



Technical Data Sheet

333/R2C1-ATWB

Features

- Popular T-1 3/4 package.
- High efficiency.
- General purpose leads.
- Selected minimum intensities
- Available on tape and reel.
- ESD-withstand voltage: up to 4KV
- The product itself will remain within RoHS compliant version.



Descriptions

- The series is specially designed for applications requiring higher brightness.
- The LED lamps are available with different colors, intensities, epoxy colors, etc.

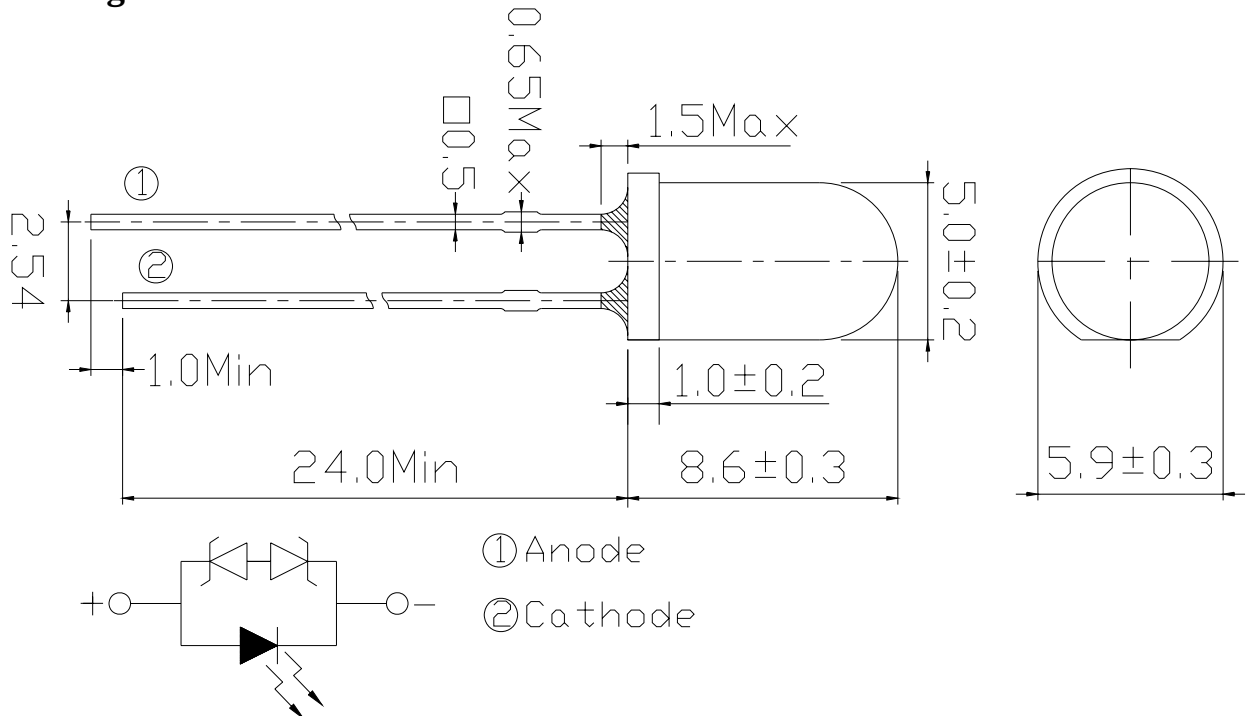
Applications

- Status indicators.
- Commercial use.
- Advertising Signs.
- Back lighting.

Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
333/R2C1-ATWB	AlGaInP	Hyper Red	Water Clear

Package Dimensions



Notes:

- Other dimensions are in millimeters, tolerance is 0.25mm except being specified.
- Protruded resin under flange is 1.5mm Max LED.
- Bare copper alloy is exposed at tie-bar portion after cutting.

Absolute Maximum Rating ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Absolute Maximum Rating	Unit
Forward Current	I_F	50	mA
Pulse Forward Current (Duty 1/10@ 1KHz)	I_{FP}	100	mA
Operating Temperature	T_{opr}	-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40 ~ +100	$^{\circ}\text{C}$
Electrostatic Discharge	ESD	4K	V
Soldering Temperature	T_{sol}	260 ±5	$^{\circ}\text{C}$
Power Dissipation	P_d	130	mW
Zener Reverse Current	I_Z	100	mA
Reverse Voltage	V_R	5	V

Notes: Soldering time ≤ 5 seconds.



