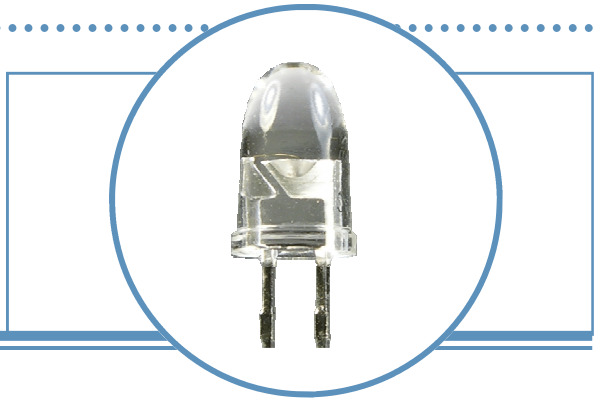
White High-Intensity LED Lamp (5 mm, 15° Viewing Angle)

TT electronics
OPTEK Technology

OVLEW1CB9

- Narrow beam angle
- High luminous intensity
- Water clear plastic package
- InGaN White
- Pb-free

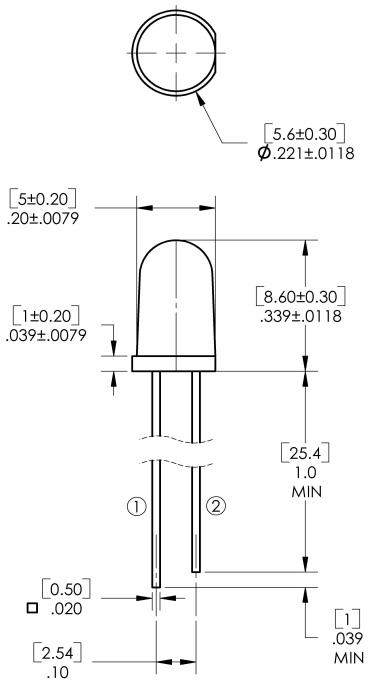


The **OVLEW1CB9** is a round 5 mm white high-intensity lamp with a 15° viewing angle. It is designed for applications that require high luminous intensity, such as indoor and outdoor displays, marker lights and optical indicators. The phosphor used in the reflector converts the blue emission of the InGaN chip to ideal white light so that the best mode of white light intensity and CIE chromaticity are achieved.

Applications

- Indoor/outdoor displays and applications
- Message boards
- Store front signage
- Indicators

Part Number	Material	Emitted Color	Intensity Typ. mcd	Lens Color
OVLEW1CB9	InGaN	White	18000	Water Clear



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

$T_A = 25^o C$

Storage Temperature Range	-40 ~ +100 ° C
Operating Temperature Range	-40 ~ +95 ° C
Reverse Voltage	5 V
Continuous Forward Current	25 mA
Peak Forward Current (10% Duty Cycle, 1 KHz)	100 mA
Power Dissipation	100 mW
Lead Soldering Temperature (3 mm from the base of the epoxy bulb)[1]	260° C
Electrostatic Discharge	150 V

Note:
1. Solder time less than 3 seconds at temperature extreme.

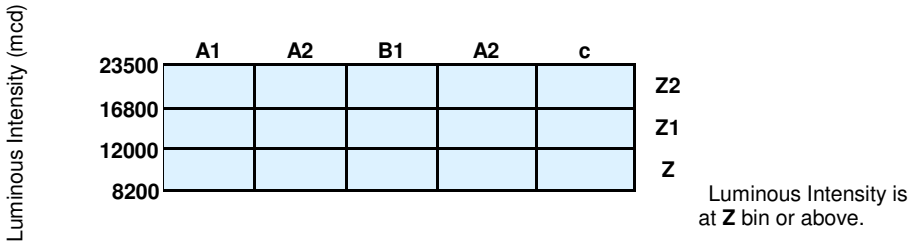
Electrical Characteristics

$T_A = 25^o C$

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
I_V	Luminous Intensity	8200	18000	23500	mcd	I_F = 20 mA
V_F	Forward Voltage	----	3.4	4.0	V	I_F = 20 mA
I_R	Reverse Current	----	----	100	µA	V_R = 5 V
2 Θ½	50% Power Angle	----	15	----	deg	I_F = 20 mA
x	Chromaticity Coordinates	----	0.31	----	----	I_F = 20 mA
y		----	0.32	----	----	I_F = 20 mA

Standard Bins (I_F = 20 mA)

Lamps are sorted to luminous intensity (I_V) and chromaticity coordinates (x, y) bins shown.
Orders for OVLEW1CB9 may be filled with any or all bins contained as below.



