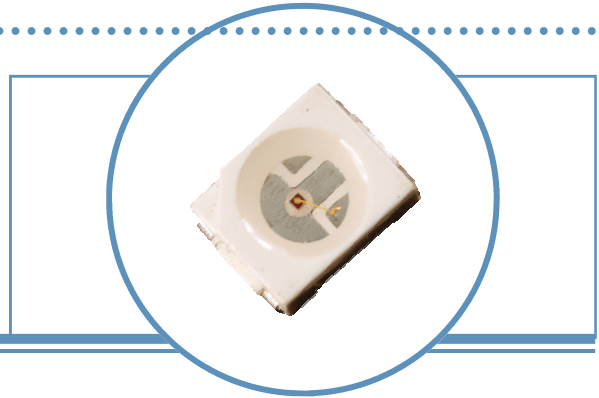


# White PLCC4 Surface Mount LED (120° Viewing Angle)

## OVSAWBCR4

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

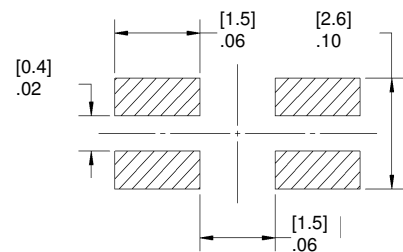
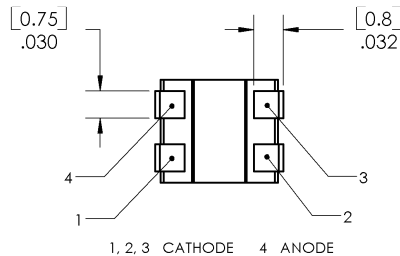
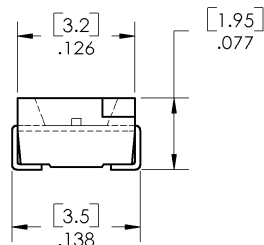
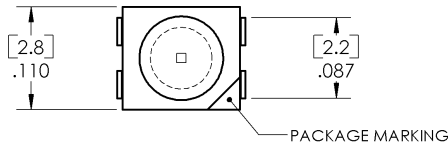


The **OVS**AWBCR4 provides high intensity light from a surface mount package. Light output is optimized by an interior reflector and the wide viewing angle adds flexibility for applications ranging from hand-held appliances to automotive interiors.

### Applications

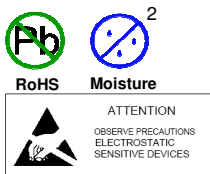
- Backlighting of full color LCD
- Automotive interior lighting
- General lighting
- Coupling into light guides
- Entertainment equipment

Part Number	Material	Emitted Color	Intensity Typ.	Lens Color
OVS	InGaN	White	1050 mcd	Water Clear



RECOMMENDED SOLDER PAD DESIGN

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



DIMENSIONS ARE IN: [MILLIMETERS]  
[INCHES]

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

$T_A = 25^\circ\text{C}$  (on metal core PCB) unless otherwise noted

Storage Temperature Range	-40 ~ + 100°C
Operating Temperature Range	-40 ~ + 100°C
Soldering Temperature (5 second maximum)	260°C
Forward Current	30mA
Peak Forward Current (10% Duty Cycle, 1 KHz)	200 mA
Reverse Voltage	5 V
ESD Threshold (HBM)	2000 V
LED Junction Temperature	125°C
Power Dissipation	135 mW

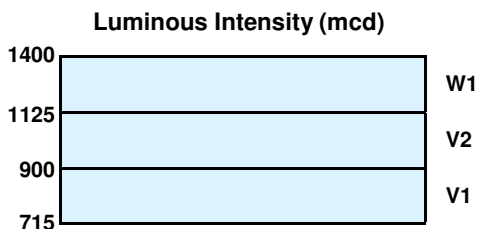
### Electrical Characteristics

$T_A = 25^\circ\text{C}$  (on metal core PCB) unless otherwise noted

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
$I_V$	Luminous Intensity	715	1050	1400	mcd	$I_F = 30\text{ mA}$
$V_F$	Forward Voltage	3.05	3.4	4.0	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	$I_F = 20\text{ mA}$
x	Chromaticity Coordinates	----	0.32	----	----	$I_F = 20\text{ mA}$
y		----	0.33	----	----	$I_F = 20\text{ mA}$

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

Lamps are sorted to luminous intensity ( $I_V$ ) and chromaticity coordinates (x, y) bins shown. Orders for OVSABCR4 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 PLCC4 Surface Mount LED

