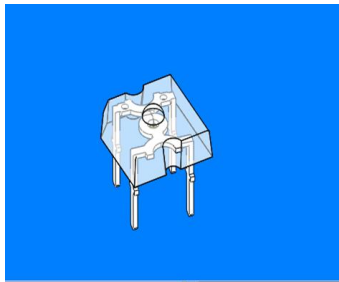


P-LED

EALP03SXDWA0



Features

- . High Flux Output.
- . Low Profile.
- . Low Thermal Resistance.
- . Low Power Consumption
- . The phosphor filled in the reflector converts the blue emission of InGaN chip to ideal white.
- . Typical chromaticity coordinates $x=0.30$, $y=0.29$ according to CIE1931
- . The product itself will remain within RoHS compliant version.
- . ESD-withstand voltage: up to 4KV.
- . Compliance with EU REACH.
- . Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm).

Descriptions

This revolutionary package design allows the light designer to reduce the number of LEDs required and provide a more uniform and unique illuminated appearance than with other LED solutions. This is possible through the efficient optical package design and high-current capabilities.

The low profile package can be easily coupled with reflectors or lenses to efficiently distribute light and provide the desired light appearance.

Applications

- . Automotive Lighting
- . Electronic Signs and Signals
- . Special Lighting application

Device Selection Guide

PART NO.	Chip		Lens Color
	Material	Emitted Color	
EALP03SXDWA0	InGaN	White	Water Clear

Table of Content	Page
Absolute Maximum Ratings (Ta=25°C)	3
Electro-Optical Characteristics (Ta=25°C)	4
Bin Range of Forward Voltage (Ta=25°C)	5
Bin Range of Luminous Intensity (Ta=25°C)	6
Color Combination	7
CIE Chromaticity Diagram	8
Typical Electro-Optical Characteristics Curves	9
Package Dimensions	10
Label Explanation	11
Antistatic Packing Materials Tube and Standard Boxes	11
Precautions	12
Revision History	14

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Continuous Forward Current	I_F	30	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	100	mA
Power Dissipation	P_d	100	mW
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +110	°C
Electrostatic Discharge	ESD	4000	V
Soldering Temperature(T=5 sec)	T_{sol}	260 ± 5	°C

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Total Flux	Φ_v	2850	4000	5650	mlm	$I_F = 30\text{mA}$
Viewing Angle	$2\theta_{1/2}$	-----	45	-----	deg	$I_F = 30\text{mA}$
Chromaticity	X	----	0.30	----		$I_F = 30\text{mA}$
Coordinates	y	----	0.29	----		
Forward Voltage	V_F	2.8	----	3.8	V	$I_F = 30\text{mA}$
Reverse Current	I_R	-----	-----	10	mA	$V_R = 5\text{V}$
Zener Reverse Voltage	V_Z	5.2	-----	-----	V	$I_Z = 5\text{mA}$

Note:

1. Total Flux: $\pm 11\%$
2. Tolerance of Dominant Wavelength: $\pm 1\text{nm}$
3. Tolerance of Forward Voltage: $\pm 0.1\text{V}$

Bin Range of Forward Voltage (Ta=25°C)

Bin	Min.	Max.	Unit	Condition
0	2.80	3.00	V	I _F =30mA
1	3.00	3.20		
2	3.20	3.40		
3	3.40	3.60		
4	3.60	3.80		

Note:

Tolerance of Forward Voltage: ±0.1V

Bin Range of Total Flux (Ta=25°C)

Bin	Min.	Max.	Unit	Condition
P	2850	3600	mlm	I _F =30mA
Q	3600	4500		
R	4500	5650		

