

Technical Data Sheet

1.6mm round Subminiature Infrared LED

HIR26-81B/L423/2T

Features

- Compatible with infrared and vapor phase reflow solder process.
- Small double-end package
- Peak wavelength $\lambda_p=850\text{nm}$
- Package in 8mm 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)

Description

- HIR26-81B/L423/2T 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

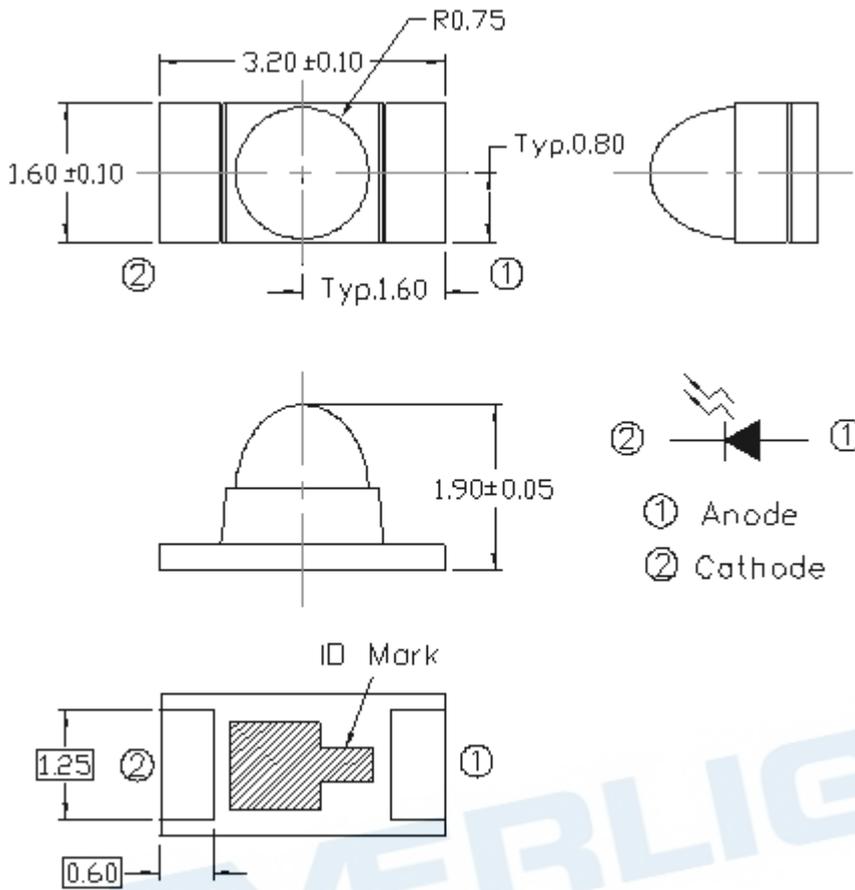
Applications

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

Device Selection Guide

Device No.	Chip Material	Lens Color
HIR26-81B/L423/2T	AlGaAs	Black

Package Dimensions



- Notes:**
1. All dimensions are in millimeters
 2. Tolerances unless dimensions ± 0.1 mm
 3. 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	Unit
Continuous Forward Current	I _F	70	mA
Peak Forward Current *1	I _{FSM}	700	mA
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	140	mW

