 0.3275 | 0.3400 | 0.3400 | 0.3275 | 0.3400 | 0.3525 | 0.3525 | 0.3400 | 0.3400 | 0.3525 | 0.3525 | 0.3400 |
| Cy | 0.3561 | 0.3768 | 0.3943 | 0.3736 | 0.3386 | 0.3593 | 0.3768 | 0.3561 | 0.3768 | 0.3975 | 0.4150 | 0.3943 | 0.3593 | 0.3800 | 0.3975 | 0.3768 |

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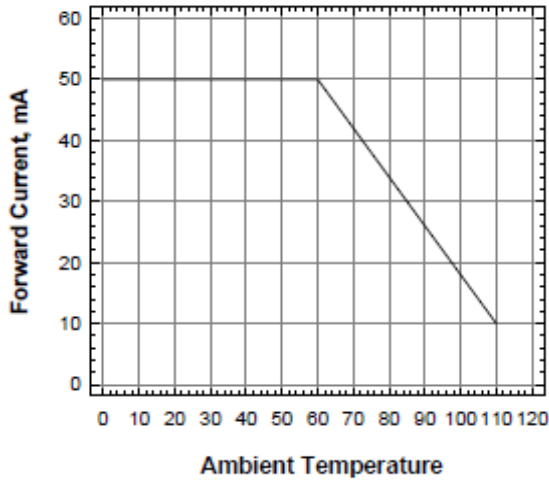
Relative Intensity Vs Forward Current



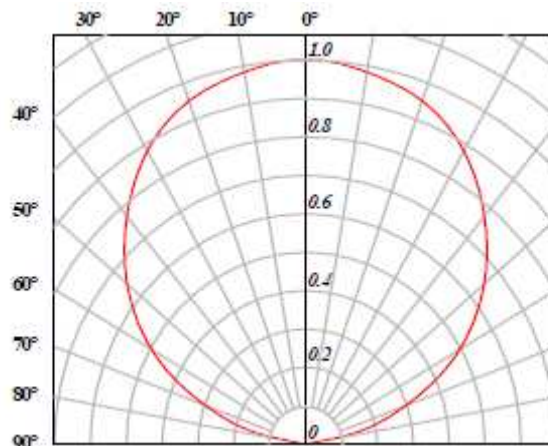
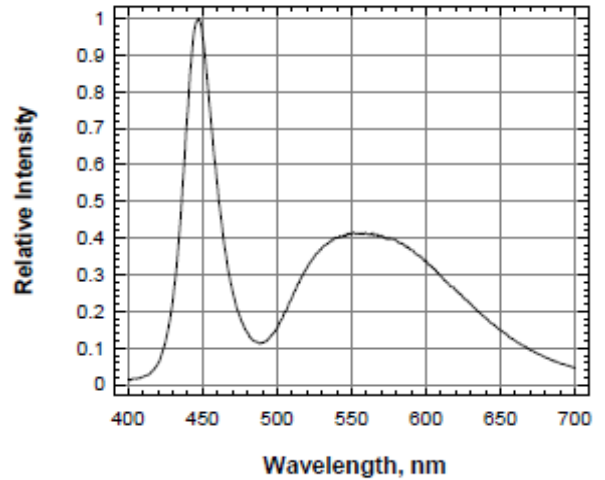
Forward Voltage Vs Forward Current