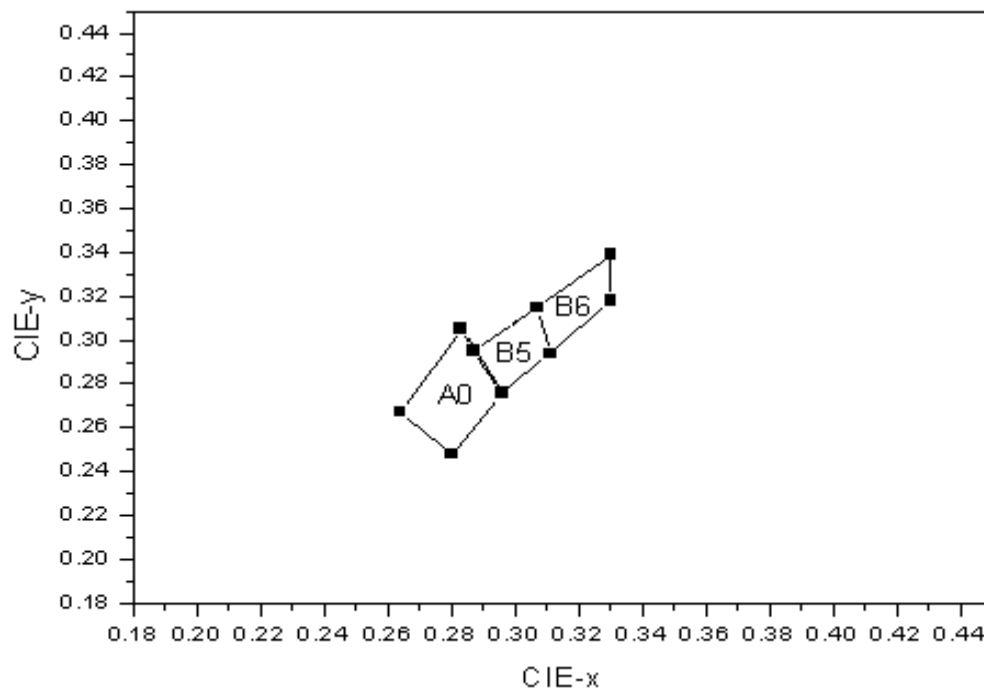
Note:

Tolerance of Total Flux: ±11%

Color Combination (at 30mA)

Group	Bins
T4	A0+B5+B6

CIE Chromaticity Diagram



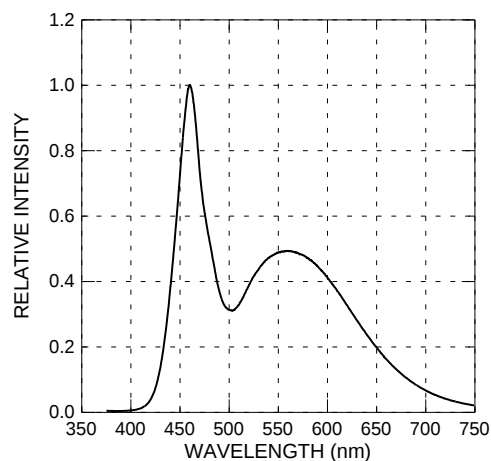
Color Ranks (IF=30mA , Ta=25°C)

Color Ranks		CIE Rank			
A0	X	0.280	0.264	0.283	0.296
	Y	0.248	0.267	0.305	0.276
B5	X	0.296	0.287	0.307	0.311
	Y	0.276	0.295	0.315	0.294
B6	X	0.311	0.307	0.330	0.330
	Y	0.294	0.315	0.339	0.318

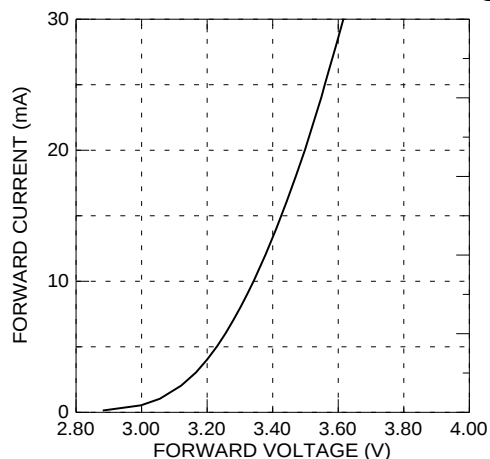
*Measurement uncertainty of the color coordinates : ± 0.01

