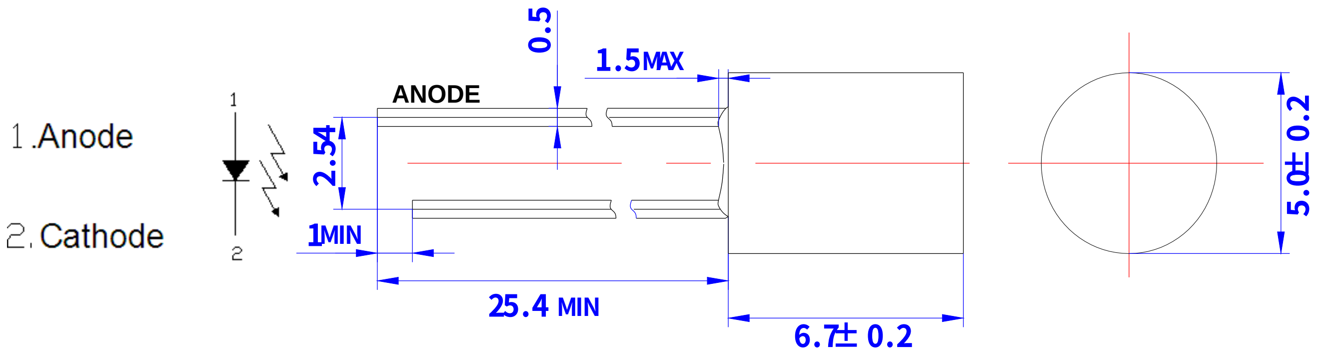
5.0mm Infrared LEDs

MODEL NO:EC-HIR433-1C

Features

- High efficiency.
- Low power consumption.
- Peak wavelength λp=850nm.
- View angle 80°.
- Pb-free.
- The product itself will remain within RoHS complaint version.

Package Dimensions



Part No.	Chip Material	Lens Color
EC- HIR433 -1C	GaAlAs	Water Clear

Note:

1. All dimensions are in millimeters.
2. Protruded resin under flange 1.5mm (0.059”) Max.

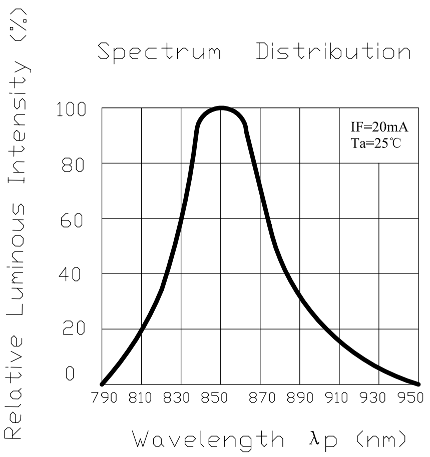
Absolute maximum Ratings (Ta = 25℃)

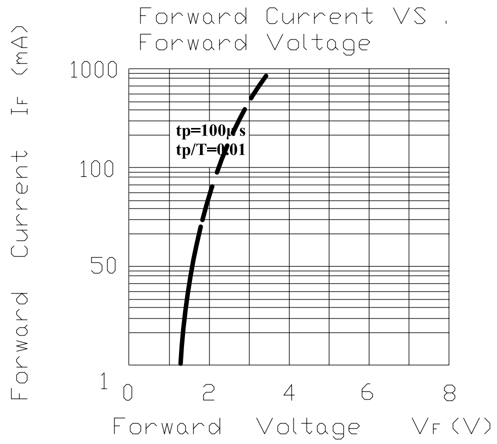
Parameter	Symbol	Max	Unit
Forward current	I_F	100	mA
Reverse voltage	V_R	5	V
Power dissipation	Pd	150	mW
Peak forward current	IFP	1.0	A
Operating temperature	Topr	-40℃ ~ 85℃	
Storage temperature	Tstg	-40℃ ~ 85℃	
Soldering temperature	Tsol	260℃ for 5 Seconds	

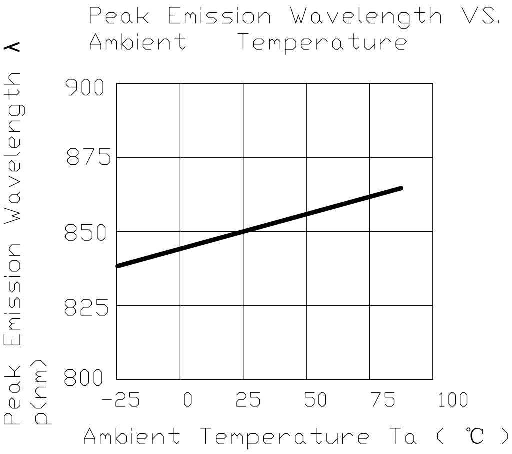
Electro / Optical Characteristics (Ta = 25℃)

