

# Technical Data Sheet

## 5 mm Round White LED (T-13/4)

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**334-15/T2C1-2UWC**

### Features

- Popular T-13/4 colorless 5mm package.
- High luminous power.
- Typical chromaticity coordinates  $x=0.26$ ,  $y=0.27$  according to CIE1931.
- Bulk, available taped on reel.
- Pb free product-RoHS compliant.
- ESD-withstand voltage: up to 4KV
- The product itself will remain within RoHS compliant version.



### Descriptions

- The series is designed for application required high luminous intensity.
- The phosphor filled in the reflector converts the blue emission of InGaN chip to ideal white.

### Applications

- Outdoor Displays
- Optical Indicators
- Backlighting
- Marker Lights

### Device Selection Guide

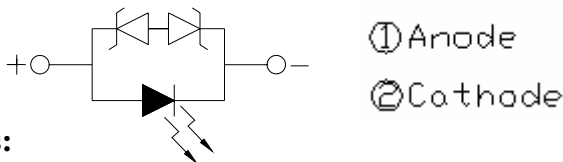
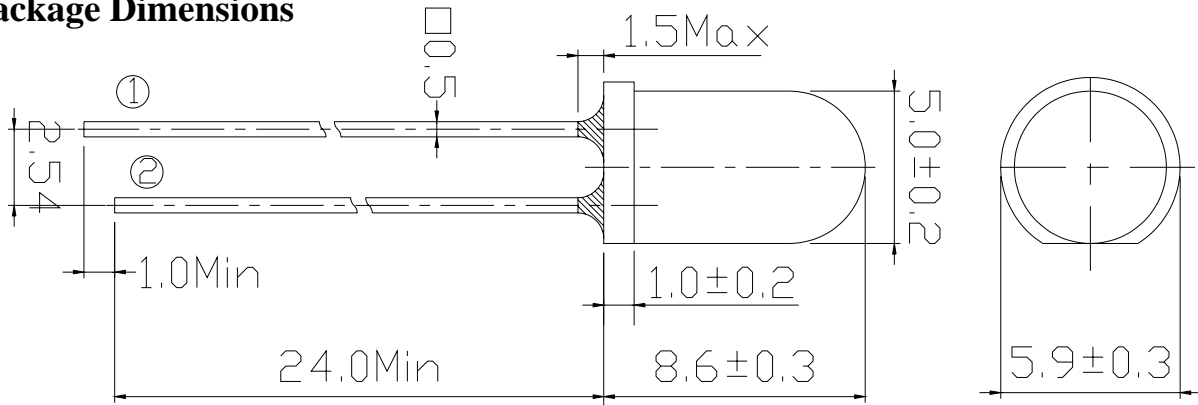
PART NO.	Chip		Lens Color
	Material	Emitted Color	
334-15/T2C1-2UWC	InGaN/Sapphire	White	Water Clear

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### Package Dimensions



### Notes:

- 1.All dimensions are in millimeters, and tolerance is 0.25mm except being specified.
- 2.Lead spacing is measured where the lead emerges from the package.
- 3.Protruded resin under flange is 1.5mm Max. LED.

### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Continuous Forward Current	I <sub>F</sub>	25	mA
Peak Forward Current(Duty /10 @ 1KHZ)	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Soldering Temperature (T=5 sec)	T <sub>sol</sub>	260 ± 5	°C
Power Dissipation	P <sub>d</sub>	100	mW
Zener Reverse Current	I <sub>Z</sub>	100	mA
Electrostatic Discharge	ESD	4K	V

