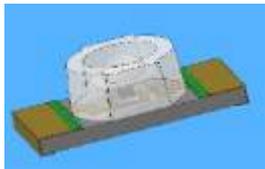


0.8mm Height Flat Top Infrared LED

HIR25-21C/L423/TR8



Features

- Small double-end package
- Low forward voltage
- Good spectral matching to Si photo detector
- 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)

Descriptions

- HIR25-21C/L423/TR8 is an infrared emitting diode in miniature SMD package which is molded in a water clear plastic with flat top view lens.
- The device is spectrally matched with silicon photodiode and phototransistor.

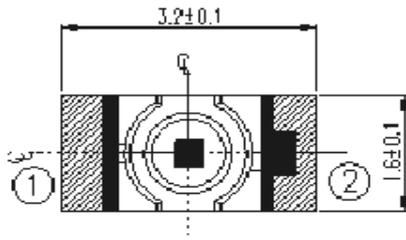
Applications

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

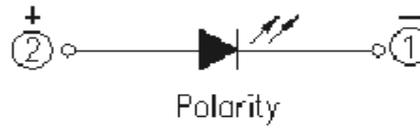
Device Selection Guide

Part Category	Chip Material	Lens Color
HIR	GaAIAs	Water Clear

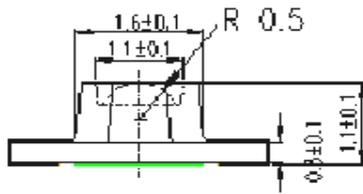
Package Dimensions



Top

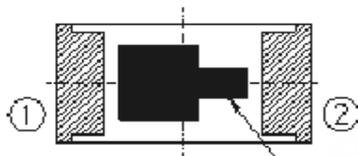


- ① Cathode
- ② Anode



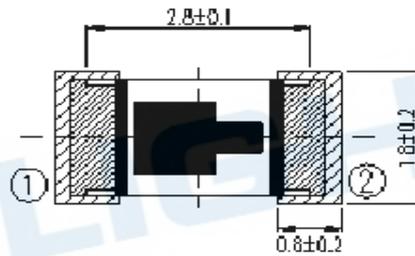
Side

Recommend Soldering Pad



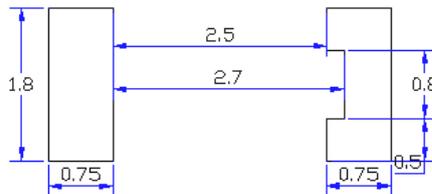
Bottom

Anode Mark



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

- 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



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	50	mA
Reverse Voltage	V_R	5	V
Peak Forward Current*1	I_{FP}	1.0	A
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +85	°C
Soldering Temperature*2	T_{sol}	260	°C
Power Dissipation at(or below) 25°C Free Air Temperature	P_d	110	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	$I_F=20mA$	3.0	5.5	--	mW/sr
		$I_F=100 mA$ (Pulse Width $\leq 100 \mu s$ and Duty $\leq 50\%$)	13.0	23.0	--	
Peak Wavelength	λ_p	$I_F=20mA$	--	850	--	nm
Spectral Bandwidth	$\Delta \lambda$	$I_F=20mA$	--	42	--	nm
Forward Voltage	V_F	$I_F=20mA$	--	1.45	1.65	V
		$I_F=100mA$ (Pulse Width $\leq 100 \mu s$ and Duty $\leq 50\%$)	--	1.66	1.90	
Reverse Current	I_R	$V_R=5V$	--	--	10	μA
Optical rise and fall time	t_r/t_f	$I_F=20mA$	--	25/15	35/35	ns
View Angle	$2\theta_{1/2}$	$I_F=20mA$	--	70	--	deg

Typical Electro-Optical Characteristics Curve

Fig.1 Forward Current vs.

