White PLCC4 Surface Mount LED (120° Viewing Angle)

TT electronics
OPTEK Technology

OVSAWBCR9

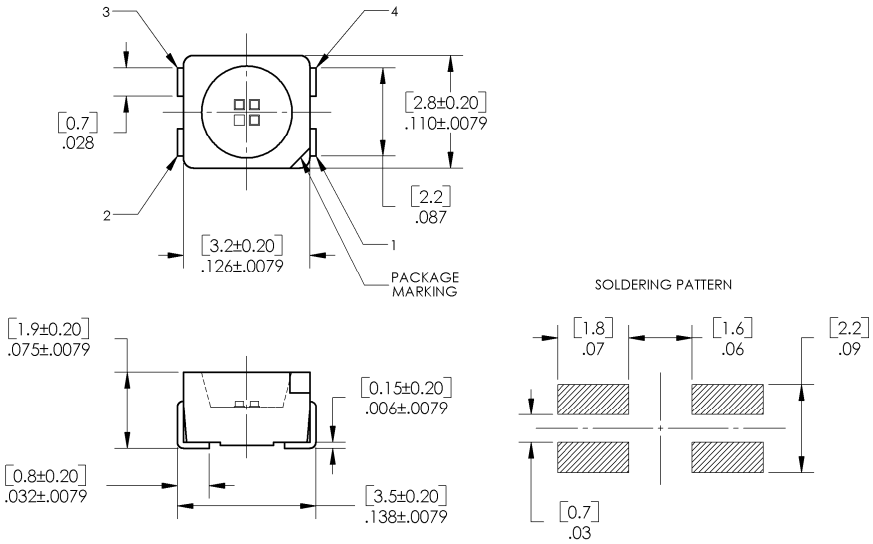
- High luminous intensity
- High efficiency, 3-chip device
- Emission color: x = 0.29, y = 0.30
- Pb-free

The **OVSAWBCR9** combines three die in a single package to provide 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
OVSAWBCR9	InGaN	White	1900 mcd	Water Clear



1,3,4 CATHODE 2 ANODE
DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

RoHS Moisture

ATTENTION
OBSERVE PRECAUTIONS FOR ELECTROSTATIC SENSITIVE DEVICES

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° C (on metal core PCB[1]) unless otherwise noted

Storage Temperature Range	-40 ~ + 85℃
Operating Temperature Range	-40 ~ + 100℃
Soldering Temperature (5 second maximum)	260° C
Forward Current[1]	25 mA
Peak Forward Current (10% Duty Cycle, 1 KHz)[1]	100 mA
Reverse Voltage	5 V
Electrostatic Discharge	150 V
Power Dissipation	110 mW

Note:
1. Maximum forward current for each die.

Electrical Characteristics

T_A = 25° C (on metal core PCB[1]) unless otherwise noted

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
I_V	Luminous Intensity[1]	1045	1900	----	mcd	I_F = 20 mA
V_F	Forward Voltage[2]	----	3.5	4.0	V	I_F = 20 mA
I_R	Reverse Current[2]	----	----	50	µA	V_R = 5 V
2 Θ½	50% Power Angle	----	120	----	deg	I_F = 20 mA
x	Chromaticity Coordinates[3]	----	0.29	----	----	I_F = 20 mA
y		----	0.30	----	----	I_F = 20 mA

Notes:
1. When three LED die are operated simultaneously.
2. For each die.
3. The C.I.E. 1931 chromaticity diagram.

Standard Bins (I_F = 20mA)

Lamps are sorted to luminous intensity (I_V) and chromaticity coordinates (x, y) bins shown.
Orders for OVSAWBCR9 may be filled with any or all bins contained as below.

Rank		A0				B1			
Chromaticity Coordinates	x	0.280	0.264	0.283	0.296	0.287	0.283	0.330	0.330
	y	0.248	0.267	0.305	0.276	0.295	0.305	0.360	0.339

Rank		B2				C0			
Chromaticity Coordinates	x	0.296	0.287	0.330	0.330	0.330	0.330	0.361	0.356
	y	0.276	0.295	0.339	0.318	0.318	0.360	0.385	0.351

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, please contact OPTEK.
4. Part is sensitive to static electricity and precautions must be used when handling products.