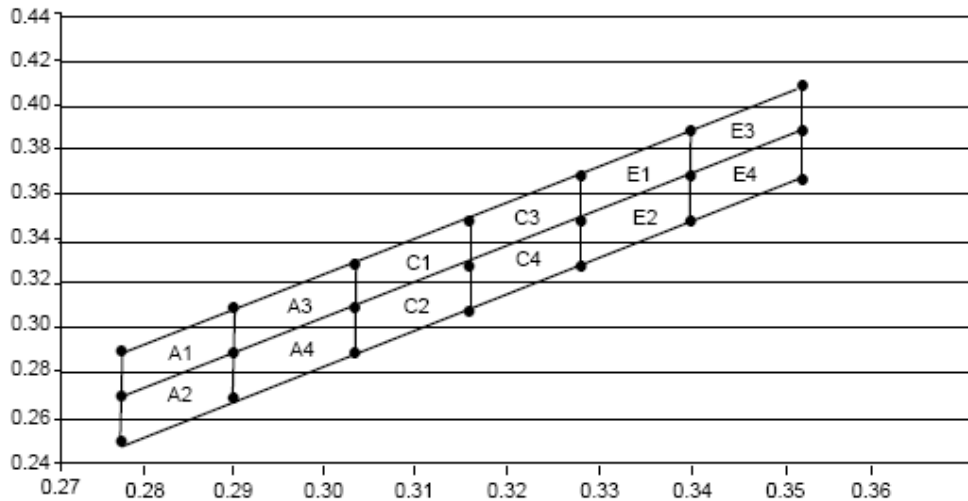
## OVSAWBCR4



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

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

White Bin Structure

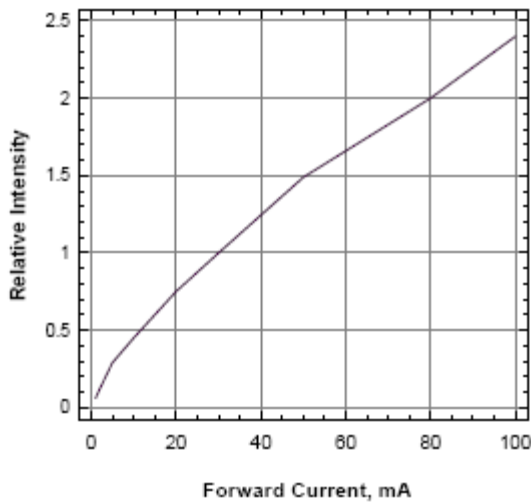


A1	$C_x$	0.2775	0.2900	0.2900	0.2775
	$C_y$	0.2732	0.2939	0.3114	0.2907
A2	$C_x$	0.2775	0.2900	0.2900	0.2775
	$C_y$	0.2557	0.2764	0.2939	0.2732
A3	$C_x$	0.2900	0.3025	0.3025	0.2900
	$C_y$	0.2939	0.3146	0.3321	0.3114
A4	$C_x$	0.2900	0.3025	0.3025	0.2900
	$C_y$	0.2764	0.2971	0.3146	0.2939
C1	$C_x$	0.3025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

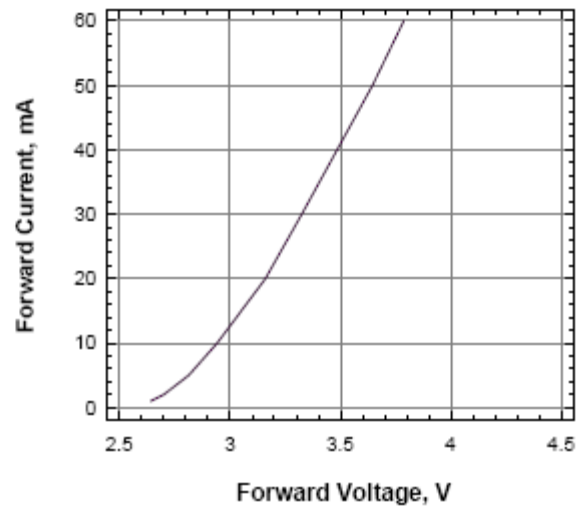
OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