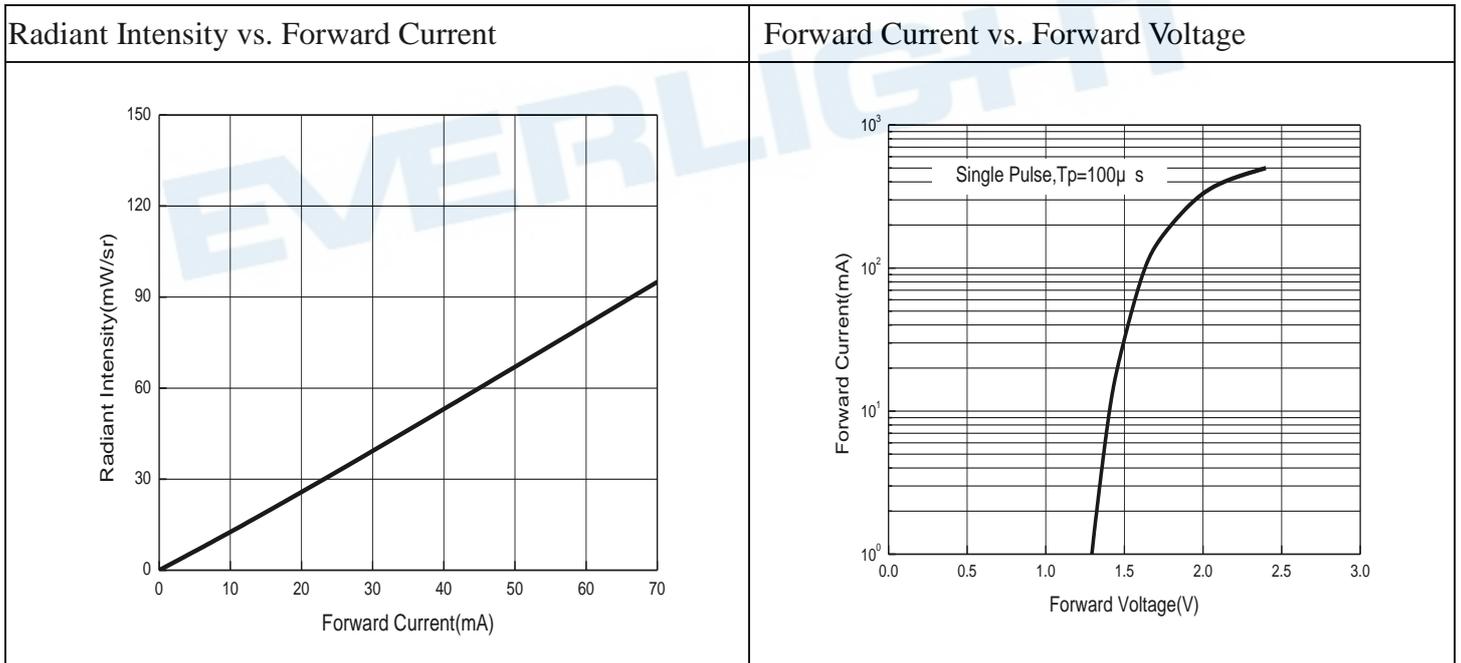
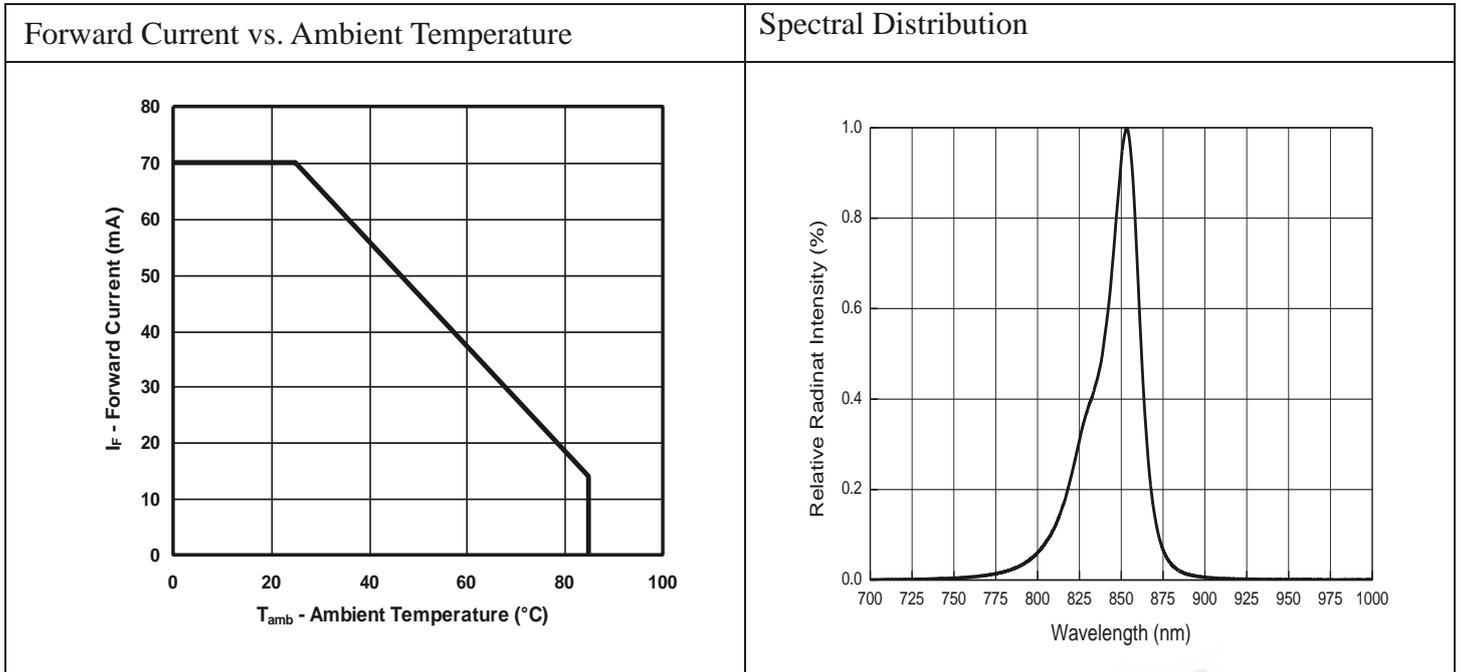
Notes: *1:I_{FP} Conditions--Pulse Width ≤ 10μ s and Duty=0.

