



ETG Inc.

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ETG-5 IR850-30

DATA SHEET

QC :

ENG :

Prepared By:



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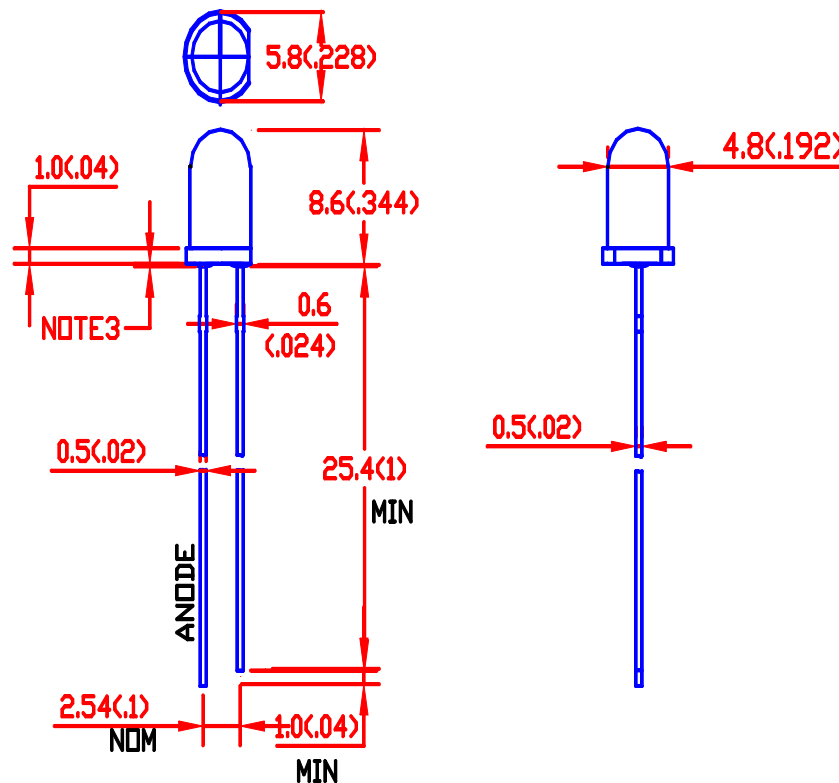
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Features:

- ◆ High Reliability
- ◆ Standard T-1 3/4 diameter package
- ◆ High Radiant Intensity
- ◆ Reliable and rugged

Package Dimensions:



Part NO.	Chip Material	Lens Color	Source Color
ETG-5IR850-30	GaAlAs	Water Clear	IR Emitting Diode

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm(.04") max
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. This data-sheet only valid for six months.
- 7.

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Parameter	MAX.	Unit
Power Dissipation	120	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	600	mA
Continuous Forward Current	50	mA
Reverse Voltage	5	V
Operating Temperature Range	-25 to +80	
Storage Temperature Range	-40 to +100	
Lead Soldering Temperature [4mm(.157") From Body]	260 for 5 Seconds	

Electrical Optical Characteristics at Ta=25

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Radiant intensity	I_e	--	30	--	<i>mW</i>	$I_f=50mA$ (Note 1)
Viewing Angle	$2_{1/2}$		30		Deg	(Note 2)
Peak Emission Wavelength	ρ		850		nm	$I_f=50mA$
Spectral Line Half-Width			25		nm	$I_f=50mA$
Forward Voltage	V_f		1.2	1.6	V	$I_f=50mA$
Reverse Current	I_R	---	---	1	μA	$V_R=5V$

Notes:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (ρ) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.



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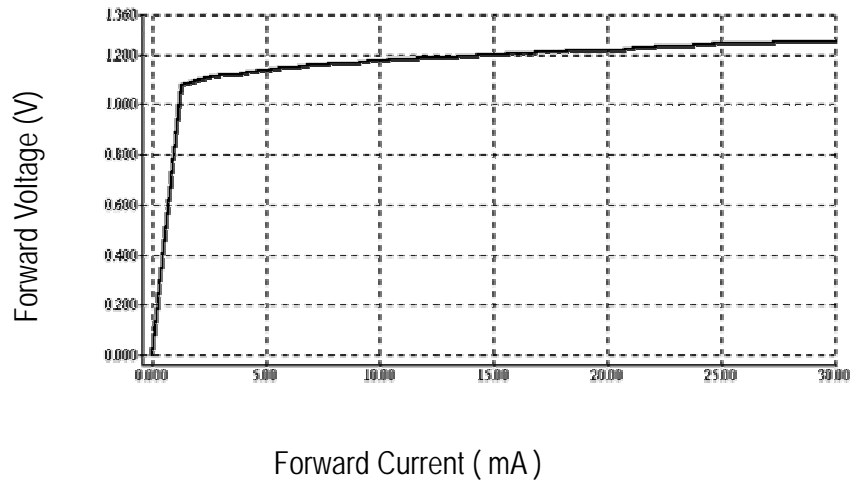
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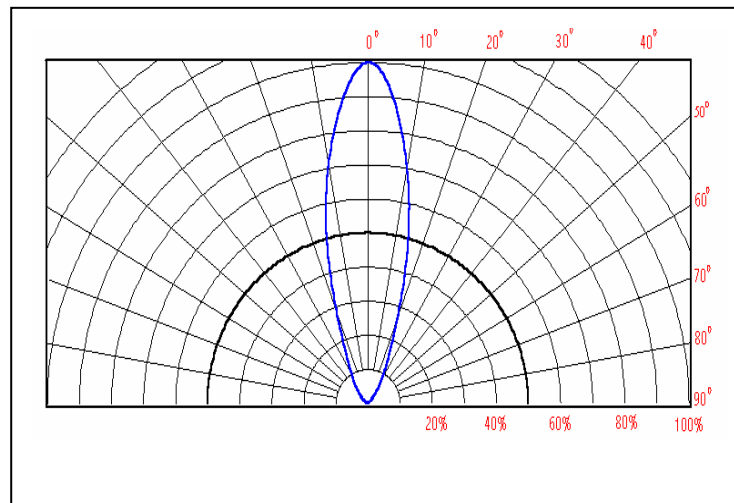
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Forward Current vs. Forward Voltage



Directive Characteristics





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Test items and results of reliability

Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-20 30min ↑↓ 80 30min	100 cycle	0/22
	Thermal Shock	-20 15min ↑↓ 80 15min	100 cycle	0/22
	High Humidity Heat Cycle	30 ↔ 65 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	T _a =80	1000 hrs	0/22
	Humidity Heat Storage	T _a =60 RH=90%	1000 hrs	0/22
	Low Temperature Storage	T _a =-30	1000 hrs	0/22
Operation Sequence	Life Test	T _a =25 I _F =20mA	1000 hrs	0/22
	High Humidity Heat Life Test	60 RH=90% I _F =20mA	500 hrs	0/22
	Low Temperature Life Test	T _a =-20 I _F =20mA	1000 hrs	0/22