OPTEK Technology Inc. — 1645 Wallace Drive, Carrollton, Texas 75006
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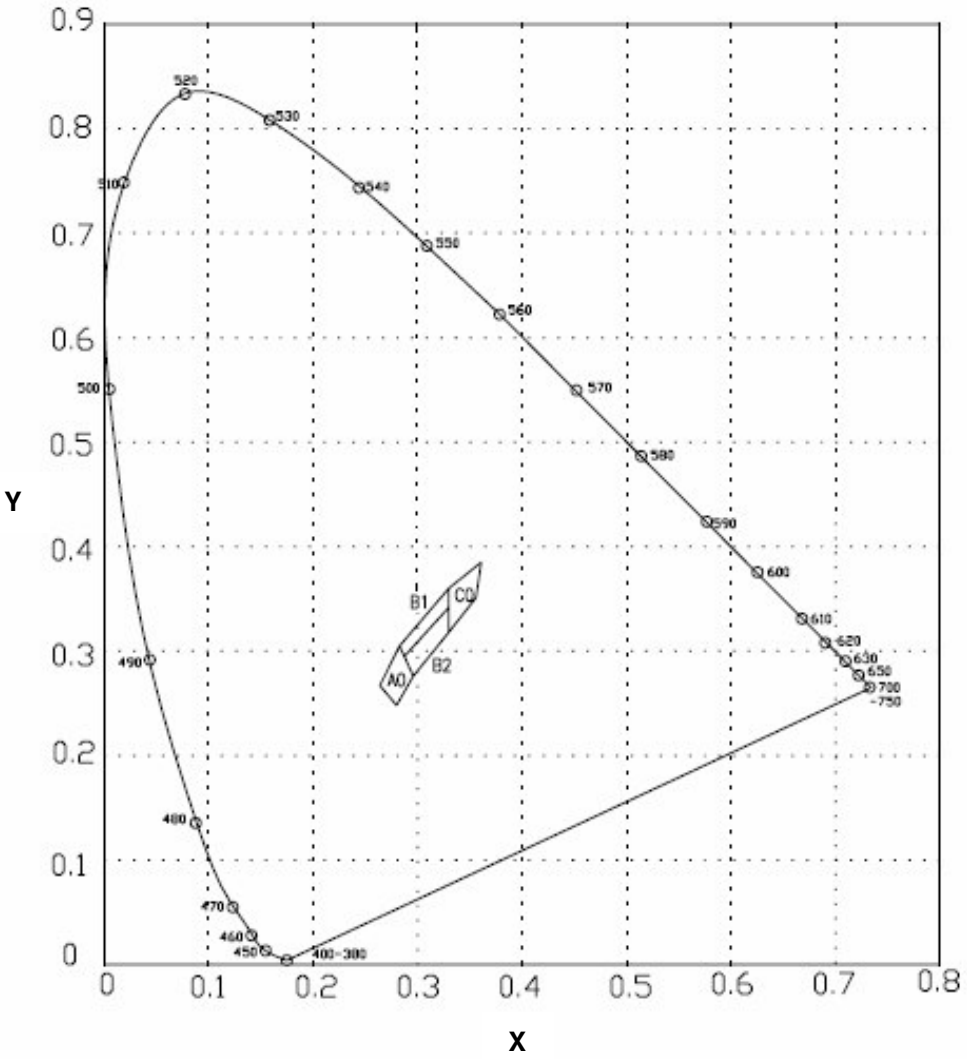
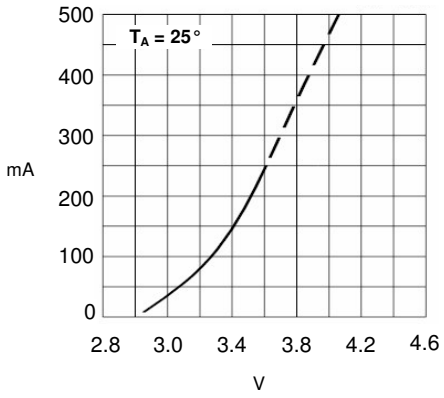
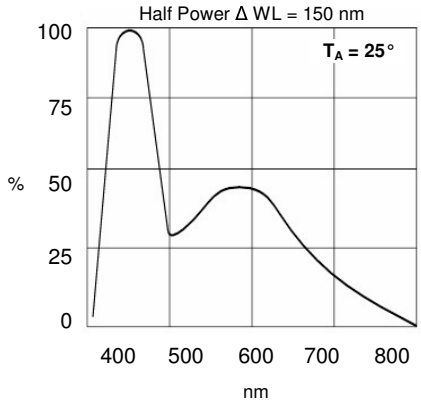
CIE Chromaticity Diagram



