



## Technical Data Sheet

### 5mm Infrared LED, T-1 3/4

#### IR7393/H59

#### Features

- High reliability
- 2.54mm lead spacing
- Low forward voltage
- Good spectral matching to Si photodetector
- High radiant intensity
- Pb free
- The product itself will remain within RoHS compliant version.



#### Descriptions

EVERLIGHT's infrared emitting (IR7393/H59) is a high intensity diode, molded in a blue transparent plastic package.

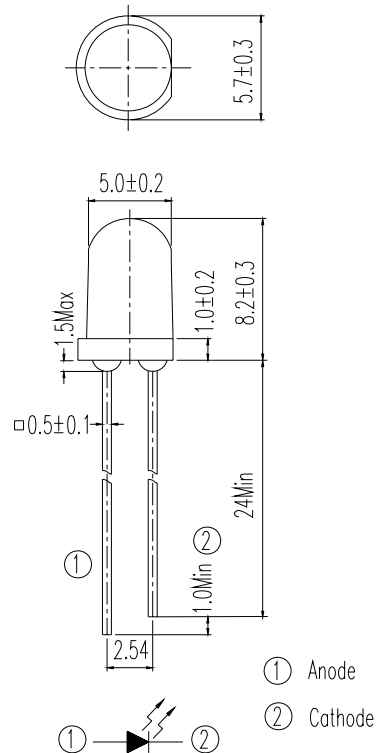
The device is spectrally matched with phototransistor, photodiode and infrared receive module.

#### Applications

- Infrared applied system

#### Device Selection Guide

LED Part No.	Chip	Lens
	Material	Color
IR7393/H59	GaAlAs	Blue

**Package Dimensions**


- Notes:** 1.All dimensions are in millimeters  
 2.Tolerances unless dimensions  $\pm 0.25\text{mm}$

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

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	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 ~ +100	$^\circ\text{C}$
Soldering Temperature *2	$T_{sol}$	260	$^\circ\text{C}$
Power Dissipation at(or below) 25 $^\circ\text{C}$ Free Air Temperature	$P_d$	150	mW

**Notes:** \*1: $I_{FP}$  Conditions--Pulse Width  $\leq 100 \mu\text{s}$  and Duty  $\leq 1\%$ .

\*2:Soldering time  $\leq 5$  seconds.

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =20mA	7.8	10	--	mW/sr
		I <sub>F</sub> =100mA	40	50	--	
		I <sub>F</sub> =1A Pulse Width ≤ 100 μs and Duty ≤ 1%	--	500	--	
Peak Wavelength	λ <sub>p</sub>	I <sub>F</sub> =20mA	--	940	--	nm
Spectral Bandwidth	Δλ	I <sub>F</sub> =20mA	--	45	--	nm
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	--	1.2	1.5	V
		I <sub>F</sub> =100mA	--	1.4	1.8	
		I <sub>F</sub> =1A Pulse Width ≤ 100 μs and Duty ≤ 1%	--	2.6	4.0	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	--	--	10	μA
View Angle	2θ <sub>1/2</sub>	I <sub>F</sub> =20mA	32	45	58	deg