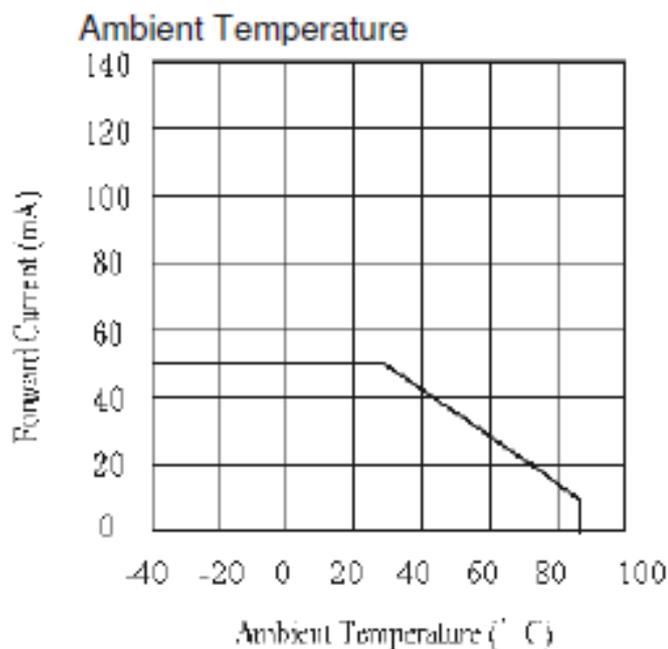


Fig.2 Spectral Distribution

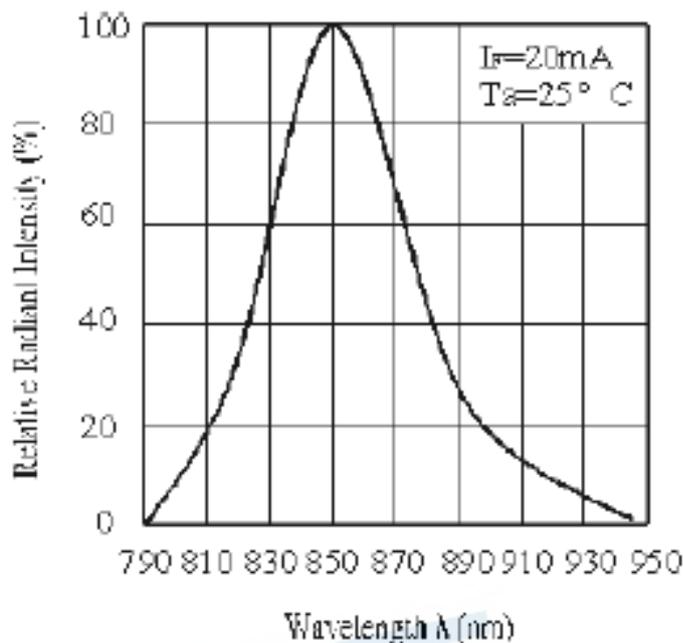


Fig.3 Peak Emission Wavelength
Ambient Temperature

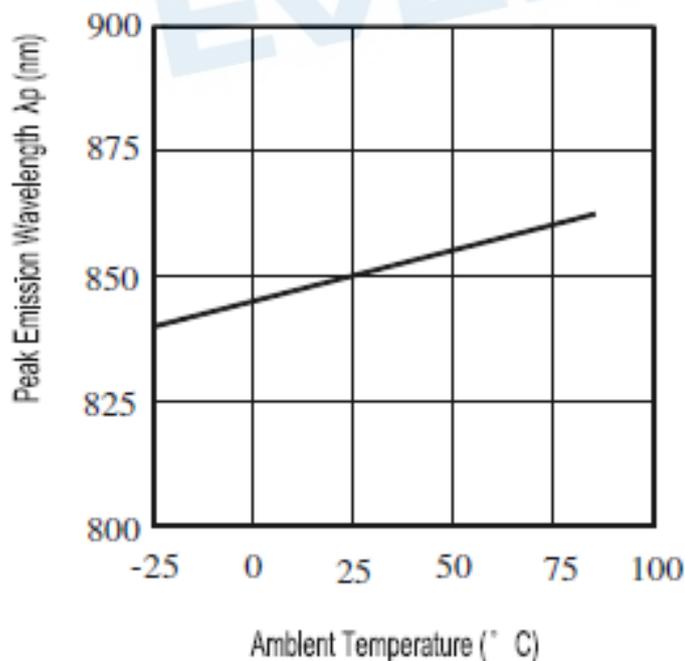
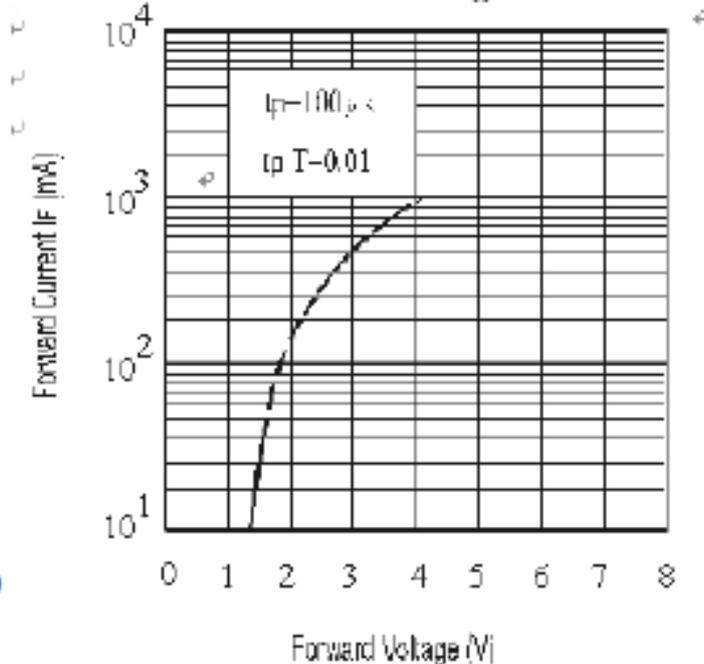


Fig.4 Forward Current
vs. Forward Voltage