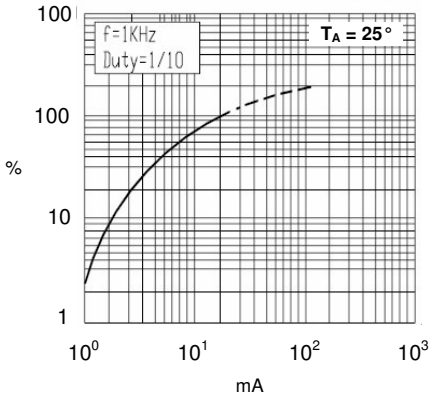
Typical Electro-Optical Characteristics Curves



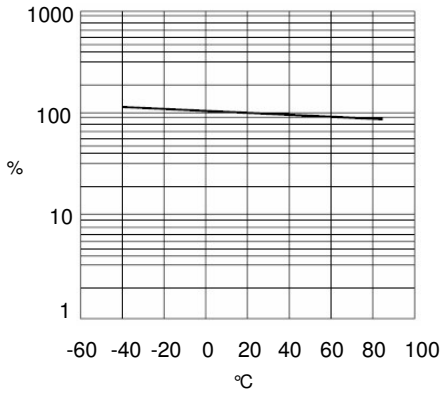
Forward Current vs Forward Voltage



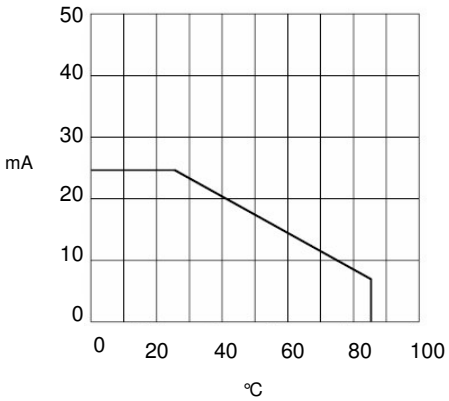
Relative Luminous Intensity vs Wavelength



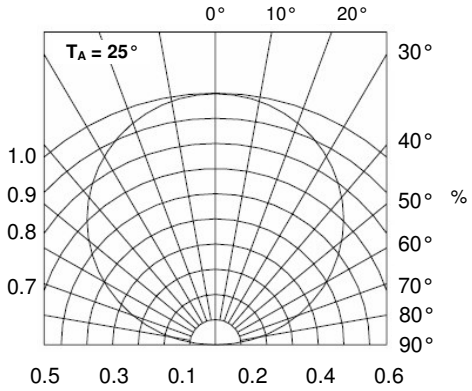
Relative Luminous Intensity vs Forward Current



Relative Luminous Intensity vs Ambient Temperature



Forward Current vs Ambient Temperature



Radiation Pattern

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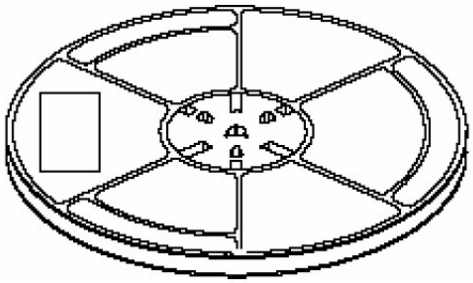
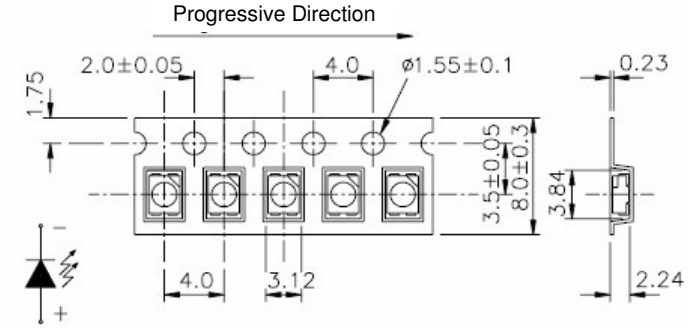
Reel Dimensions: 7-inch reel



Carrier Tape Dimensions: Loaded quantity 2000 pieces per reel



Moisture Resistant Packaging