DATASHEET

# Technical Data Sheet
# 5mm Infrared LED , T-1 3/4
# IR8353-14C/TR1-4(A)

## Features

- High reliability
- High radiant intensity
- Peak wavelength λp=940nm
- 2.54mm Lead spacing
- Low forward voltage
- Pb free
- This product itself will remain within RoHS compliant version.
- Compliance with EU REACH
- Compliance Halogen Free(Br < 900ppm, Cl < 900ppm, Br+Cl < 1500ppm)

## Descriptions

- EVERLIGHT'S Infrared Emitting Diode (IR8353-14C/TR1-4(A)) is a high intensity diode , molded in a water clear plastic package.
- The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

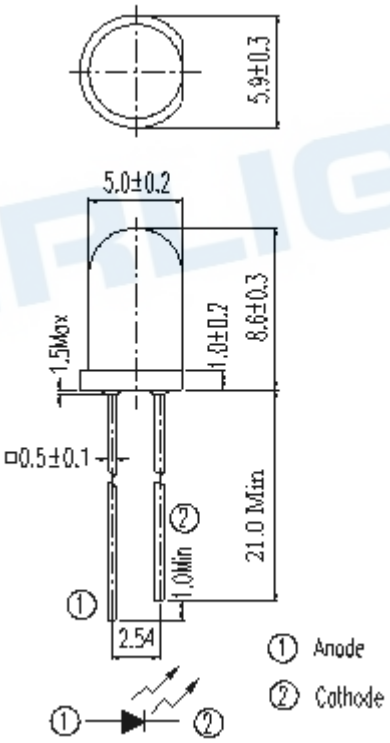
## Applications

- Free air transmission system
- Optoelectronic switch
- Floppy disk drive
- Smoke detector
- Infrared applied system

## Device Selection Guide

| LED Part No. | Chip Material | Lens Color |
|---|---|---|
| IR | GaAlAs | Clear |

## Package Dimensions




**Notes:** 1.All dimensions are in millimeters
2.Tolerances unless dimensions ±0.25mm

## Absolute Maximum Ratings (Ta=25℃)

| Parameter | Symbol | Rating | Units |
|---|---|---|---|
| Continuous Forward Current | $I_F$ | 100 | mA |
| Peak Forward Current(*1) | $I_{FP}$ | 1.0 | A |
| Reverse Voltage | $V_R$ | 5 | V |
| Operating Temperature | $T_{opr}$ | -40 ~ +85 | ℃ |
| Storage Temperature | $T_{stg}$ | -40 ~ +85 | ℃ |
| Soldering Temperature(*2) | $T_{sol}$ | 260 | ℃ |
| Power Dissipation at(or below) 25℃ Free Air Temperature | $P_d$ | 150 | mW |

**Notes:** *1:$I_{FP}$ Conditions--Pulse Width≦100μs and Duty≦1%.

*2:Soldering time≦5 seconds.

## Electro-Optical Characteristics (Ta=25℃)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| Radiant Intensity | Ie | $I_F$=20mA | 7.8 | 15 | -- | mW/sr |
| | | $I_F$=50mA Pulse Width≦100μs ,Duty≦1% | -- | 30 | -- | |
| Peak Wavelength | λp | $I_F$=20mA | -- | 940 | -- | nm |
| Spectral Bandwidth | Δλ | $I_F$=20mA | -- | 45 | -- | nm |
| Forward Voltage | $V_F$ | $I_F$=20mA | | 1.2 | 1.5 | V |
| | | $I_F$=100mA Pulse Width≦100μs ,Duty≦1% | -- | 1.4 | 1.8 | |
| | | $I_F$=1A Pulse Width≦100μs ,Duty≦1%. | -- | 2.6 | 4.0 | |
| Reverse Current | $I_R$ | $V_R$=5V | -- | -- | 10 | μA |
| View Angle | 2θ1/2 | $I_F$=20mA | -- | 35 | -- | deg |

Note:

*Measurement Uncertainty of Forward Voltage: ±0.1V

*Measurement Uncertainty of Luminous Intensity: ±10%

*Measurement Uncertainty of Dominant Wavelength ±1.0nm

## Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

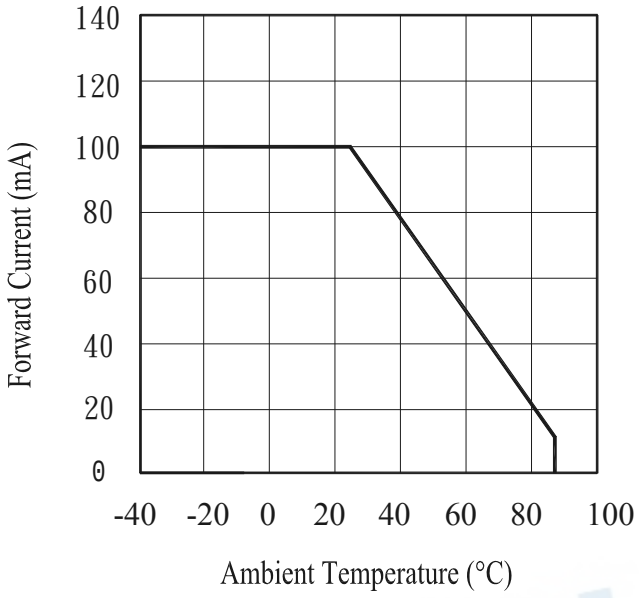



Fig.2 Spectral Distribution

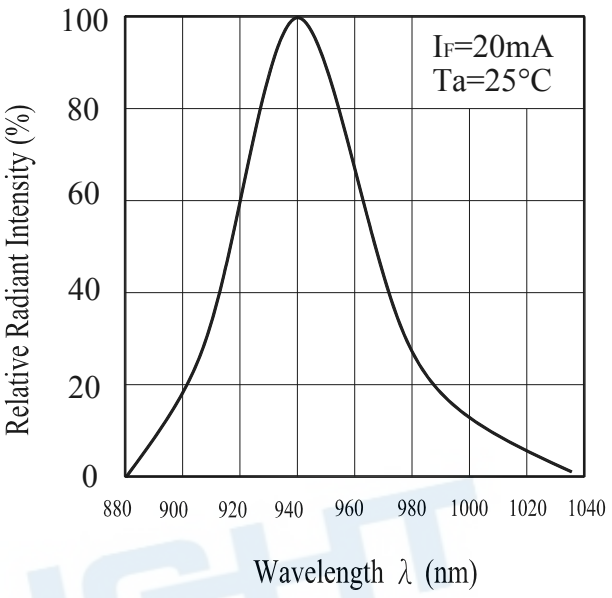



Fig.3 Peak Emission Wavelength vs. Ambient Temperature

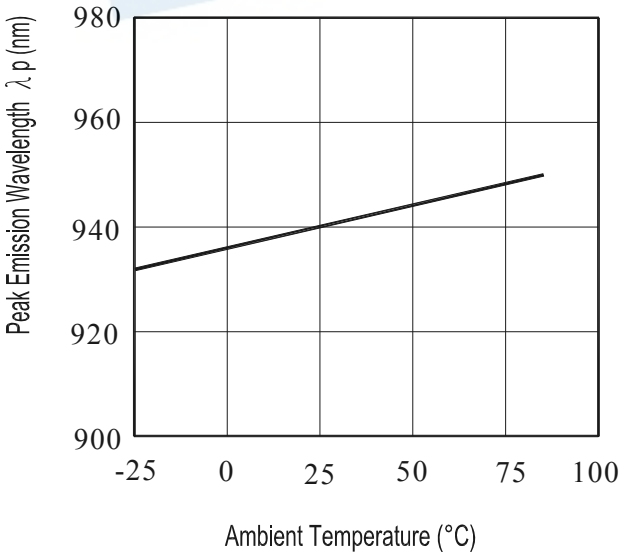
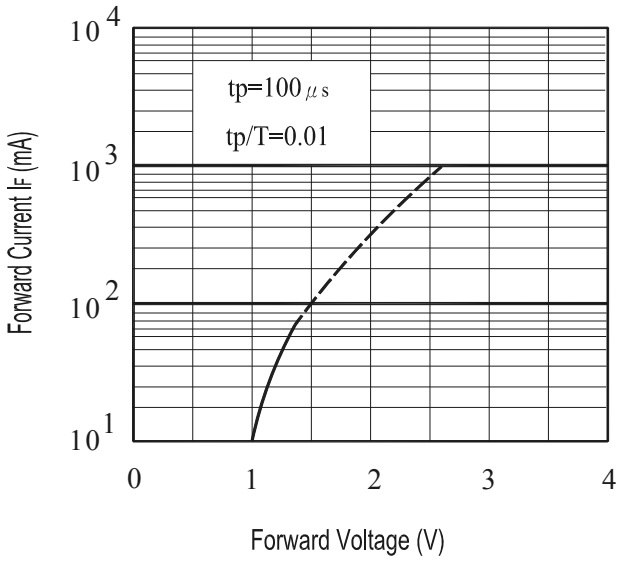