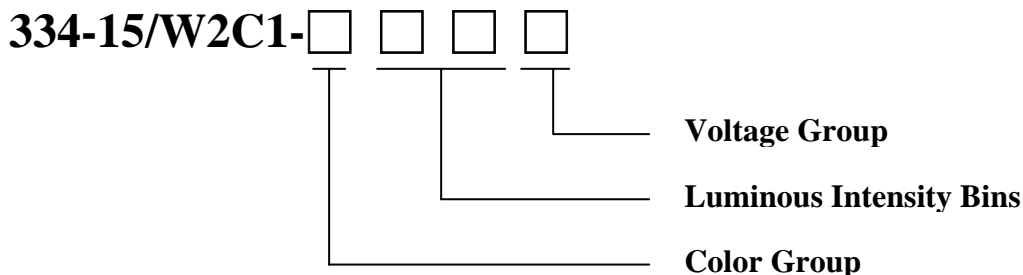


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### Production Designation



### Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	--	3.5	4.0	V
Zener Reverse Voltage	V <sub>Z</sub>	I <sub>Z</sub> =5mA	5.8	----	----	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	--	--	50	uA
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =20mA	9000	----	18000	mcd
Viewing Angle	2θ 1/2	I <sub>F</sub> =20mA	--	15	--	deg
Chromaticity Coordinates	x	I <sub>F</sub> =20mA	--	0.26	--	
	y		--	0.27	--	



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### Luminous Intensity Combination (mcd at 20mA)

Rank	Min	Max
U	9000.0	11250.0
V	11250.0	14250.0
W	14250.0	18000.0

\*Measurement Uncertainty of Luminous Intensity:  $\pm 15\%$

### Forward Voltage Combination (V at 20mA)

Group	C		
	1	2	3
Min.	3.00	3.20	3.40
Max.	3.20	3.40	3.60

\*Measurement Uncertainty of Forward Voltage :  $\pm 0.1V$

### Color Combination ( at 20mA)

Group	Bins
2	A1+A0

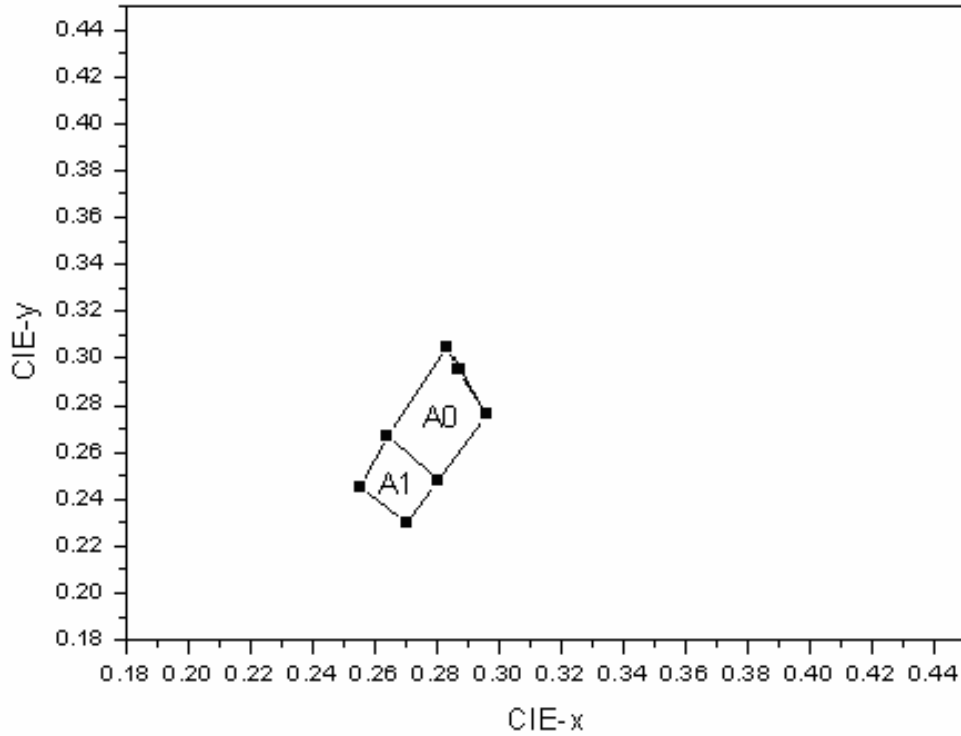


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### CIE Chromaticity Diagram



