



Technical Data Sheet

5 mm Round LED, T-1 3/4

333/R5C1-ATWB/MS

Features

- Popular T-1 3/4 diameter package.
- Choice of various viewing angles.
- Available on tape and reel.
- Reliable and robust.
- The product itself will remain within RoHS compliant version.
- UV resistant epoxy



Descriptions

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

Applications

- Color Graphic Signs
- Message boards
- Variable message signs (VMS)
- Commercial outdoor advertising

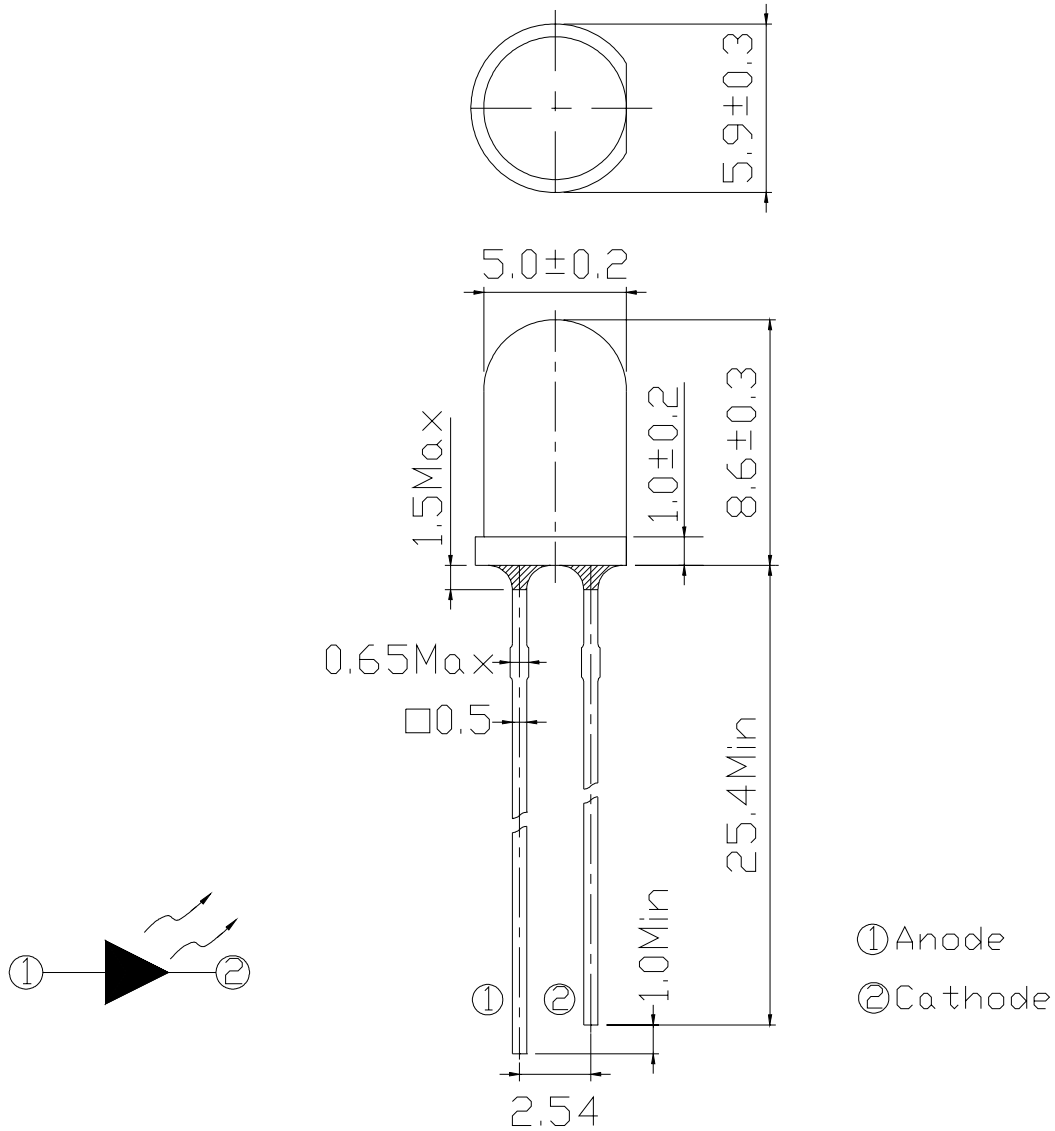
Device Selection Guide

| Chip | | Lens Color |
|----------|---------------|-------------|
| Material | Emitted Color | |
| AlGaInP | Brilliant Red | Water clear |

Technical Data Sheet
5 mm Round LED, T-1 3/4

333/R5C1-ATWB/MS

Package Dimensions



Notes:

- All dimensions are in millimeters, tolerance is 0.25mm except being specified.
- Protruded resin under flange is 1.5mm Max LED.



