EVERLIGHT ELECTRONICS CO., LTD

Technical Data Sheet (Preliminary)
Side View LEDs

97-22/BHC-AS1T2

Features

- White package.
- Dual-chip, wide-angle, low-profile LEDs .
- Excellent chip to chip consistency
- Super Intensity
- Highperformance
- Pb-free.
- The product itself will remain within RoHS compliant version.

Applications

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Indicator and backlight for audio and video equipment.
- Indicator and backlight for battery driven equipment.
- Display Screen Illumination on Portable Handheld Devices
- Indicator and backlight in office equipment.
- General use.

Device Selection Guide

Chip Material	Emitted Color	Resin Color
InGaN	Blue	Water Clear

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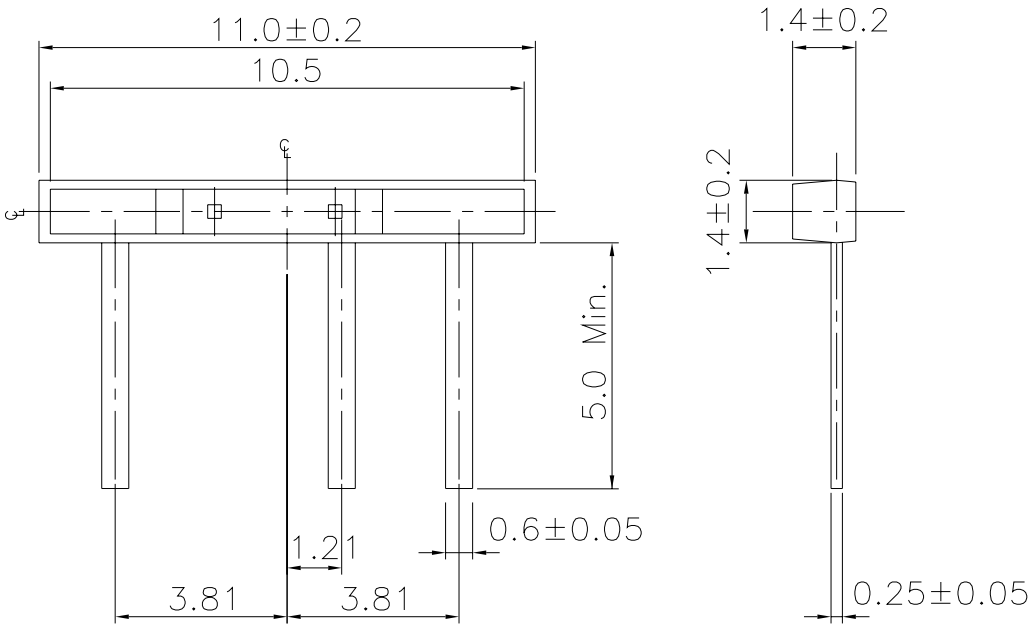
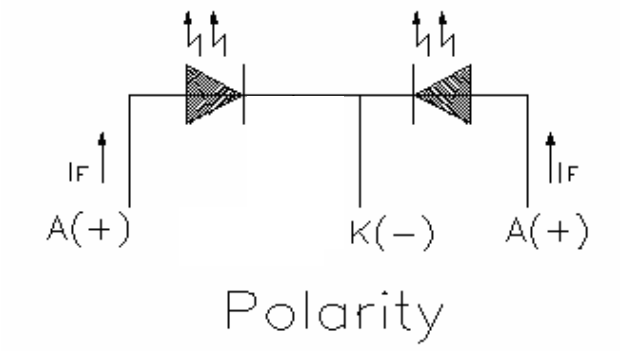
Package Dimensions





Note: The tolerances unless mentioned is ±0.1mm ;Unit = mm

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Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	25	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	100	mA
Power Dissipation	Pd	110	mW
Electrostatic Discharge(HBM)	ESD	150	V
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous intensity	I_V	180	-----	450	mcd	I_F=20mA
Viewing Angle	2θ1/2	-----	145	-----	deg	I_F=20mA
Peak Wavelength	λp	-----	468	-----	nm	I_F=20mA
Dominant Wavelength	λd	464.5	-----	476.5	nm	I_F=20mA
Spectrum Radiation Bandwidth	△λ	-----	35	-----	nm	I_F=20mA
Forward Voltage	V_F	-----	3.3	3.7	V	I_F=20mA
Reverse Current	I_R	-----	-----	50	uA	V_R=5V

Notes:

1. Tolerance of Luminous Intensity ±11%
2. Tolerance of Dominant Wavelength ±1 nm
3. Tolerance of Dominant Forward Voltage ±0.1V

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Bin Range Of Dominant Wavelength

Group	Bin Code	Min.	Max.	Unit	Condition
A	A9	464.5	467.5	nm	I_F=20mA
	A10	467.5	470.5		
	A11	470.5	473.5		
	A12	473.5	476.5		

Bin Range Of Luminous Intensity

Bin	Min	Max	Unit	Condition
S1	180	225	mcd	I_F=20mA
S2	225	285		
T1	285	360		
T2	360	450		

Notes:

