

1.6mm Round Subminiature Infrared LED HIR26-21C/L289/TR8



Features

- Compatible with infrared and vapor phase reflow solder process
- Small Double-end package
- Peak wavelength $\lambda_p=850\text{nm}$
- Package in 12mm tape on 7" diameter reel.
- Pb free
- The product itself will remain within RoHS compliant version
- Compliance with EU REACH
- Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm).

Descriptions

- HIR26-21C/L289/TR8 is an infrared emitting diode in miniature SMD package which is molded in a water clear plastic with spherical top view lens.
- The device is spectrally matched with silicon photodiode and phototransistor

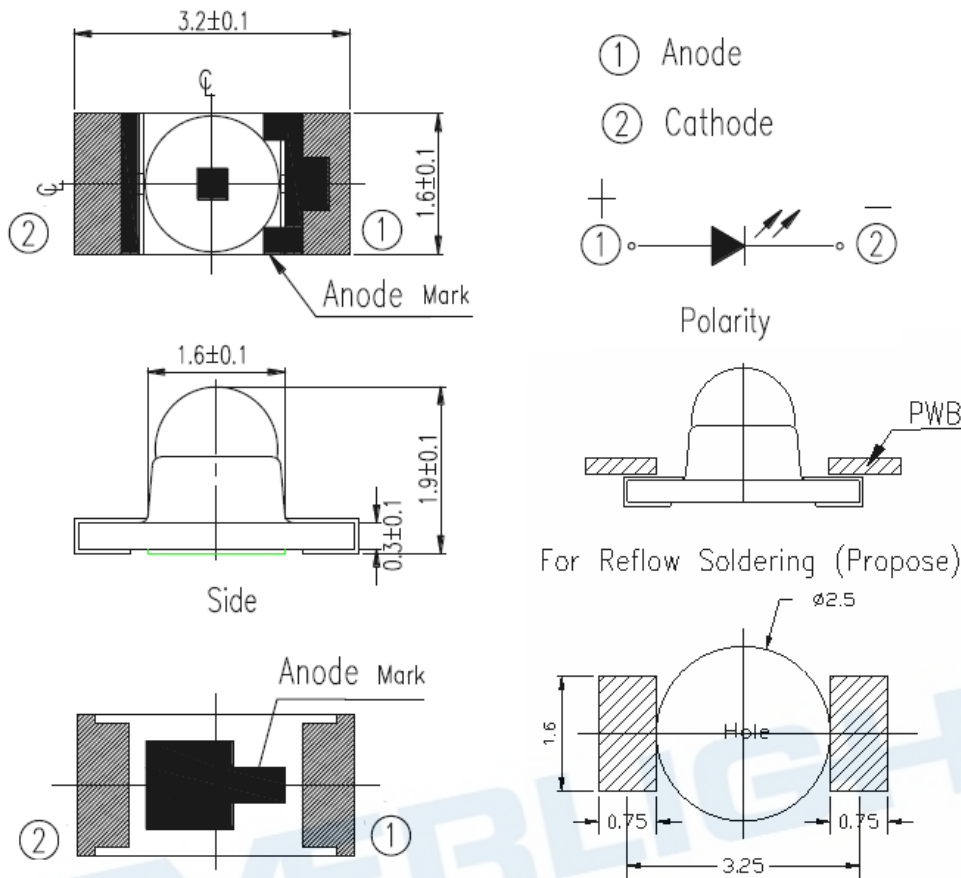
Applications

- PCB mounted infrared sensor
- Infrared remote control units with high power requirement
- Gas Counter
- Infrared applied system

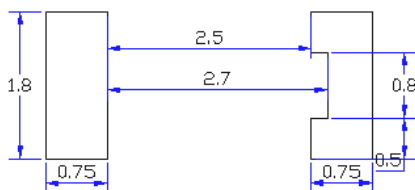
Device Selection Guide

Part Category	Chip Material	Lens Color
HIR	GaAIAs	Water Clear

Package Dimensions



- Notes:**
1. All dimensions are in millimeters
 2. Tolerances unless dimensions ± 0.1 mm
 3. To avoid solder ball problem, below is stencil design suggestion (Reference):
 - Solder paste : Sn/Ag3.0/Cu0.5
 - Stencil thickness : 0.10mm
 - Stencil design drawing :