*2:Soldering time ≤ 5 seconds.

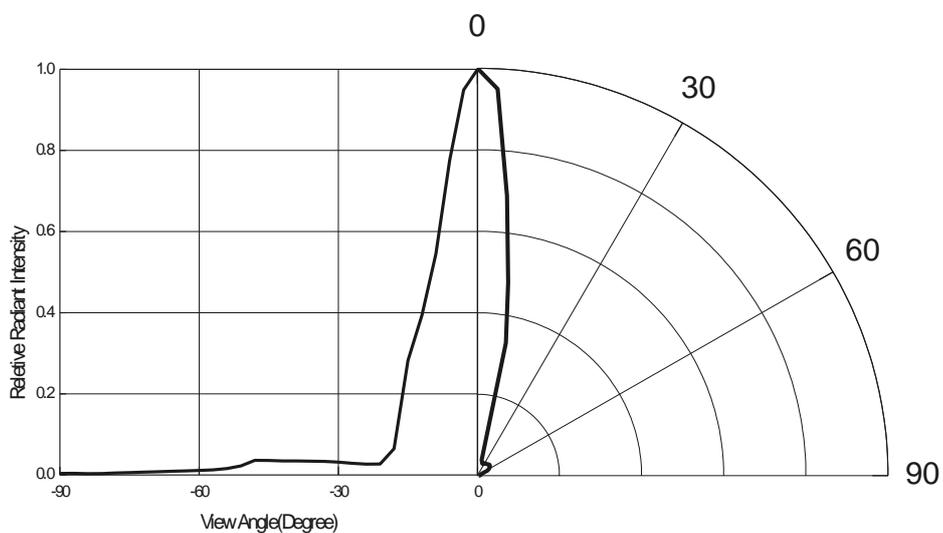
Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Intensity	I _e	18	25	--	mW/sr	I _F =20mA
		63	--	200		I _F =70mA Pulse Width=20ms
Peak Wavelength	λ _p	--	850	--	nm	I _F =20mA
Spectral Bandwidth	Δλ	--	30	--	nm	I _F =20mA
Forward Voltage	V _F	1.20	1.45	1.70	V	I _F =20mA
		1.40	1.60	2.00		I _F =70mA Pulse Width=20ms
Reverse Current	I _R	--	--	10	μ A	V _R =5V
View Angle	2θ _{1/2}	--	20	--	deg	I _F =20mA

Typical Electrical/Optical/Characteristics Curves



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 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.