Fig.4 Forward Current vs. Forward Voltage



## Typical Electro-Optical Characteristics Curves

Fig.5 Radiant Intensity vs. Forward Current

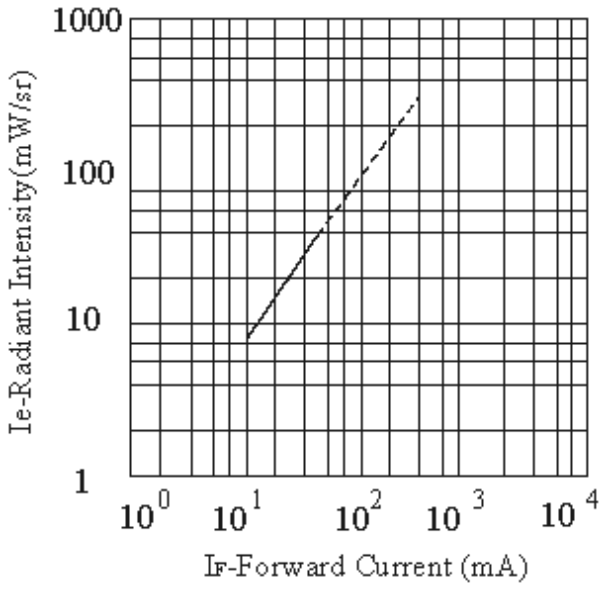
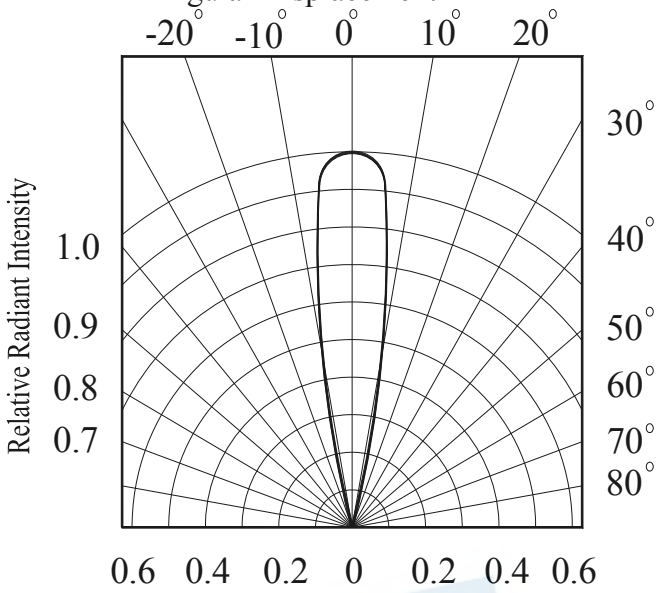
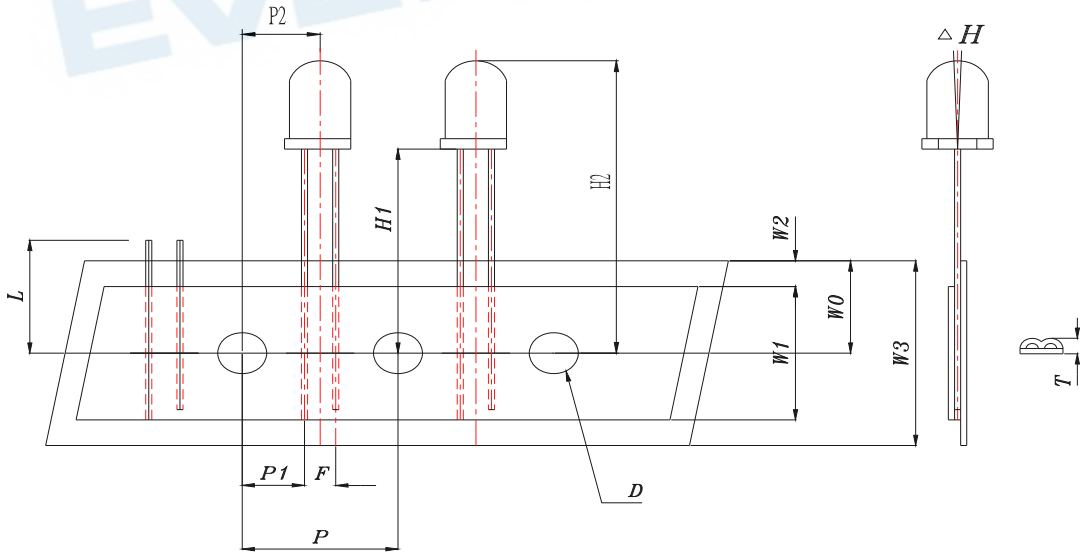