1. Tolerance of Luminous Intensity ±11%
2. Tolerance of Dominant Wavelength ±1 nm

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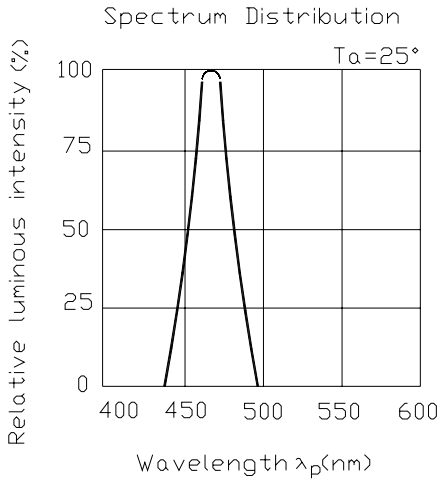
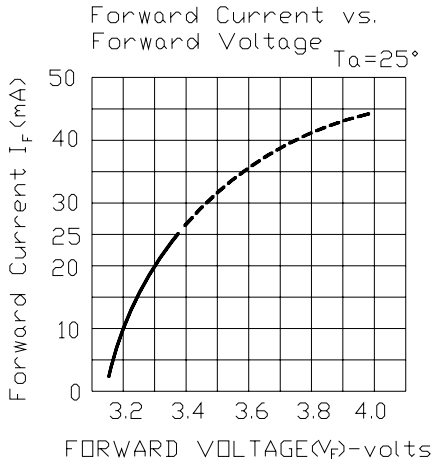
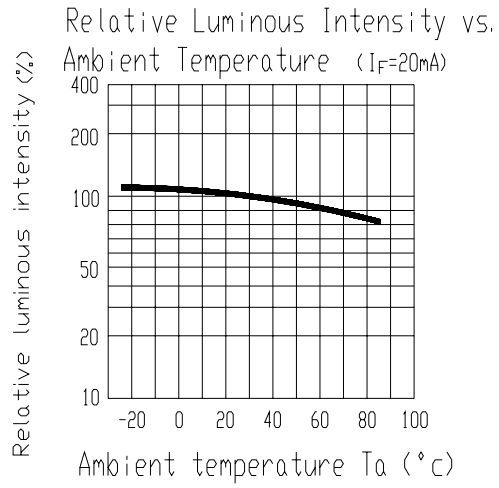
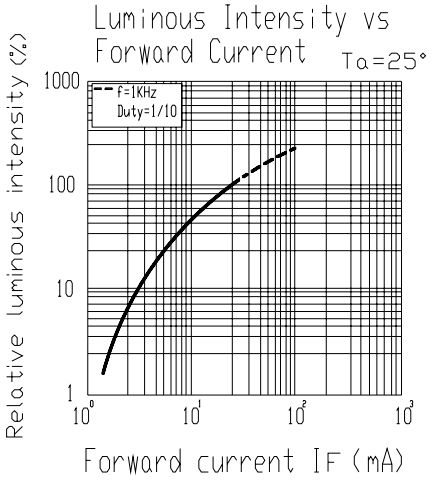
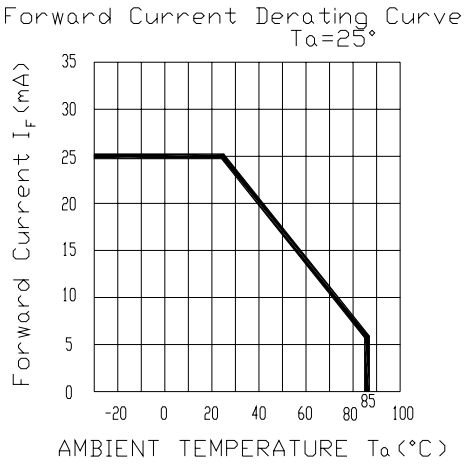
Typical Electro-Optical Characteristics Curves

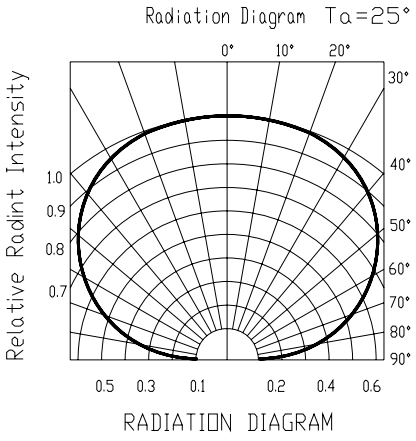












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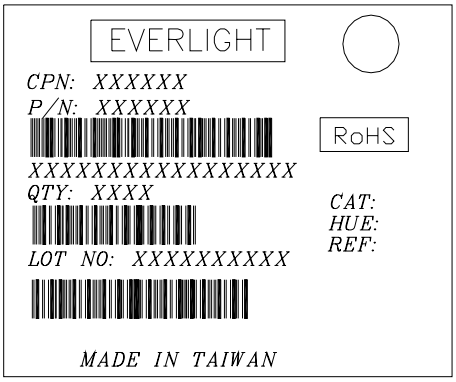
Label explanation

CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank



Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.
Confidence level : 90 % LTPD : 10 %

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Soldering Heat	Temp. : 260℃±5℃	10 sec.	22 PCS.	0/1
2	Temperature Cycle	H : +100℃ 15min ∫ 5 min L : -40℃ 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -10℃ 5min	300 Cycles	22 PCS.	0/1
4	High Temperature Storage	Temp. : 100℃	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Temp. : -40℃	1000 Hrs.	22 PCS.	0/1
6	DC Operating Life	I_F = 20 mA	1000 Hrs.	22 PCS.	0/1
7	High Temperature / High Humidity	85℃/ 85%RH	1000 Hrs.	22 PCS.	0/1

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Precautions For Use

1. Over-current-proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package: The LEDs should be kept at 30℃ or less and 90%RH or less.

2.3 After opening the package: The LED's floor life is 1 year under 30℃ or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.
Baking treatment : 60±5℃ for 24 hours.

3.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

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