Typical Electro-Optical Characteristics Curves

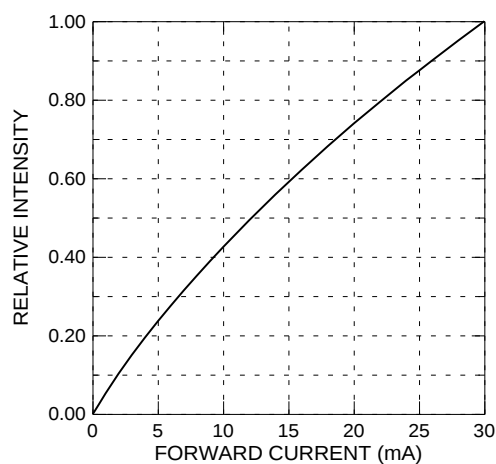
Relative Intensity vs. Wavelength



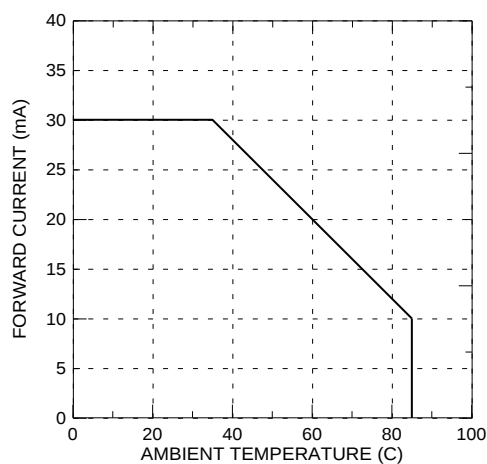
Forward Current vs. Forward Voltage



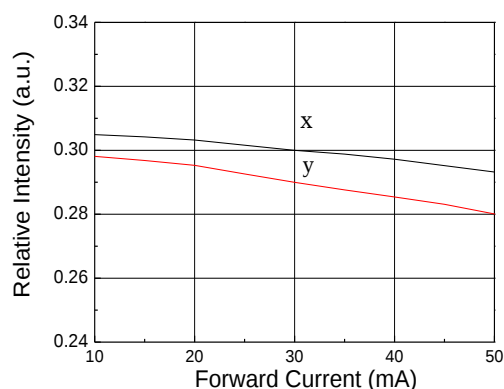
Relative Intensity vs. Forward Current



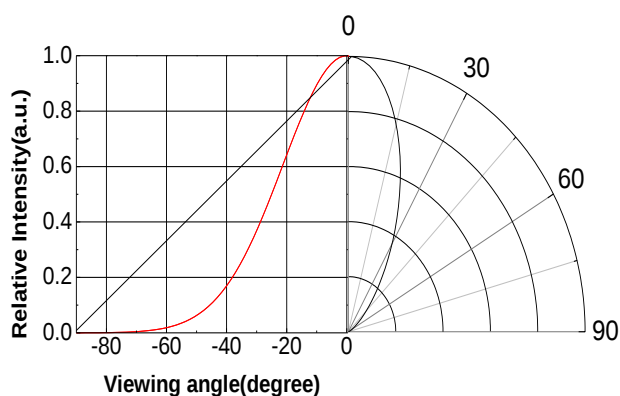
Forward Current vs. Ambient Temp.