**Typical Electro-Optical Characteristics Curves**

Fig.1 Forward Current vs. Ambient Temperature

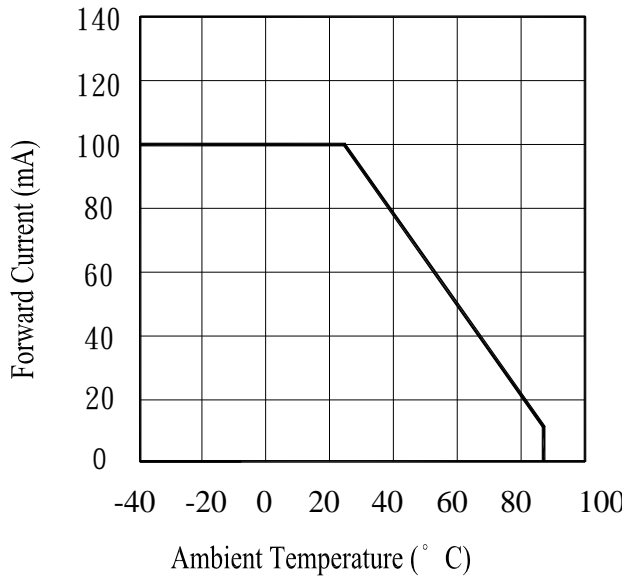


Fig.2 Spectral Distribution

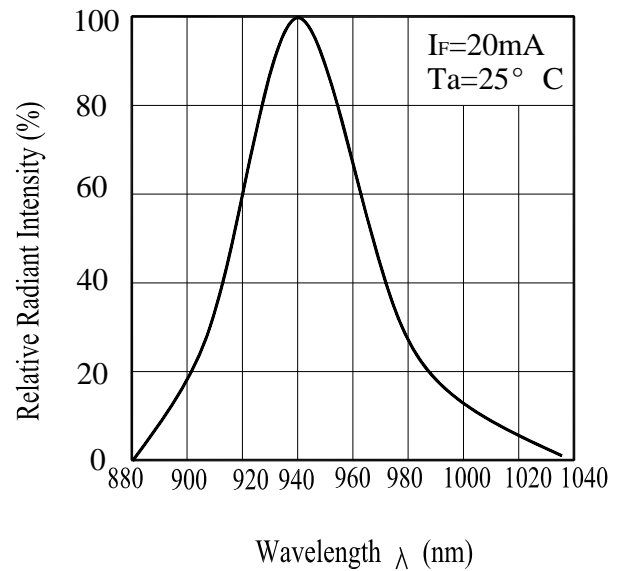


Fig.3 Peak Emission Wavelength vs. Ambient Temperature

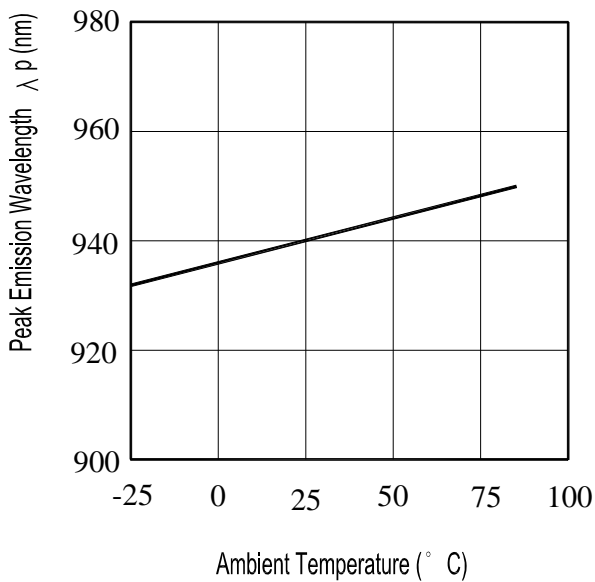
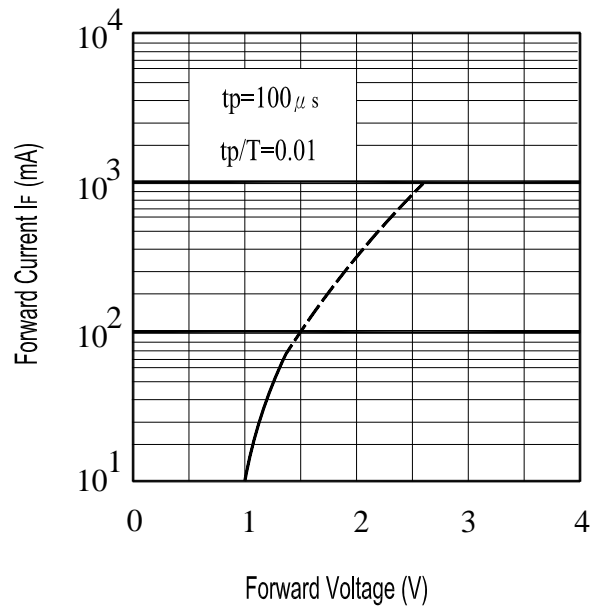


Fig.4 Forward Current vs. Forward Voltage



**Typical Electro-Optical Characteristics Curves**

Fig.5 Relative Intensity vs.  
Forward Current

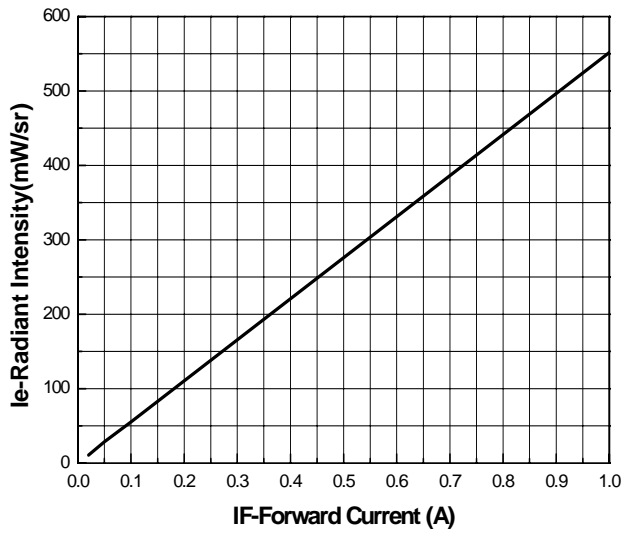
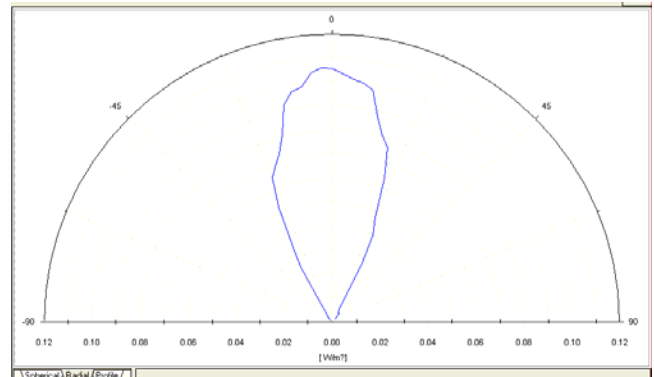


Fig.6 Relative Radiant Intensity vs.  
Angular Displacement





## IR7393/H59

### Packing Quantity Specification

1.500PCS/1Bag , 5Bags/1Box

2.10Boxes/1Carton

### Label Form Specification

The diagram shows a rectangular label form with the following elements:

- Top left: A circle with 'Pb' inside, crossed out by a diagonal line.
- Top center: The 'EVERLIGHT' logo in a rectangular box.
- Top right: An empty circle.
- Middle left: 'CPN :', 'P/N :', a barcode, and 'IR7393/H59'.
- Middle right: A box containing 'RoHS'.
- Bottom left: 'QTY : 500', a barcode, 'LOT NO :', a barcode, and 'Reference :', a barcode.
- Bottom right: 'CAT :', 'HUE :', and 'REF :', each followed by a blank space.
- Bottom center: 'MADE IN TAIWAN'.

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

AT: Ranks

HUE: Peak 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.

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