4. Suggested pad dimension is just for reference only
 Please modify the pad dimension based on individual need

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Units
Continuous Forward Current	I_F	65	mA
Peak Forward Current *1	I_{FP}	1.0	A
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40~+100	°C
Soldering Temperature *2	T_{sol}	260	°C
Power Dissipation at(or below) 25°C Free Air Temperature	P_d	130	mW

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

*2:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	I_e	$I_F=20mA$	10	17	--	mW/sr
		$I_F=100mA$ Pulse width $\leq 100\mu s$, duty $\leq 1\%$	--	85	--	
Peak Wavelength	λ_p	$I_F=20mA$	--	850	--	nm
Spectral Bandwidth	$\Delta\lambda$	$I_F=20mA$	--	30	--	nm
Forward Voltage	V_F	$I_F=20mA$	1.20	1.40	1.70	V
		$I_F=100mA$ Pulse width $\leq 100\mu s$, duty $\leq 1\%$	1.40	1.60	2.20	
Reverse Current	I_R	$V_R=5V$	--	--	10	μA
View Angle	$2\theta_{1/2}$	$I_F=20mA$	--	25	--	deg

Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

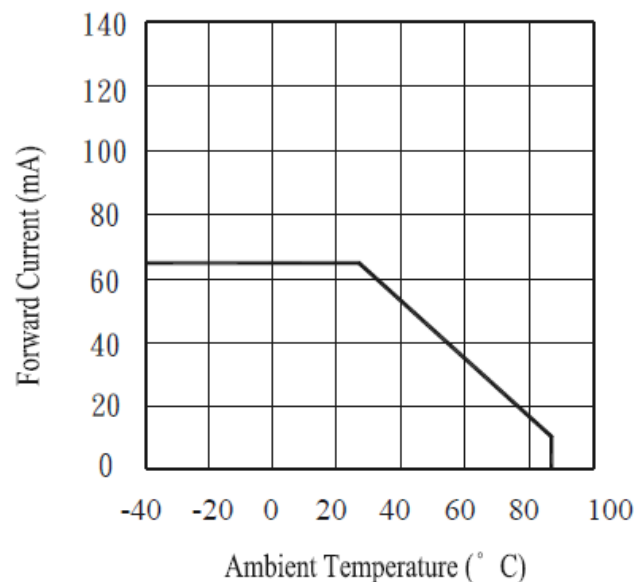


Fig.2 Spectral Distribution

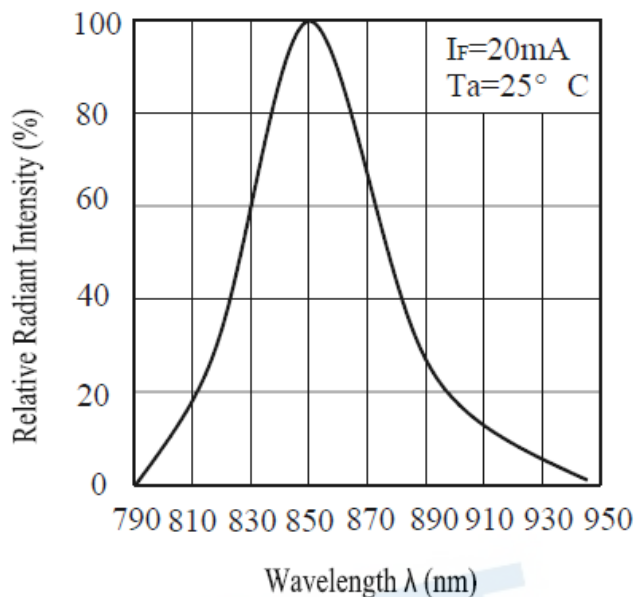


Fig.3 Forward Current vs Forward Voltage

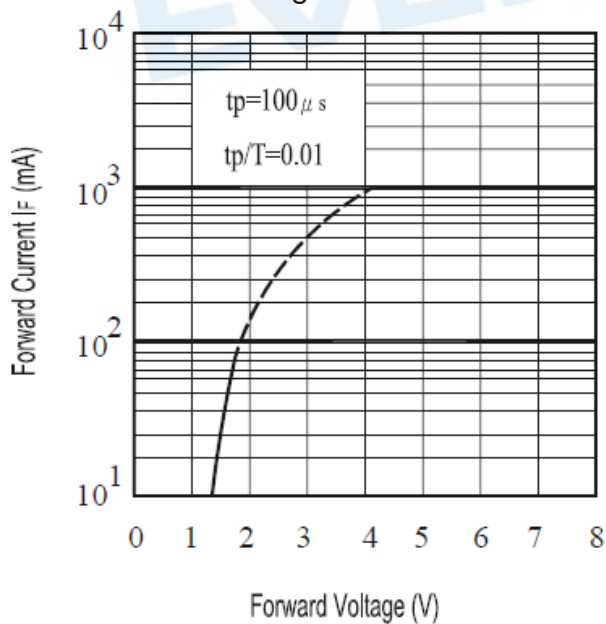
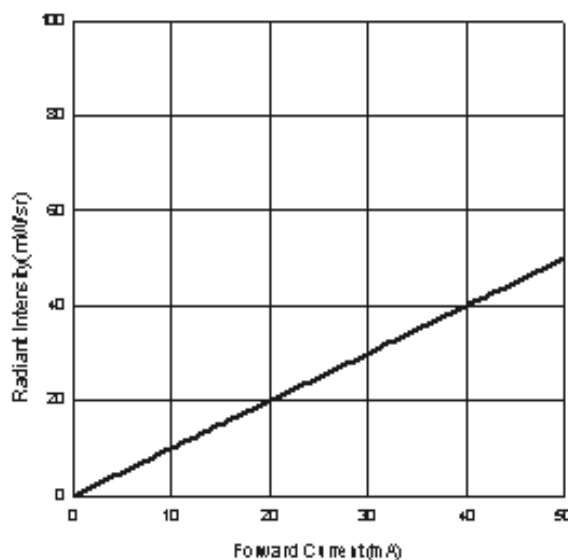
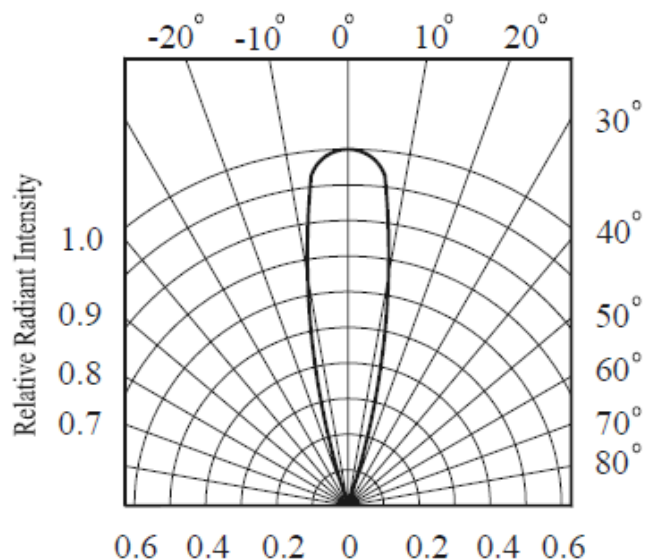


Fig.4 Radiant Intensity vs. Forward Current



Typical Electro-Optical Characteristics Curves

Fig.5 Relative Radiant Intensity vs.
Angular Displacement



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Precautions For Use

1. Over-current-proof

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

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 After opening the package: The LEDs should be kept at 30°C or less and 60%RH or less.