Typical Electro-Optical Characteristics Curves

Fig.5 Radiant Intensity vs.
Forward Current

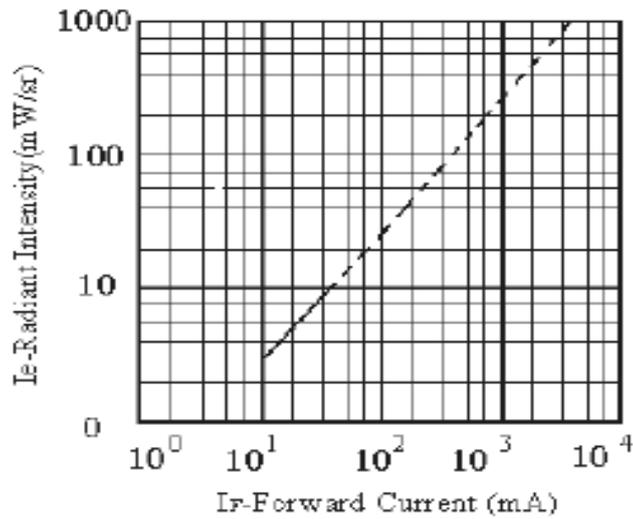
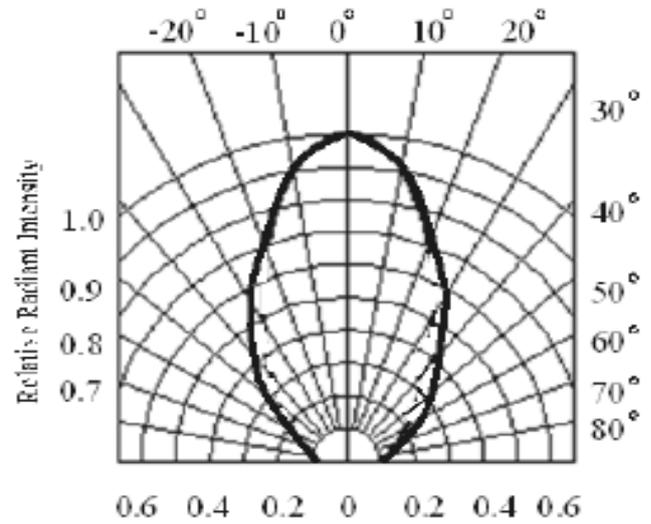


Fig.6 Relative Radiant Intensity vs.
Angular Displacement



EVERLIGHT

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.