Technical Data Sheet

5 mm Round LED, T-1 3/4

333/R5C1-ATWB/MS

Absolute Maximum Ratings (Ta=25)

| Parameter | Symbol | Rating | Units |
|-------------------------------------|------------------|------------|-------|
| Forward Current | I _F | 50 | mA |
| Pulse Forward Current ^{*1} | I _{FP} | 160 | mA |
| Operating Temperature | T _{opr} | -40 ~ +85 | |
| Storage Temperature | T _{stg} | -40 ~ +100 | |
| Electrostatic Discharge | ESD | 2K | V |
| Soldering Temperature ^{*2} | T _{sol} | 260 ±5 | |
| Power Dissipation | P _d | 115 | mW |
| Reverse Voltage | V _R | 5 | V |

Notes: *1:I_{FP} Conditions--Pulse Width 10msec and Duty 1/10.

*2:Soldering time 5 seconds.

Electro-Optical Characteristics (Ta=25)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Units |
|------------------------------|----------------|----------------------|------|-------|-------|-------|
| Forward Voltage | V _F | I _F =20mA | 1.8 | 2.0 | 2.6 | V |
| Luminous Intensity | I _V | I _F =20mA | 7150 | 11250 | 18000 | mcd |
| Viewing Angle | 2 1/2 | I _F =20mA | -- | 15 | -- | deg |
| Peak Wavelength | p | I _F =20mA | -- | 632 | -- | nm |
| Dominant Wavelength | d | I _F =20mA | 620 | 624 | 628 | nm |
| Spectrum Radiation Bandwidth | | I _F =20mA | -- | 20 | -- | nm |
| Reverse Current | I _R | V _R =5V | -- | -- | 10 | μ A |

**Technical Data Sheet**
5 mm Round LED, T-1 3/4**333/R5C1-ATWB/MS****Rank Combination ($I_F=20mA$)**

| 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: $\pm 0.1V$

Unit: V

| Rank | 1 | 2 | 3 |
|---------------------|---------|---------|---------|
| Dominant Wavelength | 620~622 | 622~626 | 626~628 |