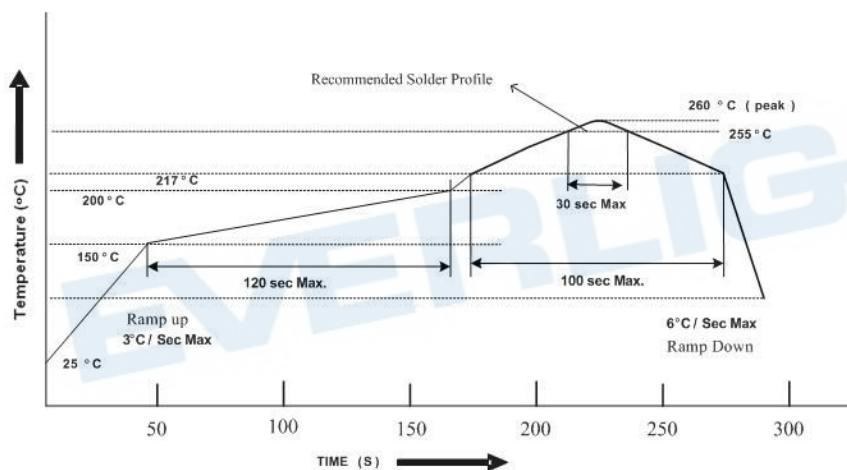
2.3 The LEDs should be used within 168 hours (7days) after opening the package .

2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment : 60±5°C for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

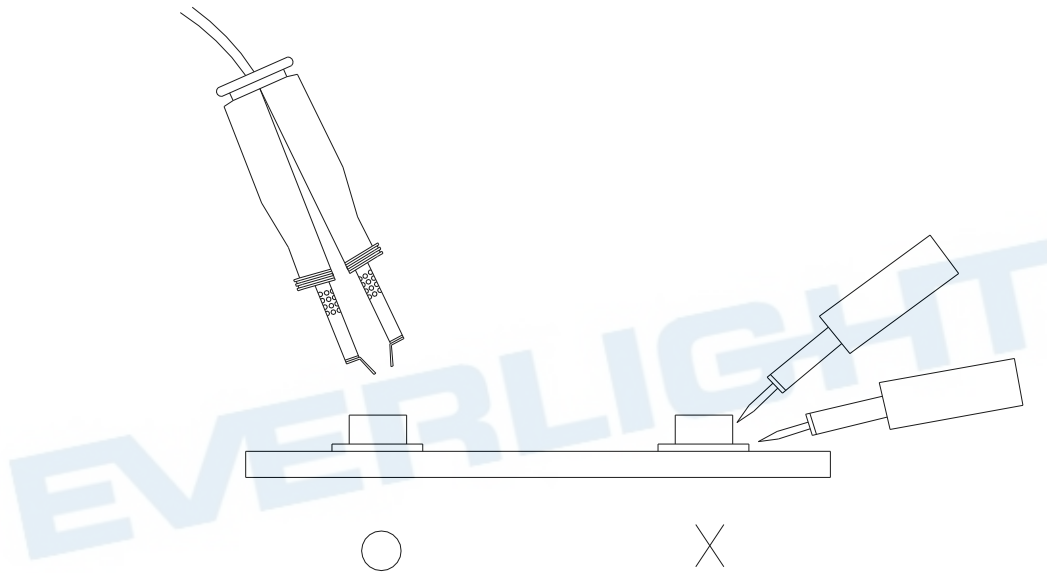
3.4 After soldering, do not warp the circuit board.