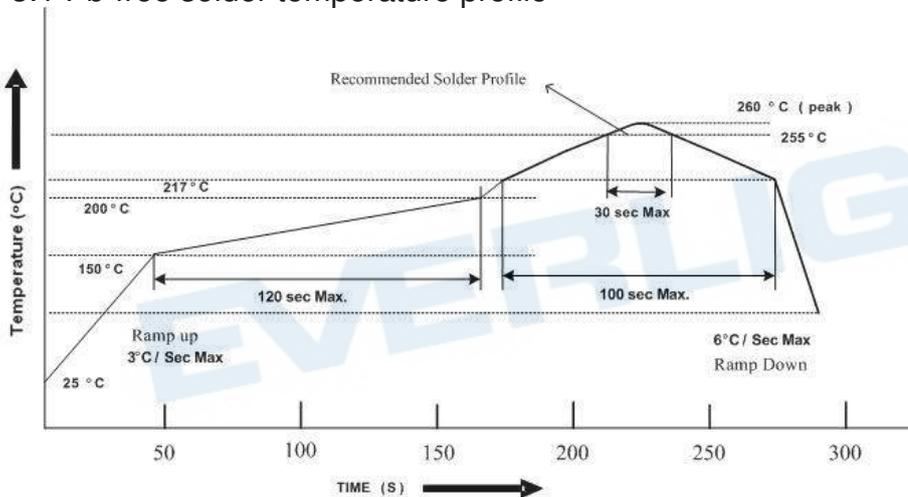
2.2 After opening the package: The LEDs should be kept at 30°C or less and 60%RH or less.

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.

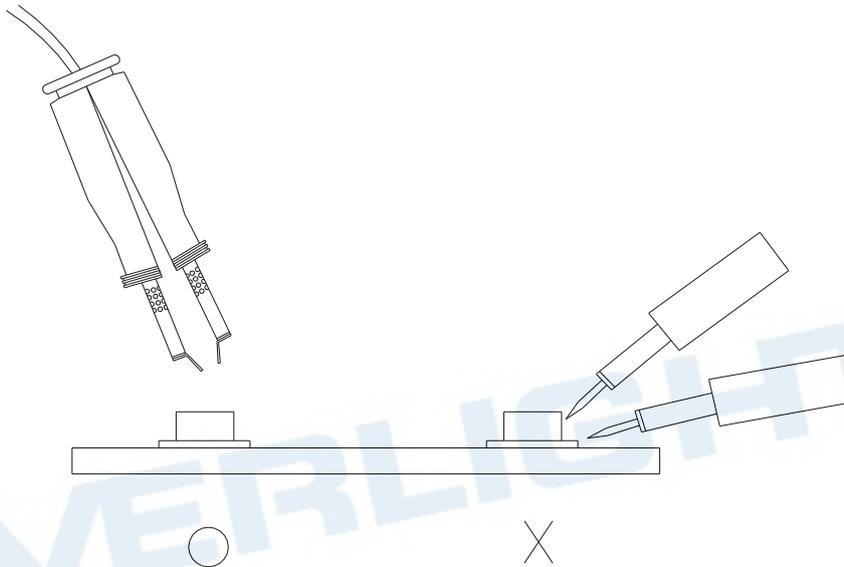
3.4 After soldering, do not warp the circuit board.