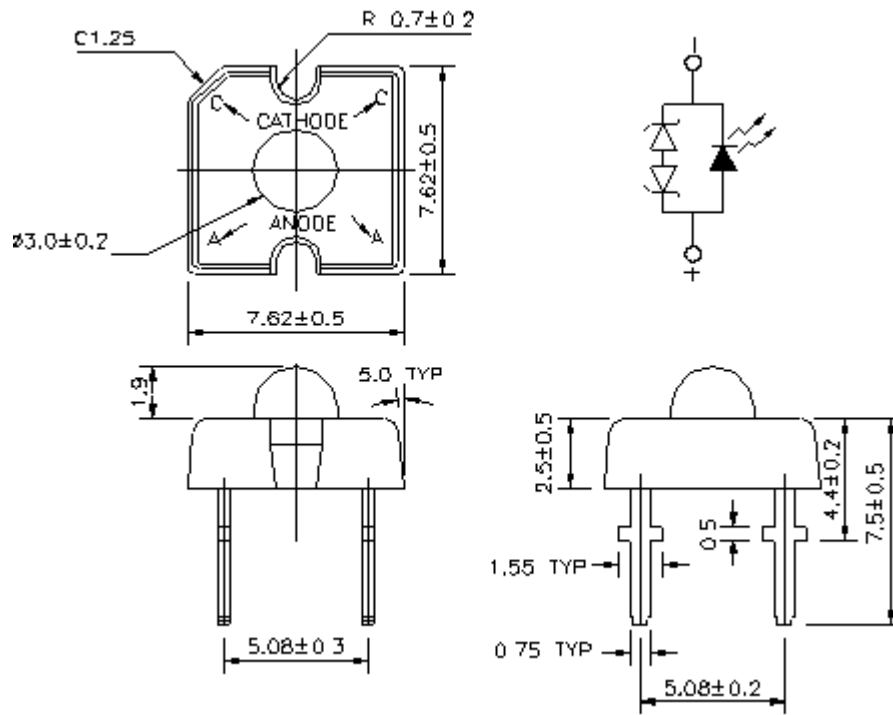
Chromaticity Coordinate vs. Forward Current



Radiation Characteristics



Package Dimensions



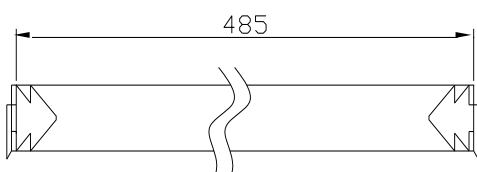
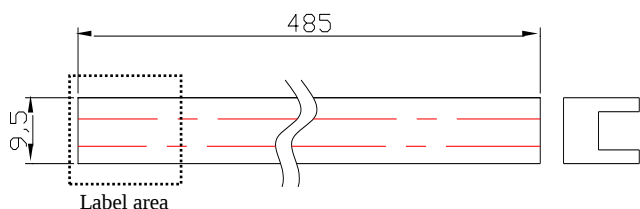
Notes: 1.All dimensions are in millimeters