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Electro-Optical Characteristics ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _V	7150	--	18000	mcd	I _F =20mA
Viewing Angle	2 θ _{1/2}	--	15	--	deg	
Peak Wavelength	λ _p	--	632	--	nm	
Dominant Wavelength	λ _d	--	624	--		
Spectrum Half width	Δ λ	--	20	--		
Forward Voltage	V _F	1.8	--	2.6	V	
Zener Reverse Voltage	V _Z	5.2	--	--	V	I _Z =5mA
Reverse Current	I _R	--	--	50	μ A	V _R =5V

Rank Combination ($I_F=20\text{mA}$)

Rank	T	U	V	W
Luminous Intensity	7150~9000	9000~11250	11250~14250	14250~18000

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

Unit:mcd

Rank	1	2	3	4
Forward Voltage	1.8~2.0	2.0~2.2	2.2~2.4	2.4~2.6

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

Unit:V

Rank	1	2	3
Dominant Wavelength	618~620	620~624	624~628

*Measurement Uncertainty of Dominant Wavelength $\pm 1.0\text{nm}$

Unit:nm

*The quantity ratio of the ranks is decided by EVERLIGHT.

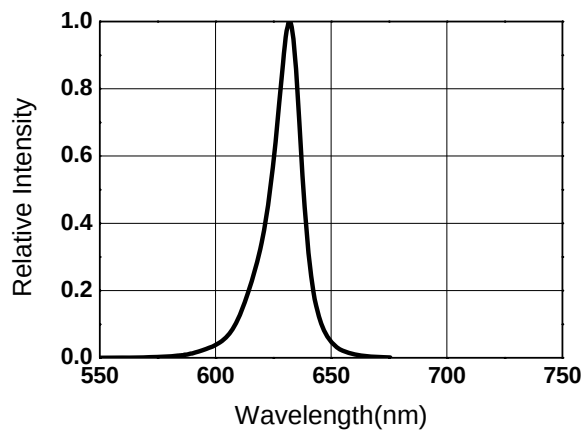


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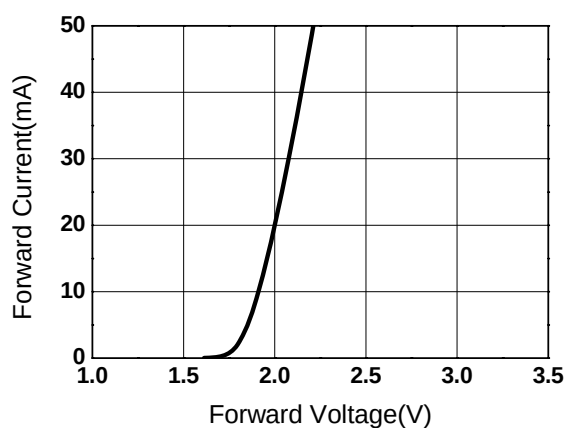
333/R2C1-ATWB