4.Soldering Iron

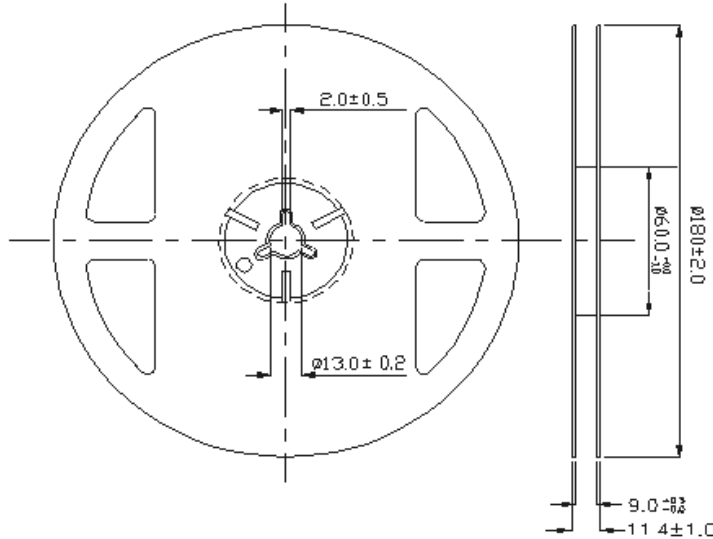
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5.Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

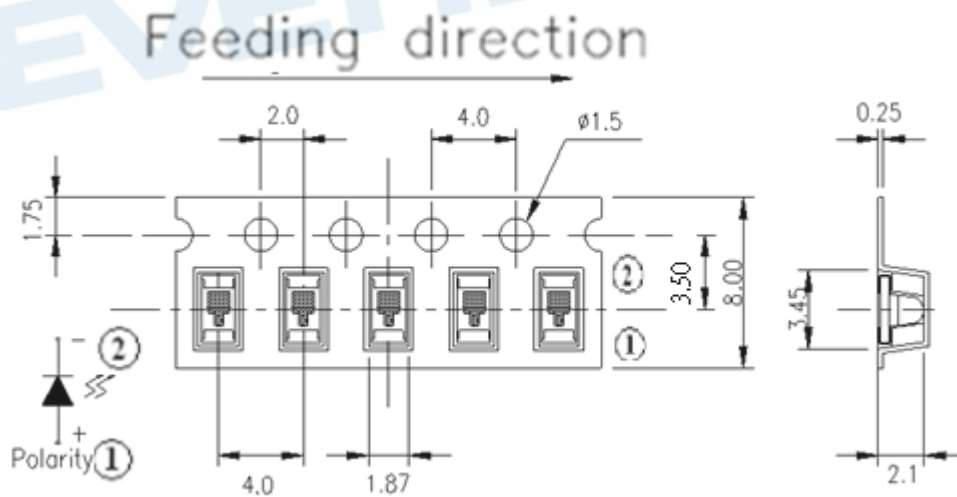


Package Dimensions



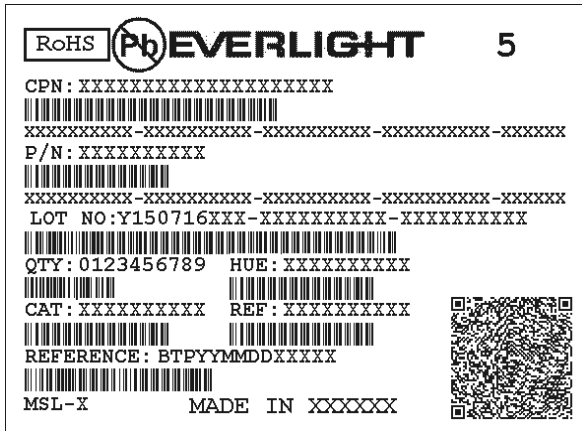
Note: The tolerances unless mentioned are ± 0.1 mm, Unit :mm

Carrier Tape Dimensions(Loaded Quantity 1500PCS/reel)



Note: The tolerances unless mentioned are ± 0.1 mm, Unit :mm

Label Form Specification



CPN: Customer's Production Number
P/N : Production Number
QTY: Packing Quantity
CAT: Ranks
HUE: Peak Wavelength
REF: Reference
LOT No: Lot Number
MSL-X: MSL Level
Made In: Manufacture place

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