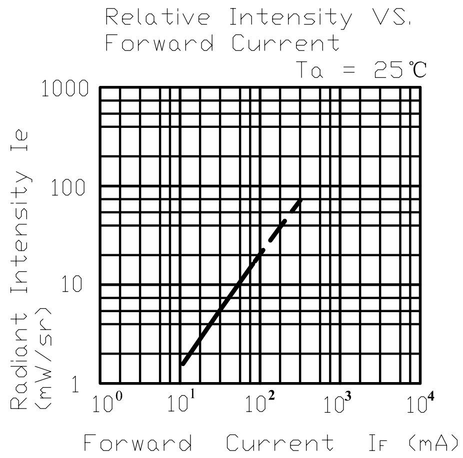
Parameter	Symbol	Condition	Min	Tpy	Max	Unit
Radiant Intensity	Ee	I_F = 20mA	----	3.5	----	mW/sr
		I_F=100mA, tp=100µs, t_P/T=0.01	----	18	----	
		I_F=1A, tp=100µs, t_P/T=0.01	----	180	----	
Forward Voltage	V_F	I_F = 20mA	----	1.4	1.85	V
		I_F=100mA, tp=100µs, t_P/T=0.01	----	1.6	2.1	
		I_F=1A, tp=100µs, t_P/T=0.01	----	3.0	4.5	
Reverse Current	I_R	V_R = 5V	----	----	10	µA
View Angle	2θ 1/2	I_F = 20mA	----	80	----	deg
Spectral Bandwidth	Δλ		----	45	----	nm
Peak Wavelength	λp		----	850	----	nm

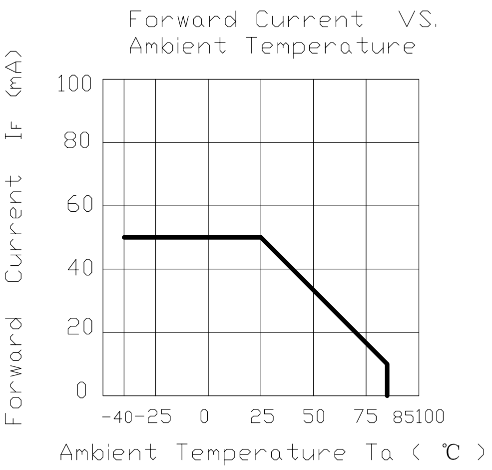
Typical Electro-Optical Dharacteristics Curves

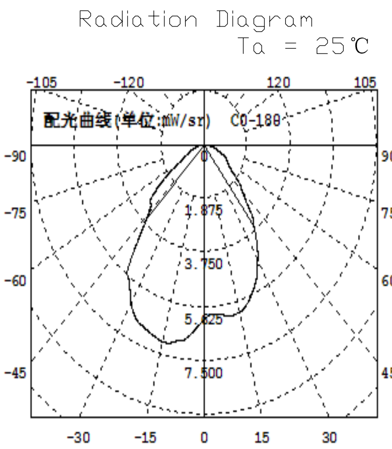












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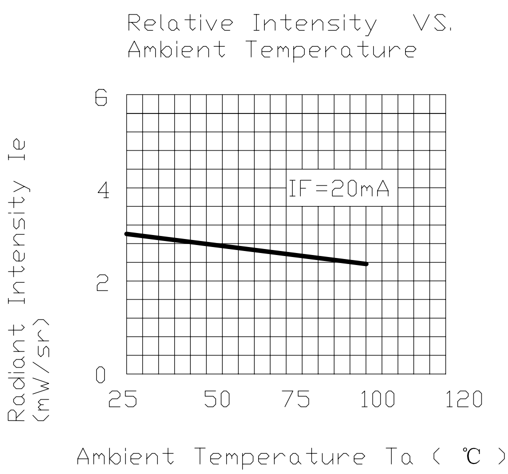

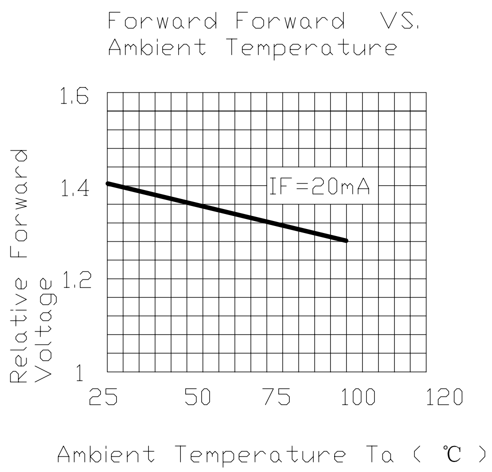

Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.
Confidence level 90%
LTPD 10%

NO.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	**Soldering Heat**	**Temp:260 ±5**	**10 1 SEC**	**76 PCS**	**0/1**
2	**Temperature Cycle**	**H:+85 30 min 5 min L:-40 30 min**	**50 Cycles**	**76 PCS**	**0/1**
3	**Thermal Shock**	**H:+85 30 min 5 min L:-10 30 min**	**50 Cycles**	**76 PCS**	**0/1**
4	**High Temperature Storage**	**Temp. : 100**	**1000 Hrs**	**76 PCS**	**0/1**
5	**Low Temperature Storage**	**Temp. : -40**	**1000 Hrs**	**76 PCS**	**0/1**
6	**DC Operating Life**	**IF = 20 mA**	**1000 Hrs**	**76 PCS**	**0/1**
7	**High Temperature / High Humidity**	**+85 / 85%RH**	**1000 Hrs**	**76 PCS**	**0/1**