### Color Ranks (IF=20mA , Ta=25°C)

Color Ranks		CIE			
A1	X	0.255	0.264	0.28	0.27
	Y	0.245	0.267	0.248	0.23
A0	X	0.264	0.283	0.296	0.28
	Y	0.267	0.305	0.267	0.248

\*Measurement uncertainty of the color coordinates :  $\pm 0.01$



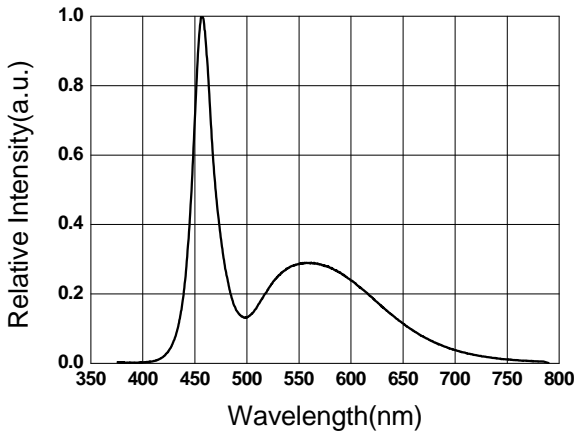
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## 5 mm Round White LED (T-13/4)

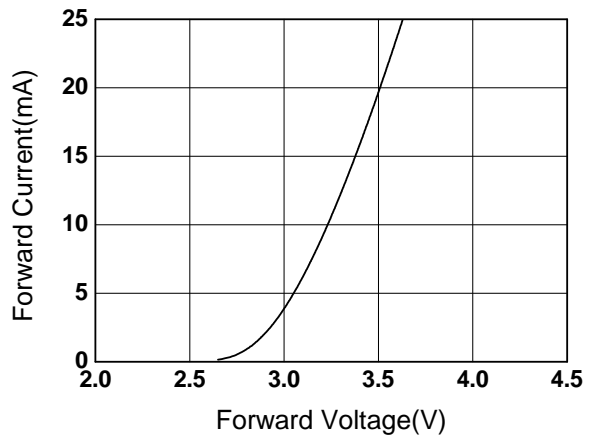
### 334-15/T2C1-2UWC

#### Typical Electro-Optical Characteristics Curves

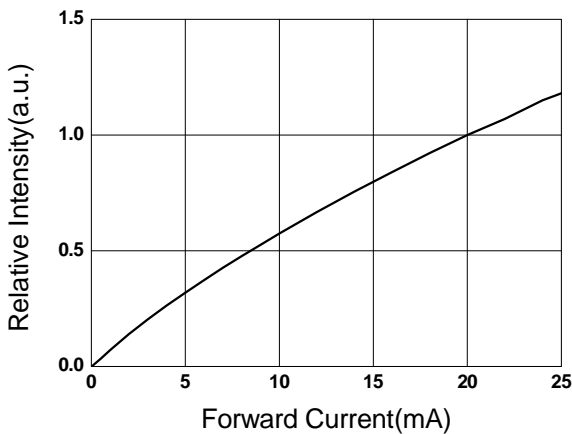
Relative Intensity vs. Wavelength



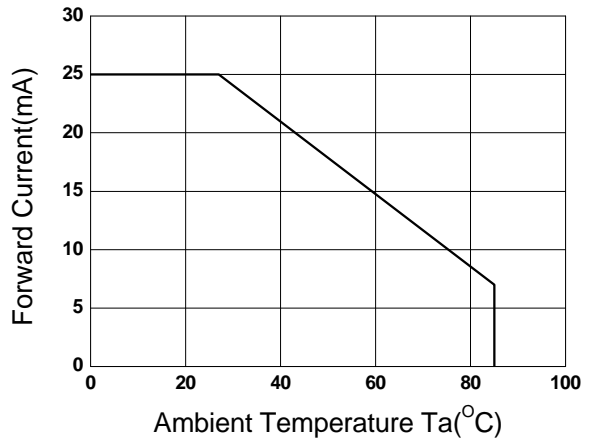
Forward Current vs. Forward Voltage



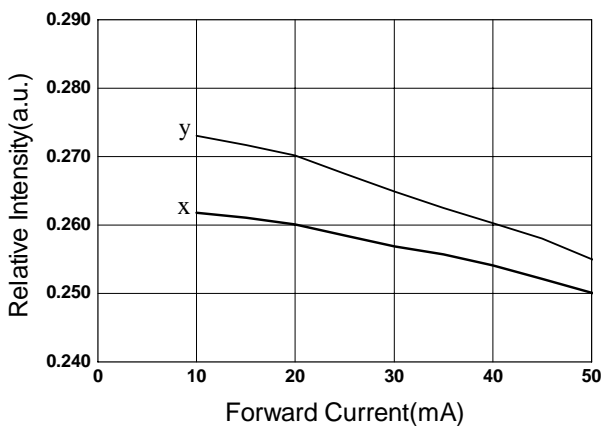
Relative Intensity vs. Forward Current



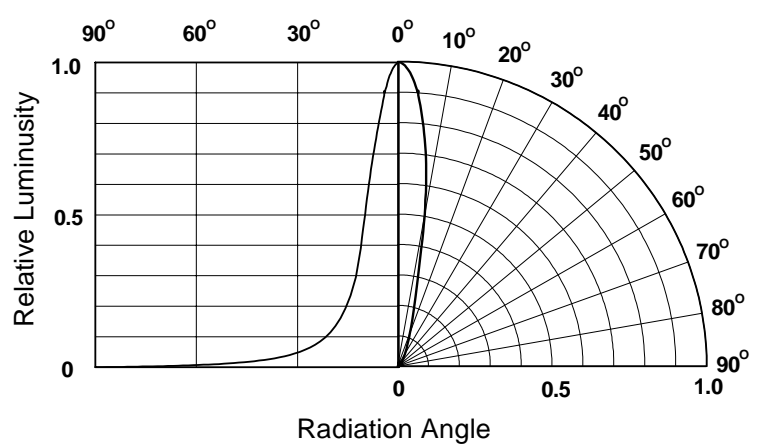
