DATASHEET

Technical Data Sheet

5mm Infrared LED, T-1 3/4

IR333-F SERIES

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.

Description

EVERLIGHT's infrared emitting (IR333-F SERIES)
is a high intensity diode, molded in a 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 Material	Lens Color
IR333-F SERIES	GaAlAs	Blue
IR333C-F SERIES		Water clear

Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	Rating	Unit
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 ~ +100	℃
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.

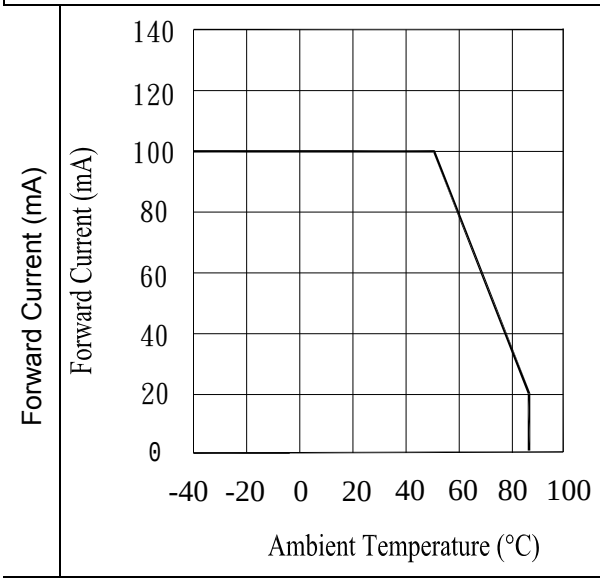
Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Peak Wavelength	λp	-	940	-	nm	I_F=20mA
Spectral Bandwidth	Δλ	-	45	-	nm	I_F=20mA
Forward Voltage	V_F	-	1.2	1.5	V	I_F=20mA
		-	1.4	1.8		I_F=100mA
Reverse Current	I_R	-	-	10	μA	V_R=5V

Electro-Optical Characteristics (Ta=25℃)

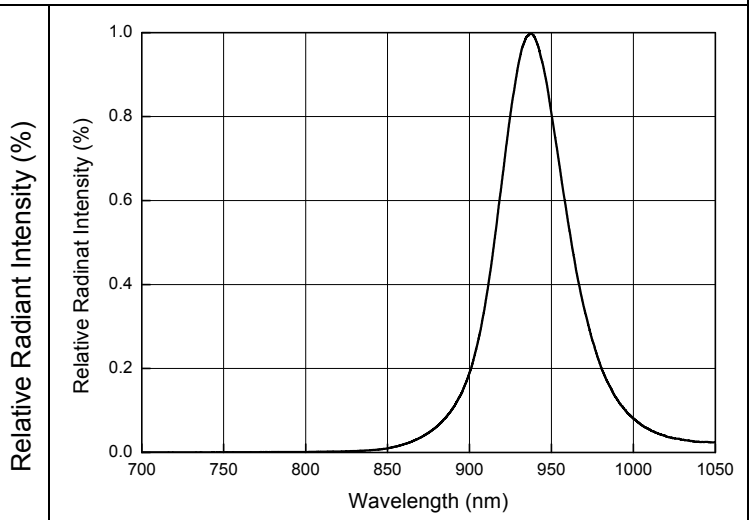
Parameter	Symbol	IR333-F IR333C-F IR333-F-A IR333C-F-A			IR333-F/H3 IR333C-F/H3 IR333-F/H3-A IR333C-F/H3-A			IR333-F/H2 IR333C-FH2 IR333-F/H2-A IR333CH2-A			IR333-F/H0 IR333C-F/H0 R333-F/H0-A IR333C-F/H0-A			Condition
		Min	Typ.	Max.	Min	Typ.	Max.	Min	Typ.	Max.	Min	Typ.	Max.	----
Radiant Intensity	IE	11	30	--	11	25	--	7.8	20	--	7.8	15	--	IF=20mA
		--	100	--	--	82	--	--	65	--	--	50	--	IF=100mA
View angle	2θ1/2	--	20	--	--	22	--	--	25	--	--	40	--	IF=20mA

Fig.1 Forward Current vs. Ambient Temperature



Ambient Temperature(℃)

Fig.2 Spectral Distribution



Wavelength λ (nm)