2.An epoxy meniscus may extend about 1.5mm(0.059") down the leads

3.Tolerances unless dimensions ± 0.25 mm

Antistatic Packing Materials

Tube



Note: Tolerances unless mentioned ± 2.0 mm. Unit = mm



Tube Label Explanation

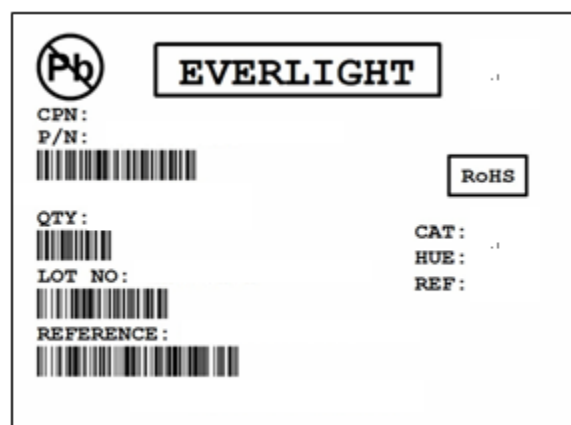
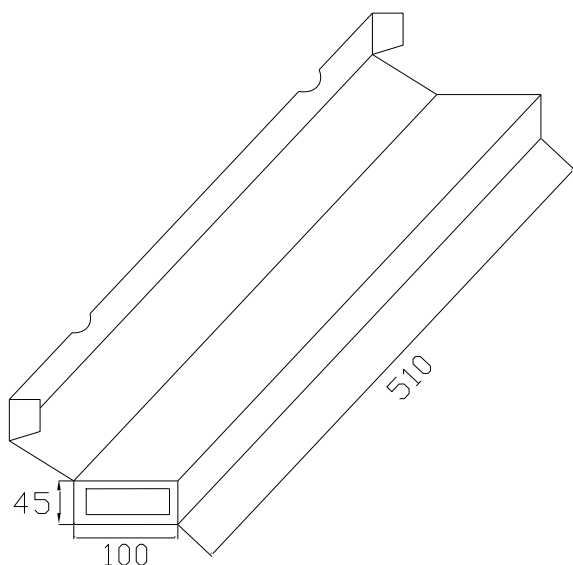
QTY: Packing Quantity

LOT No: Lot Number

CAT: Rank of (VF)(Note*)(ΦV)

Note: λ_d /CIE/Color temperature

Standard Box



Outer Label Explanation

CPN: Customer's Product Number

P/N: Product Number

QTY: Packing Quantity

CAT: Rank of (VF)(Note*)(ΦV)

Note: λ_d /CIE/Color temperature

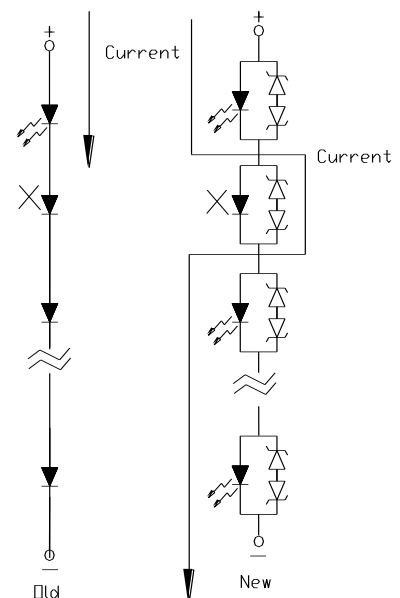
HUE/REF: Reference

LOT No: Lot Number

Note: Tolerances unless mentioned ± 3.0 mm. Unit = mm

Notes

1. Above specification may be changed without notice. EVERLIGHT AMERICAS will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT AMERICAS assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
3. These specification sheets include materials protected under copyright of EVERLIGHT AMERICAS corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT AMERICAS's consent.
4. Below the zener reference voltage V_z , all the current flows through LED and as the voltage rises to V_z , the zener diode "breakdown." If the voltage tries to rise above V_z current flows through the zener branch to keep the voltage at exactly V_z .
5. When the LED is connected using serial circuit, if either piece of LED is no light up but current can't flow through causing others to light down. In new design, the LED is parallel with zener diode. if either piece of LED is no light up but current can flow through causing others to light.



6. Soldering Condition

Careful attention should be paid during soldering. When soldering, leave more than 3mm from solder joint to case, and soldering beyond the base of the tie bar is recommended.

Avoiding applying any stress to the lead frame while the LEDs are at high temperature particularly when soldering.

Recommended soldering conditions:

Hand Soldering		DIP Soldering	
Temp. at tip of iron	300°C Max. (30W Max.)	Preheat temp.	100°C Max. (60 sec Max.)
Soldering time	3 sec Max.	Bath temp.	265 Max.
Distance	3mm Min.(From solder joint to case)	Bath time.	5 sec Max.
		Distance	3mm Min.

Revision History

Rev.	Modified date	File modified contents
3	2013/5/24	Change the form of datasheet