IR333C

Light Emitting Diode

Description

- Size: 5mm (T-1 3/4) round package.
- Emitting color: Infrared.
- Lens color: Water clear.
- Lead type: Radial leads.

Main Features

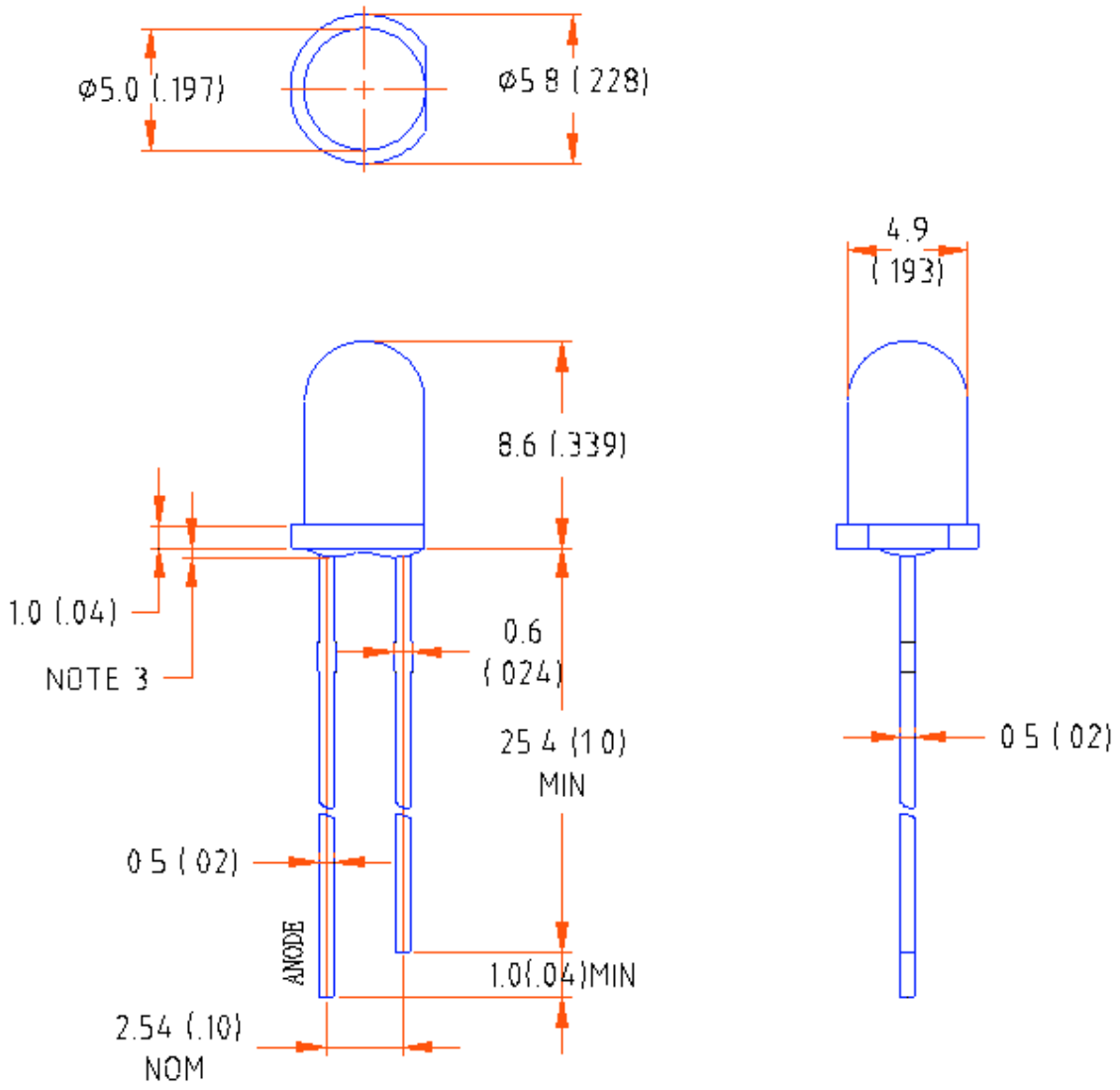
- Instant light less than 100ns turn on time.
- Superior resistance to moisture.
- Low drive current, recommend forward current: IF= 10- 20mA.
- Cool beam, safe to touch.
- Reliable and rugged.

Absolute Maximum Rating TA=25℃				
Parameter	Symbol	Rating	Unit	Notice
Power Dissipation	Pd	160	mW	----
DC Forward Current	I_F	70	mA	----
Pulse Forward Current	$I_{F\ (PEAK)}$	1000	mA	Duty 1/10 @ 1KHz
Derating Linear From 50℃	--	0.4	mA / ℃	----
Reverse Voltage	V_R	5	V	Under 100uA
Operating Temperature Range	T_{OPR}	-25 to +70	℃	----
Storage Temperature Range	T_{STG}	-40 to +80	℃	Humidity should be under 50%
Lead Soldering Temperature	T_{SOL}	260 +/-5	℃	4mm (0.157") from mold body Less then 5 Second