2.3 The LEDs should be used within a year.

2.4 After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.

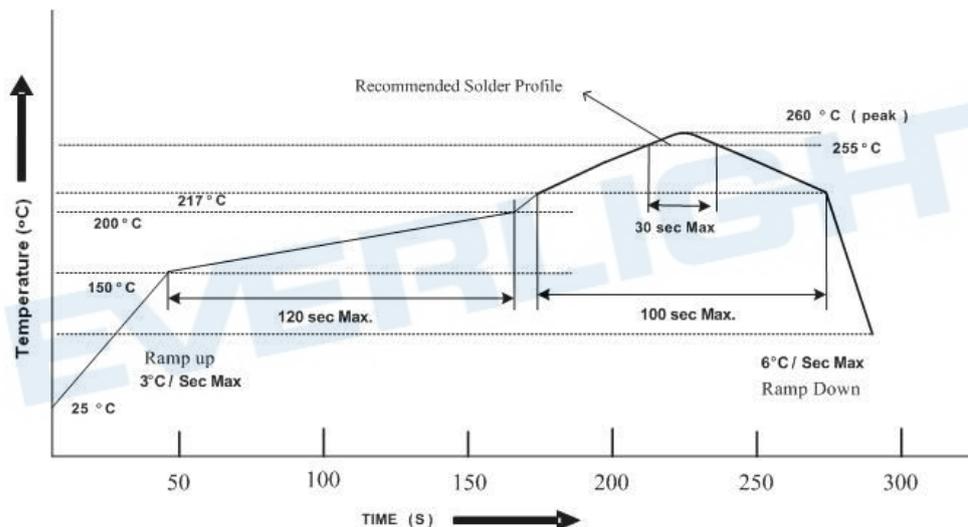
2.5 The LEDs should be used within 168 hours (7 days) after opening the package

2.6 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 Min. 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.

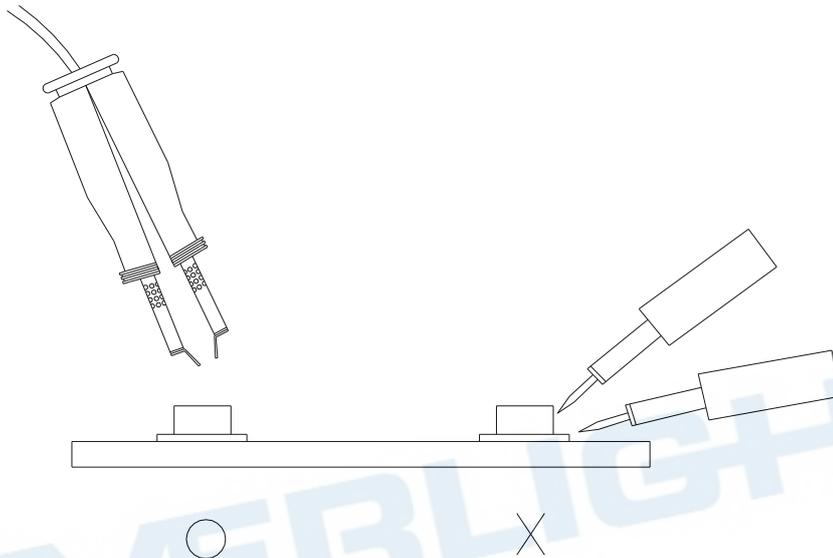
3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

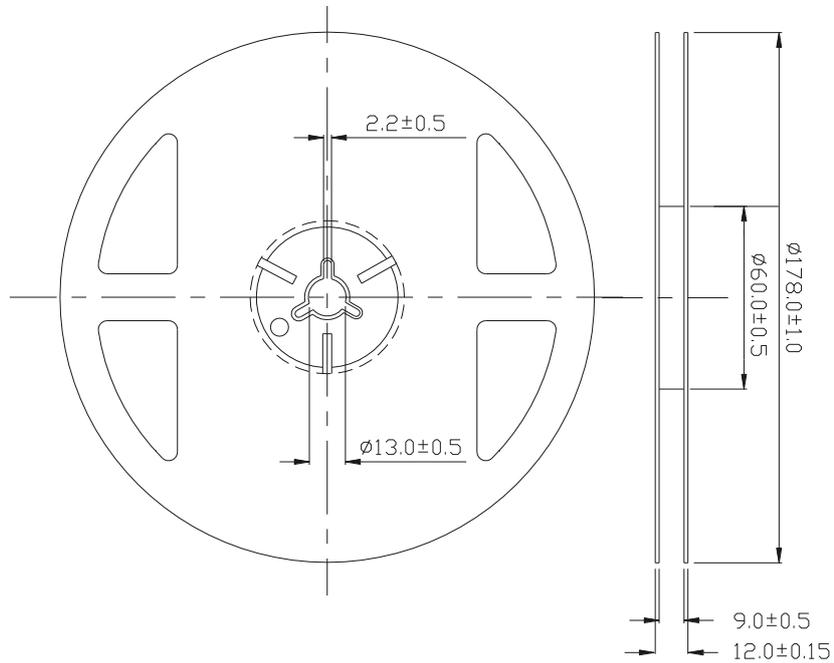
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