Fig.6 Relative Radiant Intensity vs. Angular Displacement




## Taping Dimensions

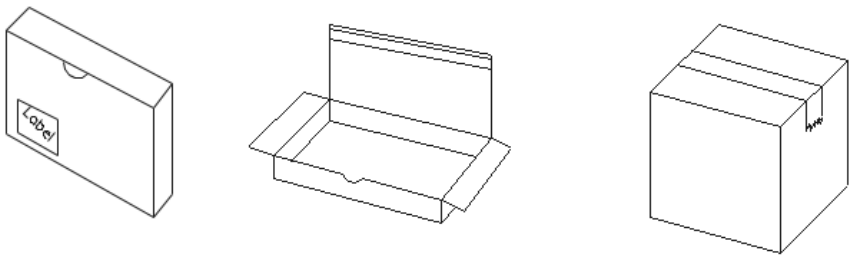


## Taping Sizes

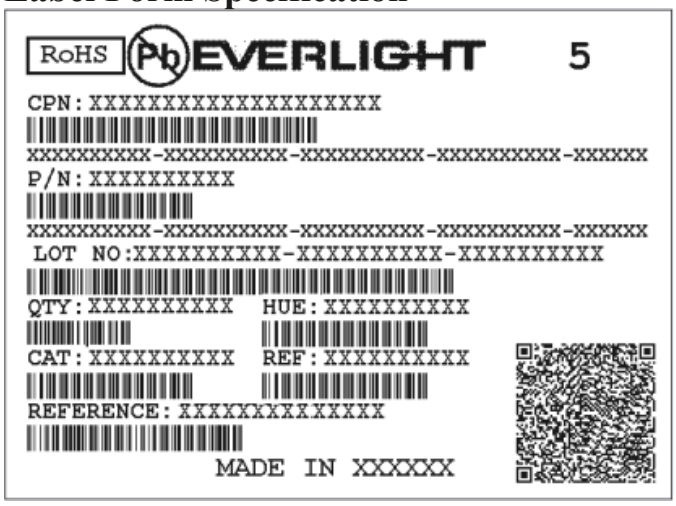
| Symbol Item | Symbol | Specifications | | |
|---|---|---|---|---|
| | | Avg | | Tolerance |
| | | mm | Inch | mm |
| Tape Feed Hold Diameter | D | 4.0 | 0.157 | ±0.2 |
| Component Lead Pitch | F | 2.54 | 0.1 | +0.8/-0.2 |
| Front-To-Rear Deflection | ΔH | 0° | 0 | ±5° |
| Feed Hole To Button Of Component | H1 | 22.4 | 0.882 | ±1.0 |
| Feed Hole To Overall Component Height | H2 | 31.0 | 1.220 | ±1.0 |
| Lead Length After Component Height | L | 11.0 | 0.433 | Max |
| Feed Hold Pitch | P | 12.7 | 0.500 | ±0.3 |
| Lead Location | P1 | 5.08 | 0.200 | ±0.7 |
| Center Of Component Location | P2 | 6.35 | 0.250 | ±1.2 |
| Overall Taped Package Thickness | T | 1.42 | 0.056 | Max |
| Feed Hold Location | W0 | 9.0 | 0.354 | ±0.5 |
| Adhesive Tape Width | W1 | 13.0 | 0.512 | ±0.5 |
| Adhesive Tape Position | W2 | 2.0 | 0.079 | Max |
| Tape Width | W3 | 18.0 | 0.709 | ±0.75 |

## Packing Quantity Specification

1. 2000PCS/1Box
2. 10Boxes/1Carton



## Label Form Specification




CPN: Customer's Production Number
P/N : Production Number
QTY: Packing Quantity
CAT: Ranks
HUE: Peak Wavelength
REF: Reference
LOT No: Lot Number
X: Month
Reference: Identify Label Number

### DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. 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 the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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