# White PLCC4 Surface Mount LED OVSAWBCR4

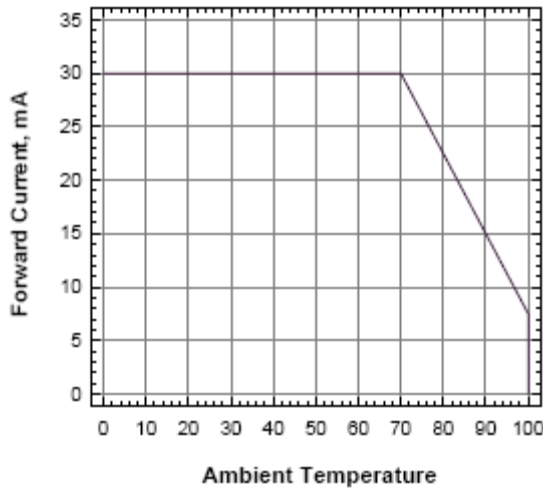
Relative Intensity Vs Forward Current



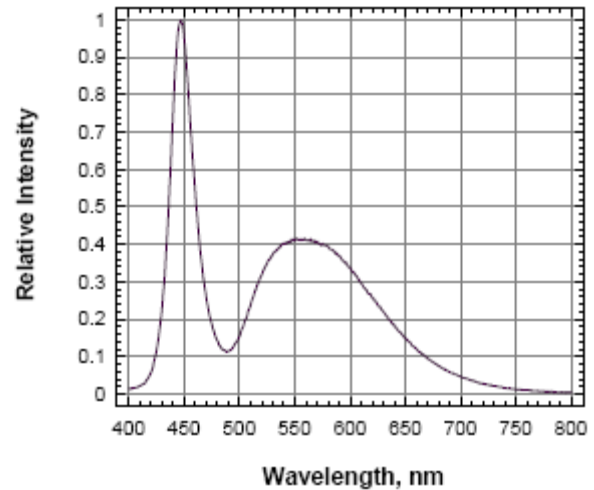
Forward Current Vs Forward Voltage



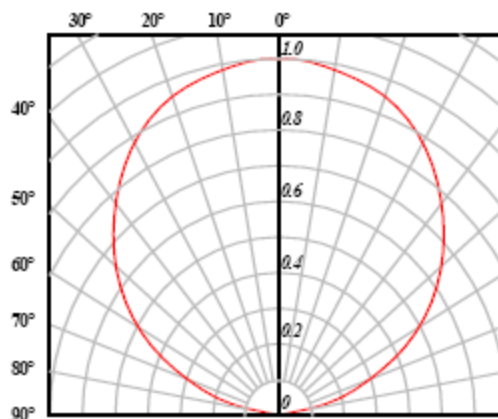
Maximum Current Vs Temperature



Wavelength Vs Forward Current



Radiation Pattern

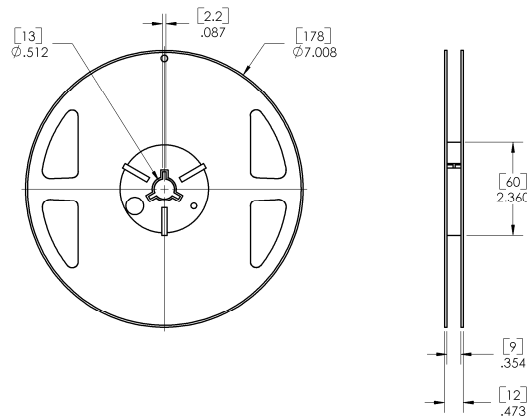


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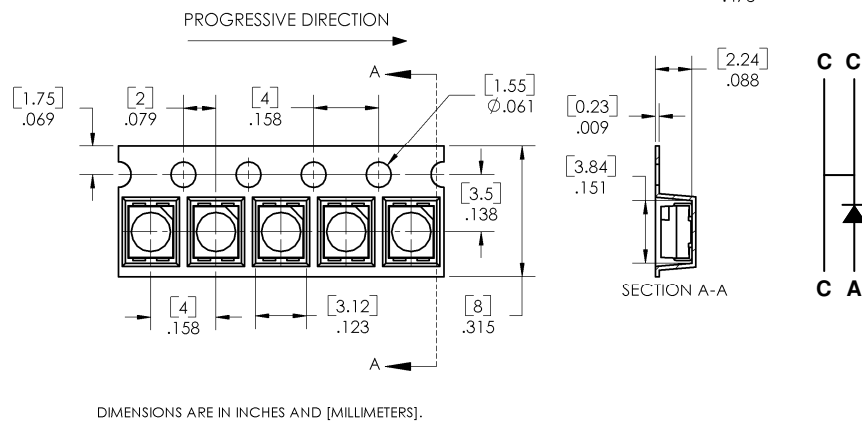
# White PLCC4 Surface Mount LED