Fig.3 Radiant Intensity vs. Forward Current

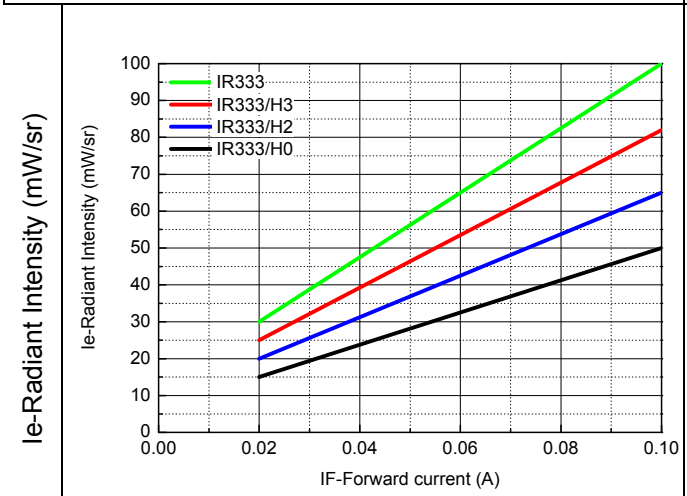
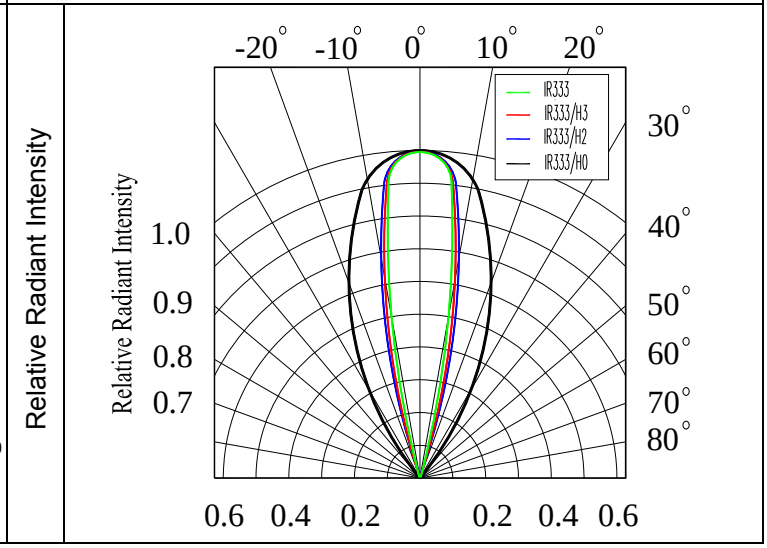
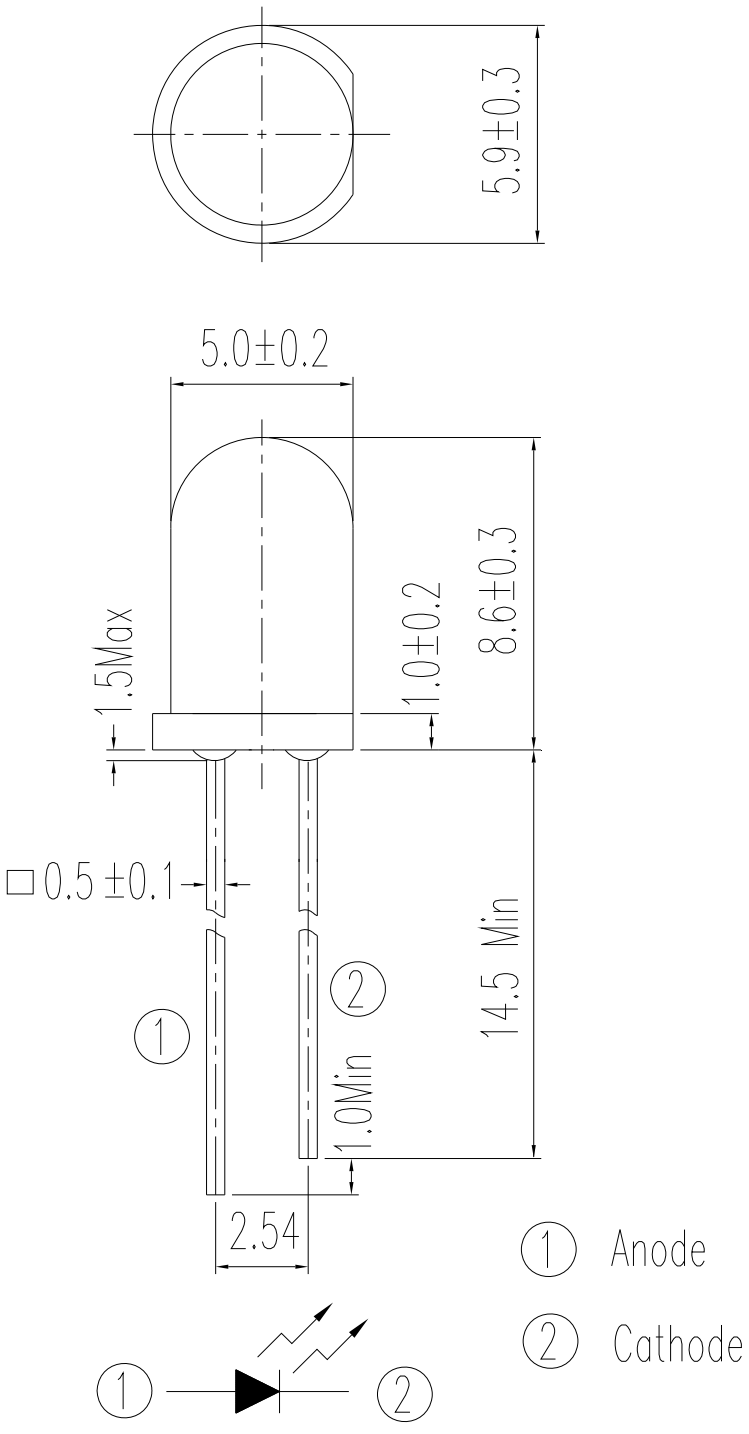


Fig.4 Relative Radiant Intensity vs. Angular Displacement



Package Dimension



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

Moisture Resistant Packing Materials

Label Form Specification