Part Selection Electrical / Optical Characteristics And Curves At TA-25℃						
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit.
Forward Voltage	V_F	I_F =20mA	1.0	1.20	1.40	V
Reverse Current	I_R	V_R =5V	—	—	10	uA
Radiant Power	p_d	I_F =100mA	30.0	55.0	90.0	mW/Sr
Peak Emission Wavelength	λ_p	I_F =20mA	---	940	---	nm
Spectral Line Half Width	$\Delta\lambda$	I_F =20mA	30	35	40	nm
Dominant Wavelength (Note 1)	λ_d	I_F =20mA	—	940	—	nm
Response Time (Rise)	tr	I_F =50mA	—	17	—	ns
Response Time (Fall)	tf	I_F =50mA	—	7	—	ns

Note 1: The dominant wavelength (λ d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

Package Dimensions

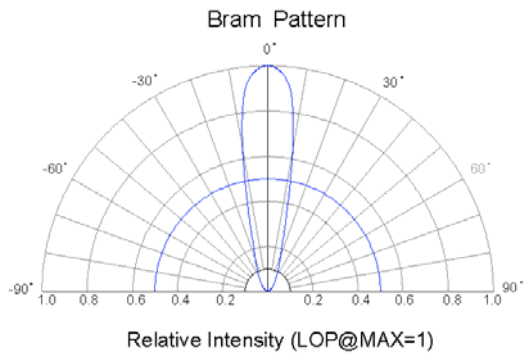


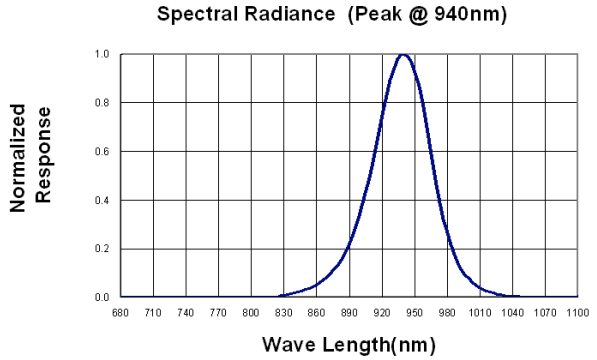
Lens Color	Water Clear	Source Color	Infrared
Chips Material	AlGaAs	Viewing Angle	25 +/-5 Deg.

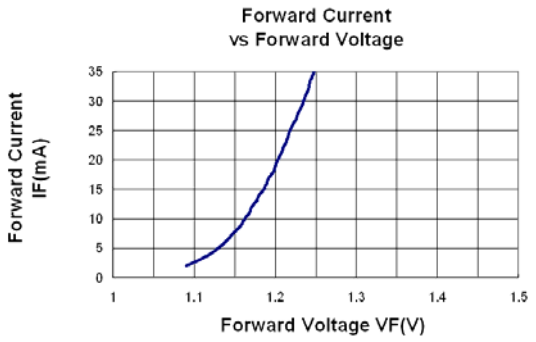
NOTES:

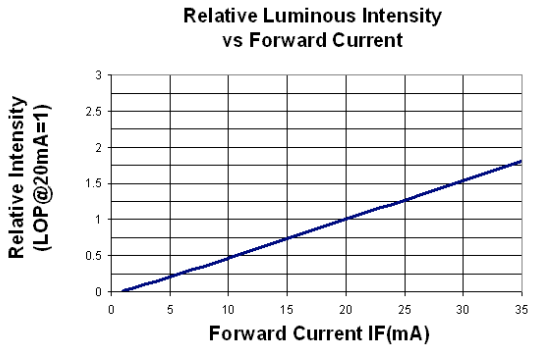
- All dimensions are in millimeters (inches).
- Tolerance is ±0.25 mm (.010") unless otherwise noted.
- Protruded resin under flange is 1.0mm(.04") max
- Lead spacing is measured where the leads emerge from the package.
- Specifications are subject to change without notice.

Typical Electrical / Optical Characteristic Curves At 25℃ Ambient Temperature





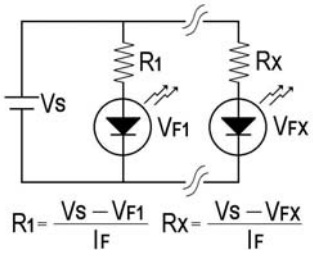




NOTE:

- All testing is under 25℃ Ambient Temperature unless Otherwise Noted.
- $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- The information contained herein is presented only as a guide for the application of our products. No responsibility is assumed by us for any infringements of intellectual property or other rights of the third parties which may result from its use.
- Clean only in isopropanol, ethanol, Freon TF (or equivalent).
- When using this product, Please observe the absolute maximum rating and the instructions for use outlined from use of the product, which does not comply with the absolute maximum rating and the instructions included in these specification sheet.
- If forming is required, it must be done before soldering. Form pin leads by securing under 5mm from body and bedding with radio pliers or the equivalent to avoid pressure on resin. When the LED is mounted into a P.C.board, pitch spacing should be aligned to prevent cause any stress to the resin. Any unsuitable stress applied to resin may break bonding wire in LED, which will cause failure.
- Q.A Outgoing inspection standard: Major Defect 0.65 A.Q.L. Minor Defect 1.5 A.Q.L
- Check at a distance of 30cm from the LED to the eye defects.
- Over-current-proof:

  Customer must apply resistor for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).



- Parallel connection:

  Customer must apply series resistor in EACH LED under parallel connection. Otherwise VF tolerance will cause LED array brightness uneven.
- Specifications are subject to change without notice.