Chromaticity Coordinates (x, y)

Rank		A1				A2				B1			
Chromaticity Coordinates	x	0.245	0.264	0.280	0.264	0.264	0.283	0.296	0.280	0.283	0.307	0.313	0.296
	y	0.229	0.267	0.248	0.220	0.267	0.305	0.276	0.248	0.305	0.337	0.297	0.276

Rank		B2				c			
Chromaticity Coordinates	x	0.307	0.330	0.330	0.313	0.330	0.361	0.356	0.330
	y	0.337	0.360	0.318	0.297	0.360	0.385	0.351	0.318

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.

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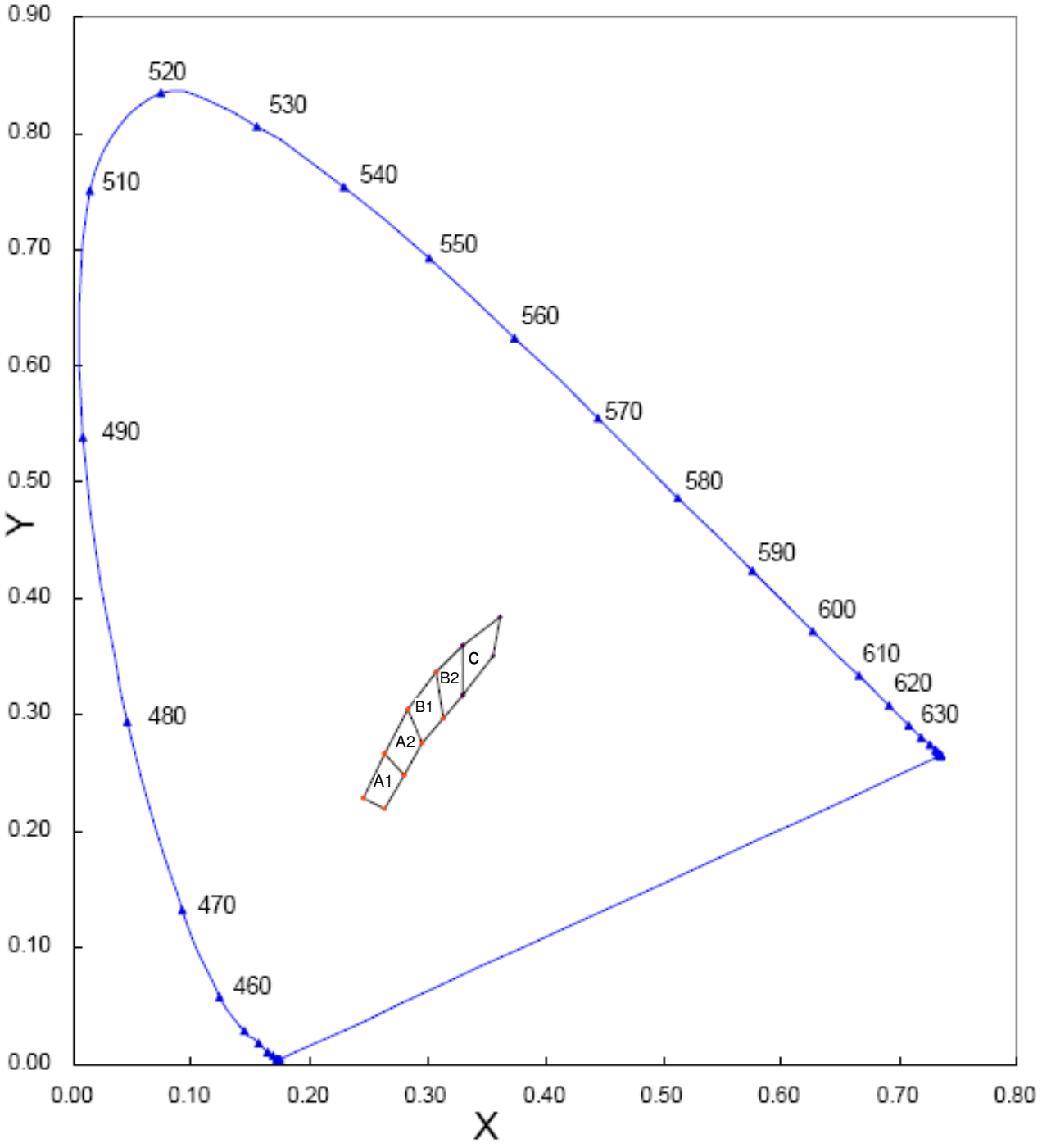
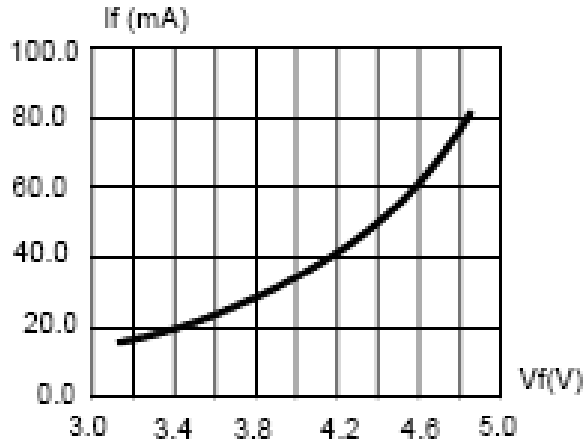
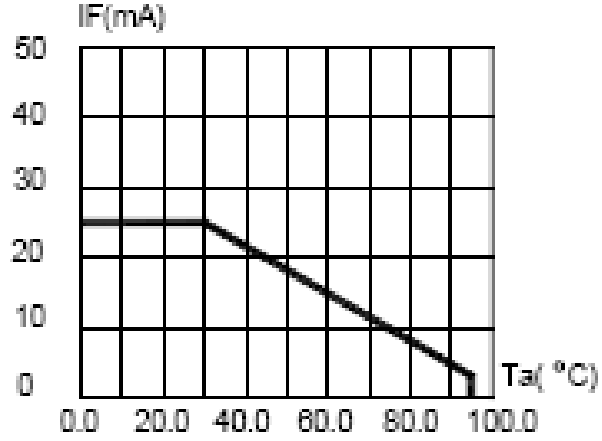
CIE Chromaticity Diagram