4.Soldering Iron

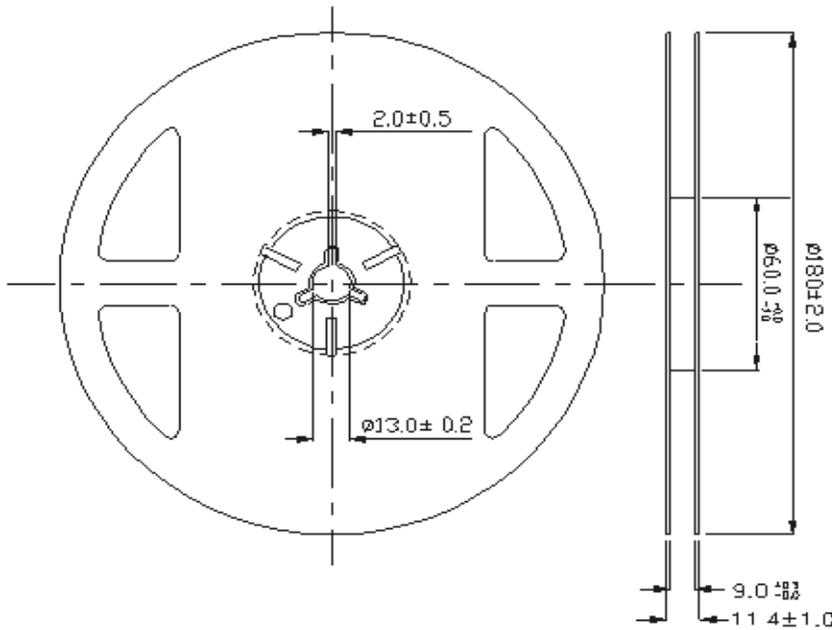
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

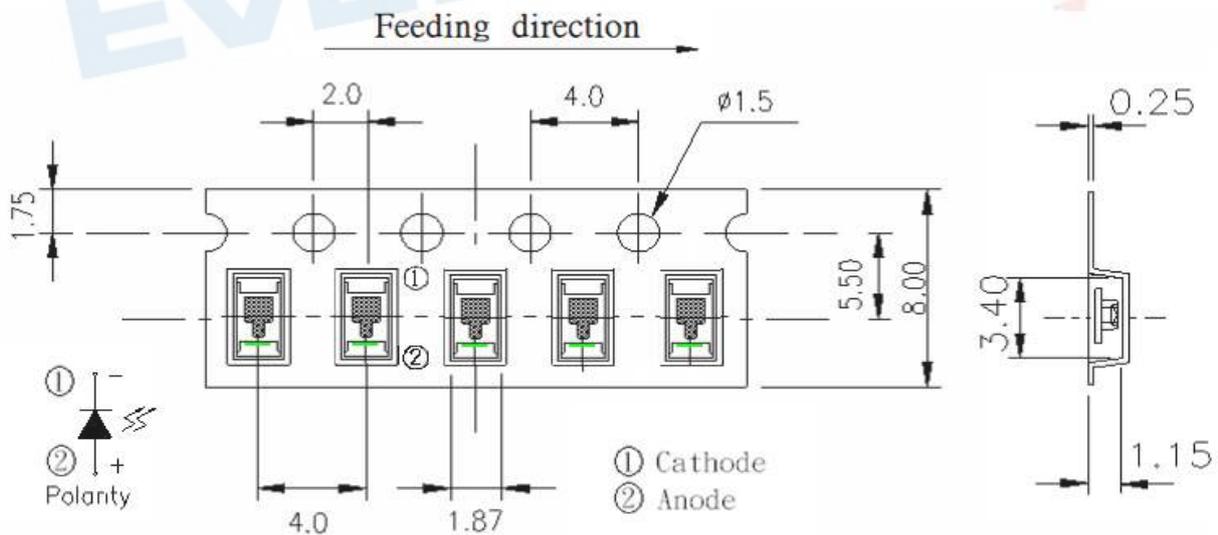


Package Dimensions



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

Carrier Taping Dimensions: (Quantity: 2000PCS/Reel)



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

Specification

RoHS	 EVERLIGHT	5
CPN: XXXXXXXXXXXXXXXXXXXX		
		
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX		
P/N: XXXXXXXXXXXX		
		
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX		
LOT NO: Y150716XXX-XXXXXXXXXX-XXXXXXXXXX		
		
QTY: 0123456789 HUE: XXXXXXXXXXXX		
		
CAT: XXXXXXXXXXXX REF: XXXXXXXXXXXX		
		
REFERENCE: BTPYYMDDXXXXX		
		
MSL-X	MADE IN XXXXXX	

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.
5. These specification sheets include materials protected under copyright of EVERLIGHT. Reproduction in any form is prohibited without obtaining EVERLIGHT's prior consent.
6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized Everlight sales agent for special application request.

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