Typical Electro-Optical Characteristics Curves

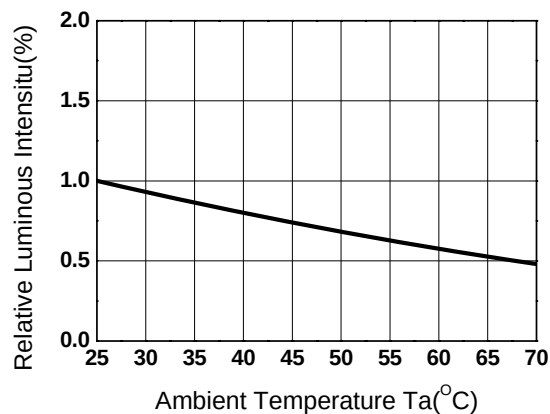
Relative Intensity vs. Wavelength



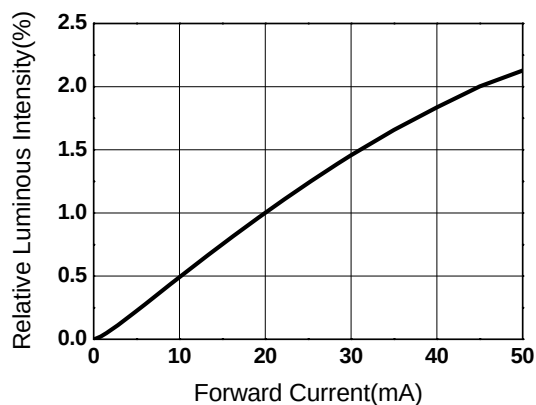
Forward Current vs. Forward Voltage



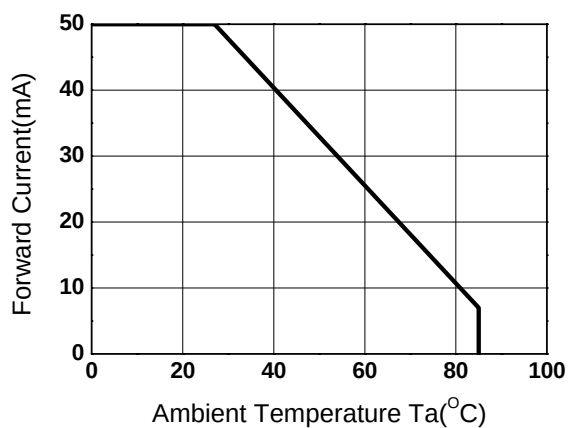
Relative Intensity vs. Ambient Temp



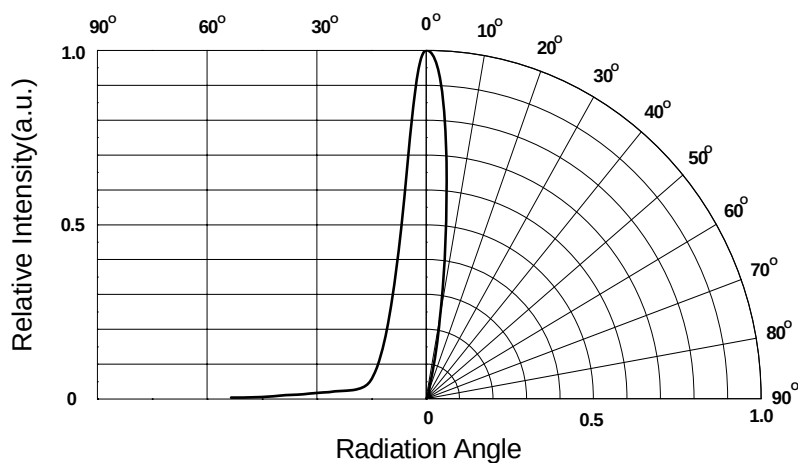
Forward Current vs. Relative Intensity



Forward Current vs. Ambient Temp.



Radiation Characteristics





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Packing Quantity Specification

1.500PCS/1Bag , 5Bags/1Box

2.10Boxes/1Carton

Label Form Specification

EVERLIGHT	
CPN:	
P/N:	
	
333/R2C1-ATWB	
QTY :	CAT:
	HUE:
LOT NO :	REF:
	
MADE IN TAIWAN	

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks of Luminous Intensity and Forward
Voltage

HUE: Ranks of Dominant Wavelength

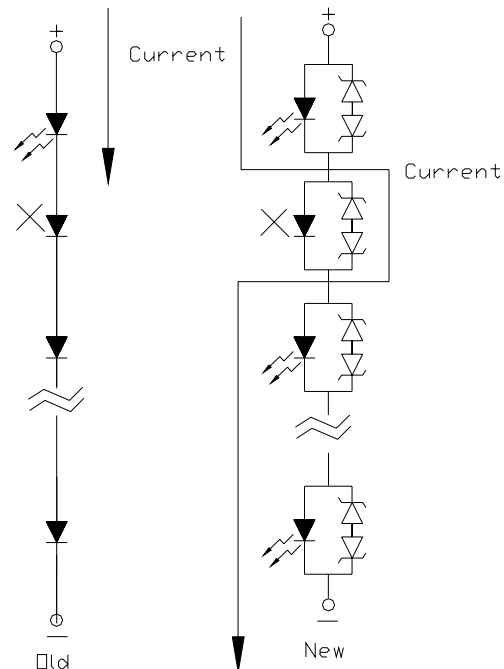
REF: Reference

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.
2. 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.
3. 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.
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 up.





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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	400°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.

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