Forward Current vs. Ambient Temp.



Chromaticity Coordinate vs. Forward Current



Relative Intensity vs. Angle Displacement





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### Label Form Specification



CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Space

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place

### Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.

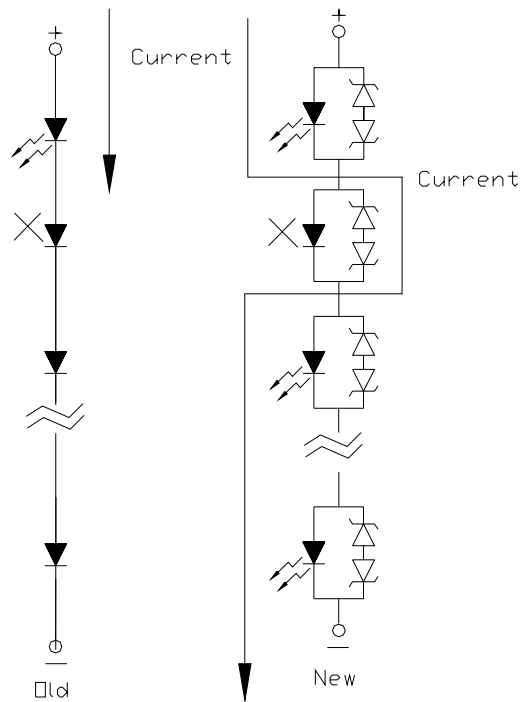


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- When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
- These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.
- 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 up



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