*Measurement Uncertainty of Dominant Wavelength $\pm 1.0nm$

Unit: nm

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

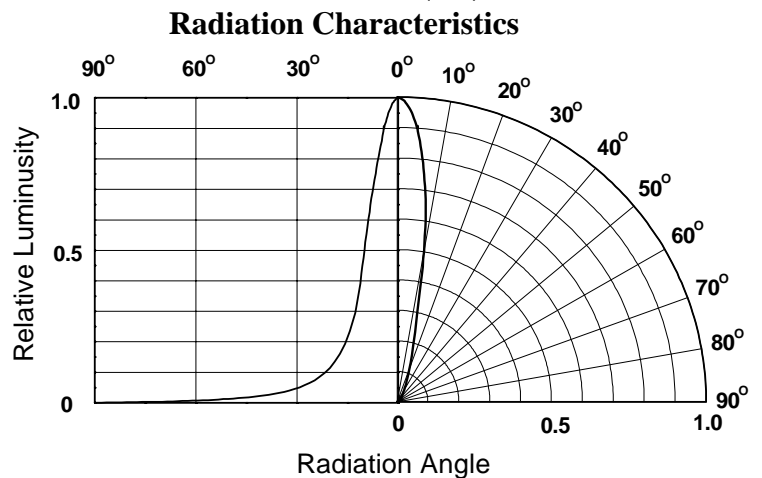
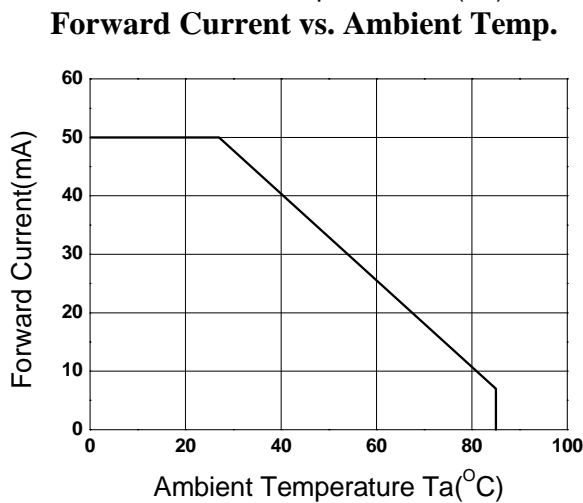
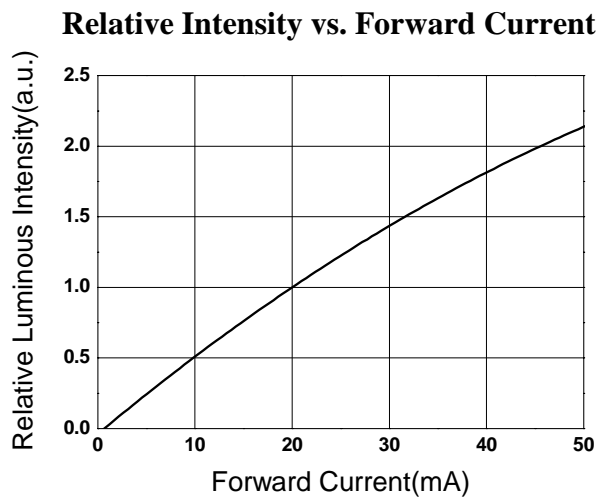
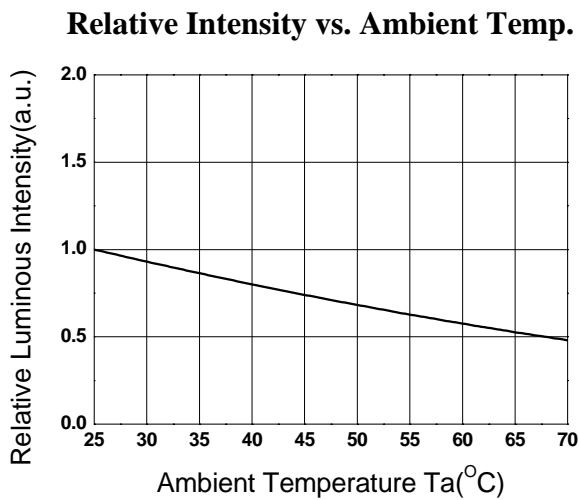
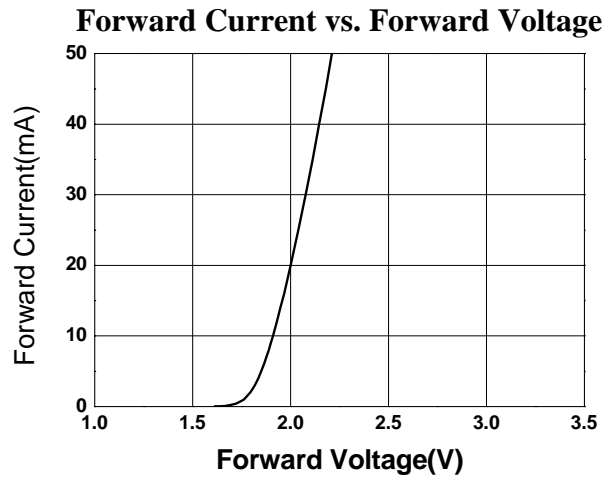
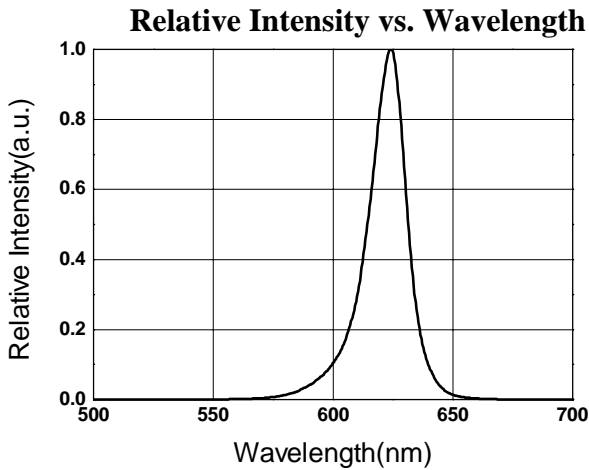


Technical Data Sheet

5 mm Round LED, T-1 3/4

333/R5C1-ATWB/MS

Typical Electro-Optical Characteristics Curves





Technical Data Sheet 5 mm Round LED, T-1 3/4





333/R5C1-ATWB/MS

Packing Quantity Specification

1.500PCS/1Bag , 5Bags/1Box

2.10Boxes/1Carton

Label Form Specification

| | |
|---|--|
| EVERLIGHT | |
| CPN: | |
| P/N: | |
|  |  |
| 333/R5C1-ATWB/MS | |
| 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: Rank of Dominant Wavelength

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place



Technical Data Sheet

5 mm Round LED, T-1 3/4

333/R5C1-ATWB/MS

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. Soldering Condition

Careful attention should be paid during soldering. When soldering, leave more then 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 Max. (30W Max.) | Preheat temp. | 100 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. |

EVERLIGHT ELECTRONICS CO., LTD.
 Office: No 25, Lane 76, Sec 3, Chung Yang Rd,
 Tucheng, Taipei 236, Taiwan, R.O.C

Tel: 886-2-2267-2000, 2267-9936
 Fax: 886-2267-6244, 2267-6189, 2267-6306
<http://www.everlight.com>