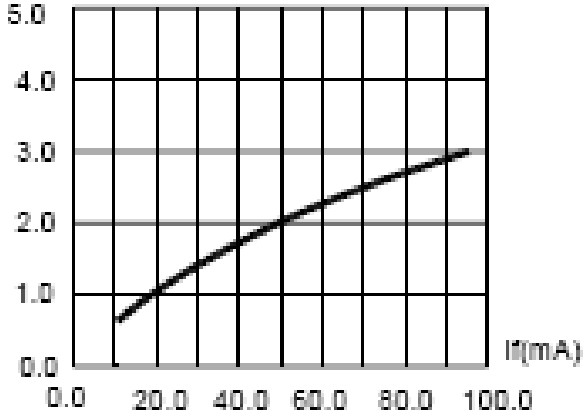
Typical Electro-Optical Characteristics Curves



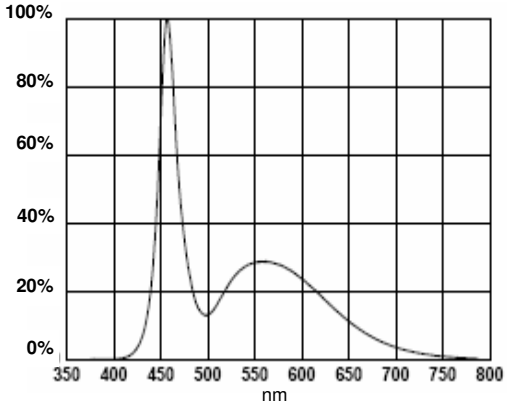
Relative Luminous Intensity vs Forward Current



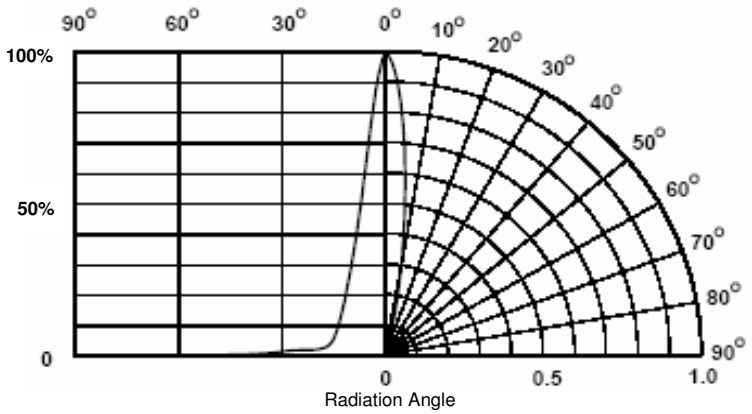
Maximum Forward Current vs Ambient Temperature



Forward Voltage vs Forward Current



Relative Luminous Intensity vs Wavelength



Relative Intensity vs Angle Displacement

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Packing Information: 500 pieces per bag