Maximum Current Vs Ambient Temperature



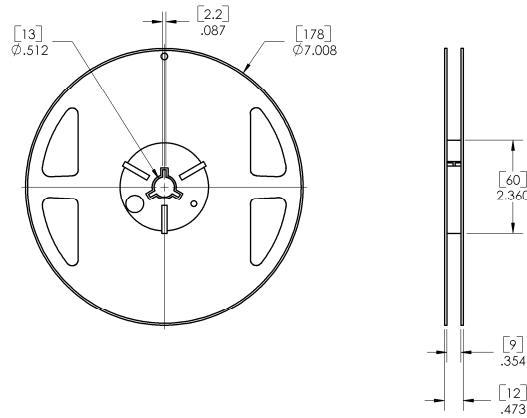
Relative Intensity Vs Wavelength



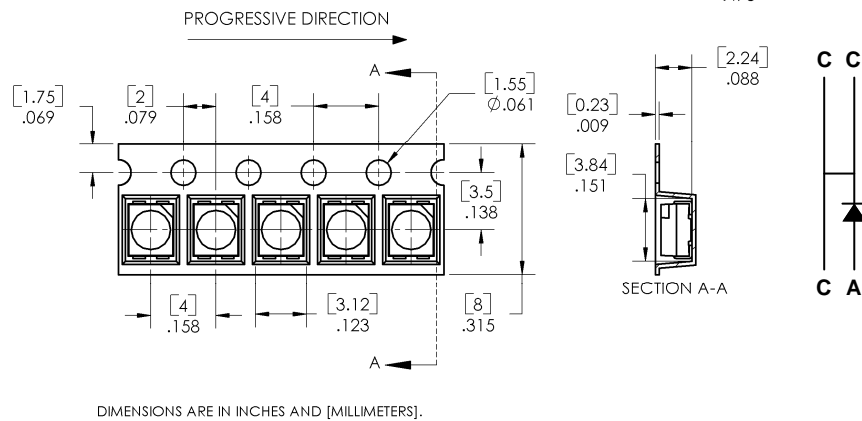
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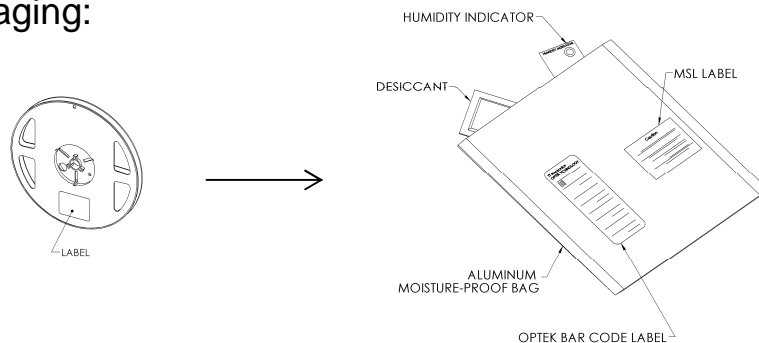
Reel Dimensions: 7-inch reel