## OVSAWBCR4

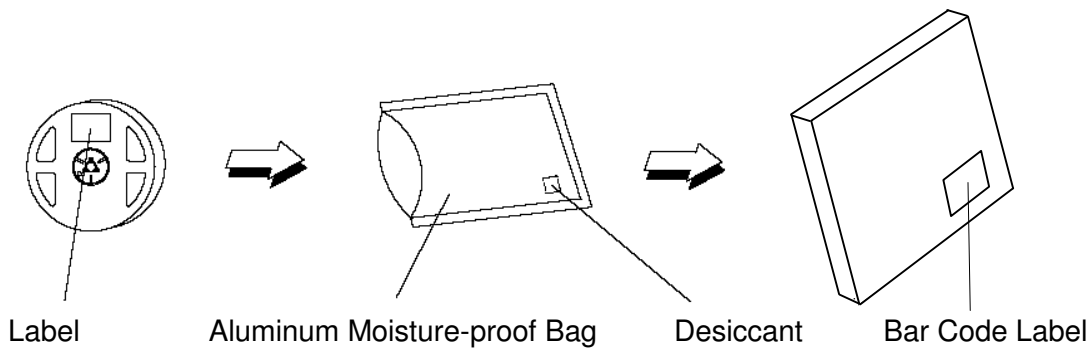
Reel Dimensions: 7-inch reel



Carrier Tape Dimensions: Loaded quantity 2000 pieces per reel

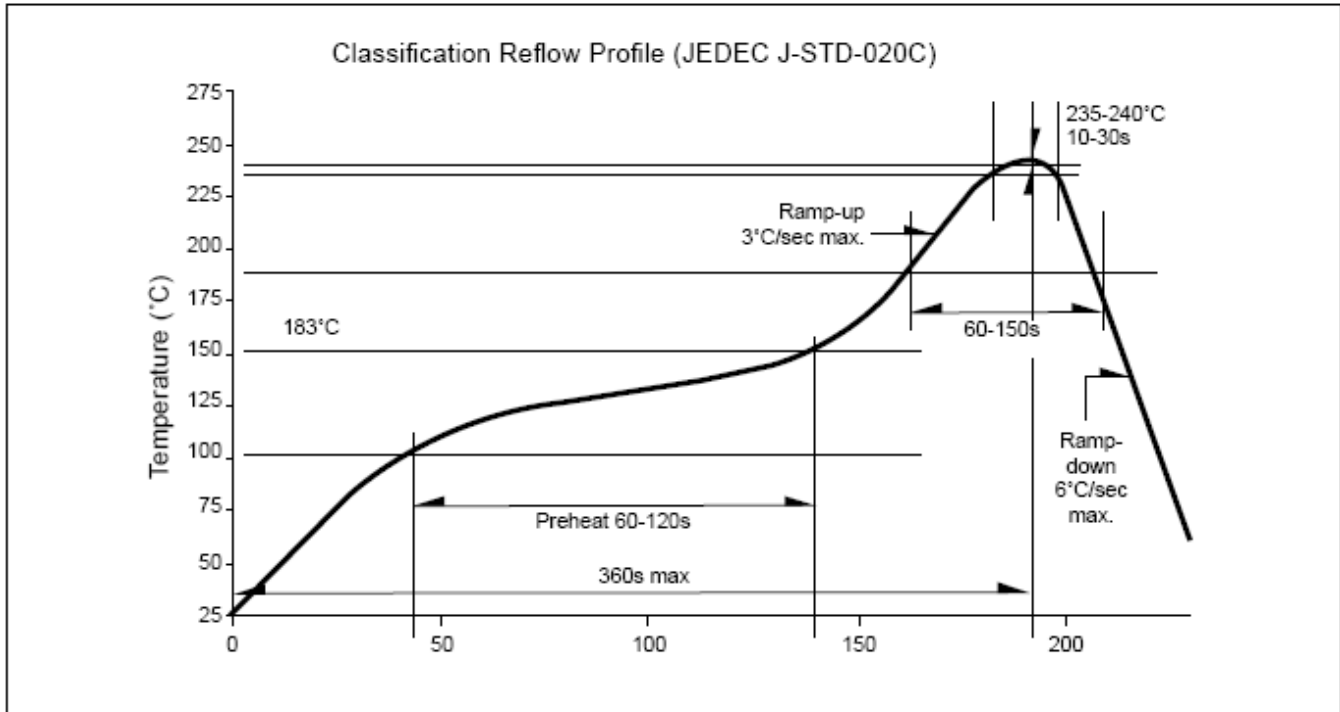


### Moisture Resistant Packaging



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



**Recommended Pb-free Soldering Profile**