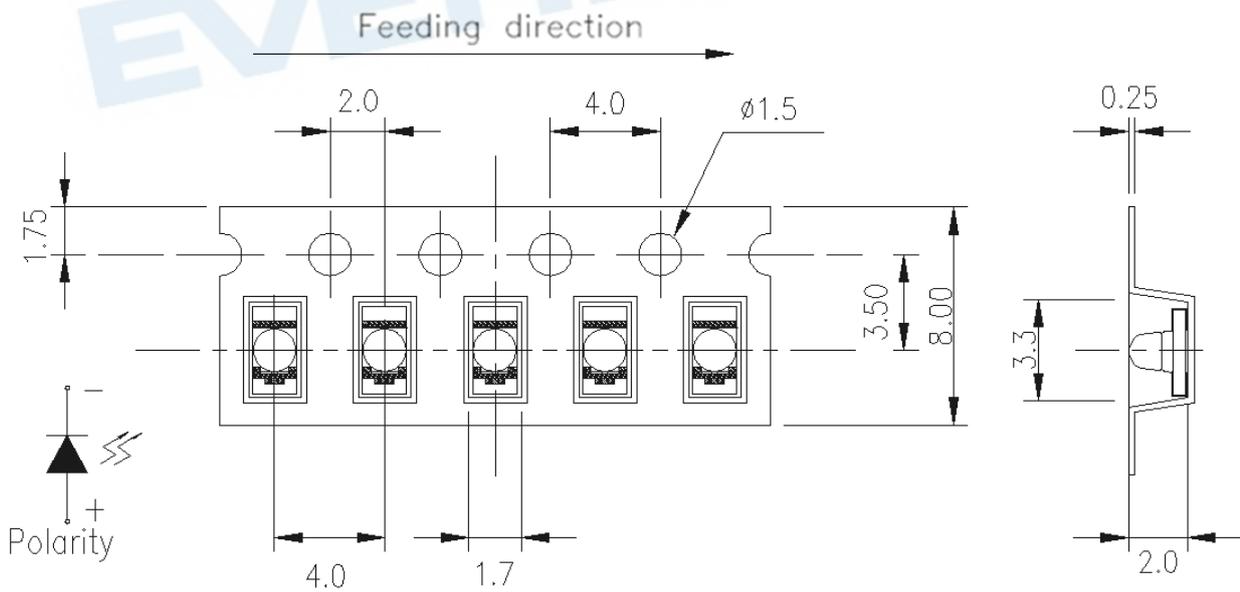


Package Dimensions



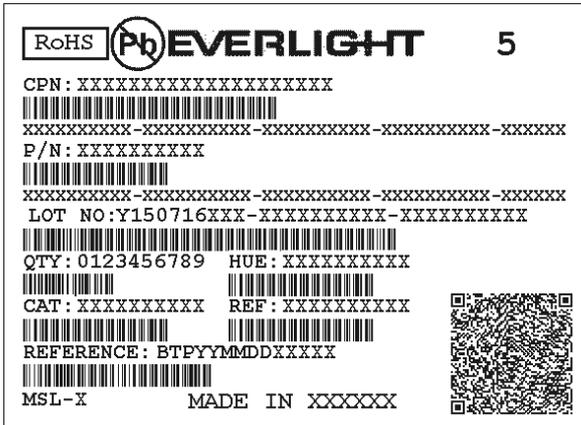
Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$, Unit = mm

Carrier Tape Dimensions: (Quantity: 1500pcs/reel)



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$, Unit = mm

Label Form Specification



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

DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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