Carrier Tape Dimensions: Loaded quantity 2000 pieces per reel

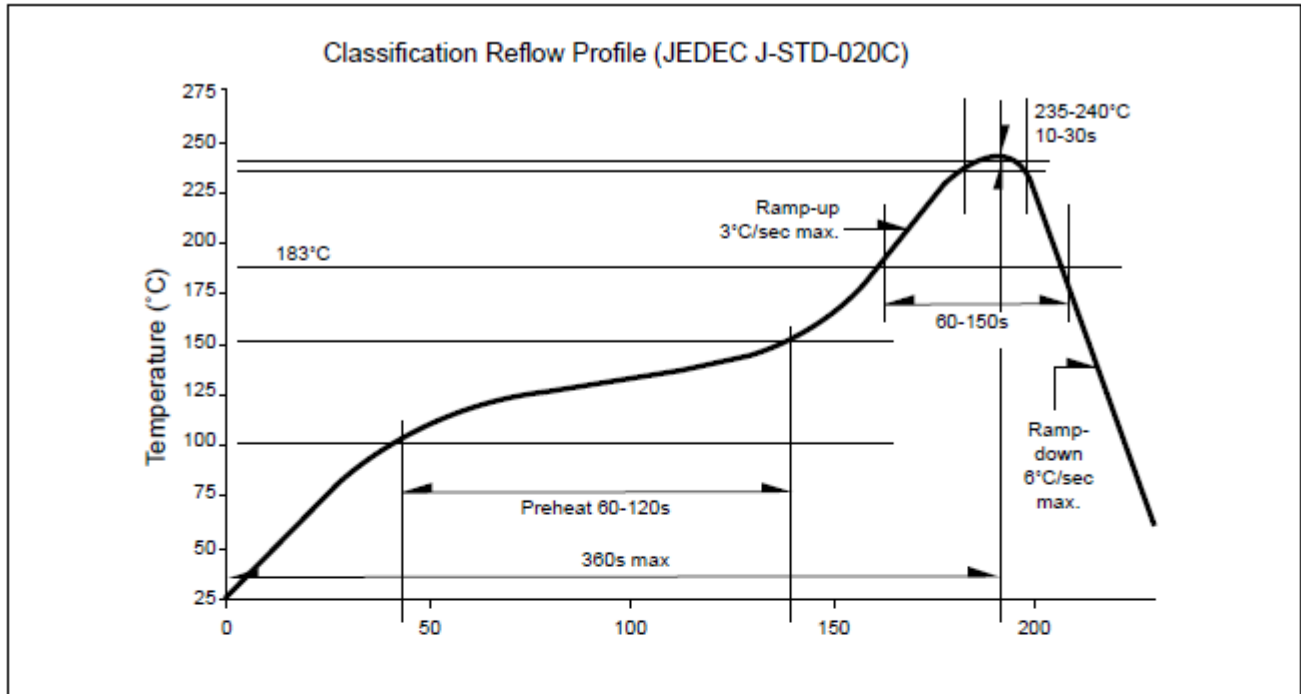


Moisture Resistant Packaging:

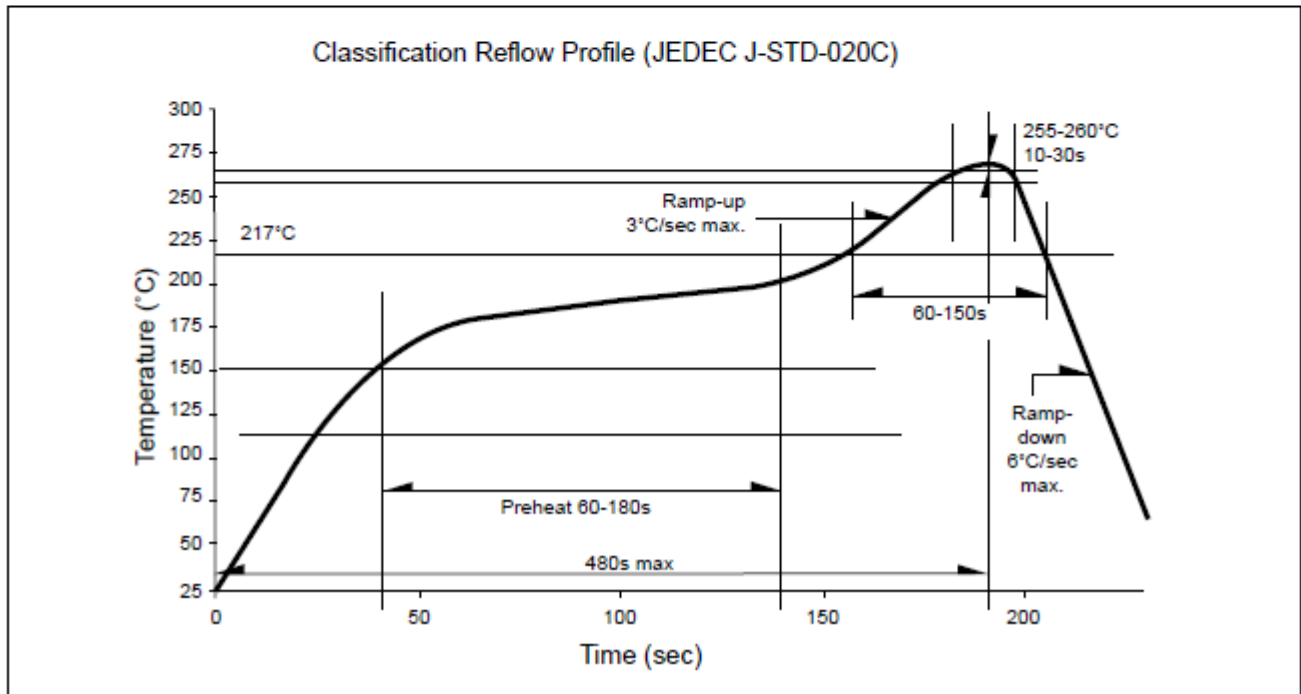


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Recommended Sn-Pb IR-Reflow Soldering Profile



Recommended Pb-free Soldering Profile



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