

### 1.6mm Round Subminiature Chip LED HIR26-21C/L423/CT



#### 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

- HIR26-21C/L423/CT 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

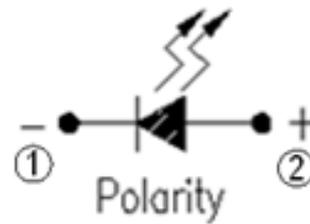
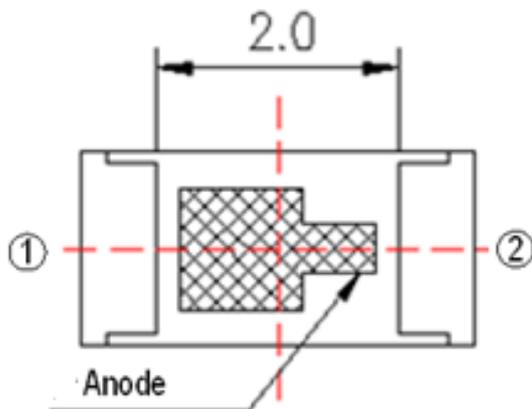
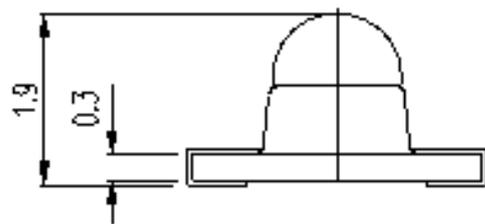
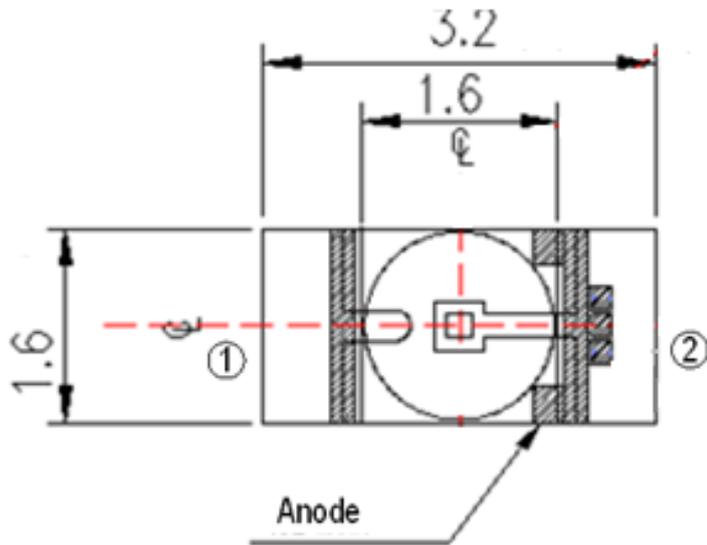
#### Applications

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

#### Device Selection Guide

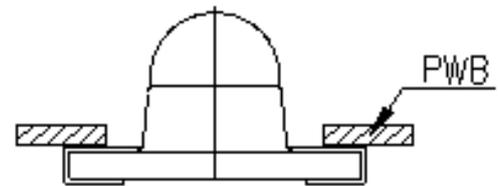
Part No.	Chip Material	Resin Color
HIR	GaAIAs	Water clear

## Package Dimensions

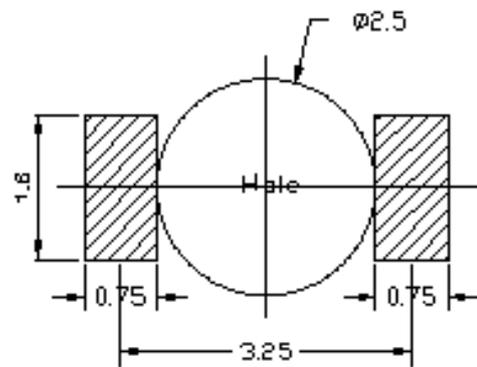


① Cathode

② Anode



For Reflow Soldering (Propose)



- Notes:** 1. All dimensions are in millimeters  
2. Tolerances unless dimensions  $\pm 0.1$  mm

**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Rating	Units
Continuous Forward Current	$I_F$	20	mA
Reverse Voltage	$V_R$	5	V
Operating Temperature	$T_{opr}$	-25 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +85	°C
Soldering Temperature	$T_{sol}$	260	°C
Power Dissipation at(or below) 25°C Free Air Temperature	$P_d$	130	mW

**Electro-Optical Characteristics (Ta=25°C)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	$I_e$	$I_F=20mA$	14	25	--	mW/sr
Peak Wavelength	$\lambda_p$	$I_F=20mA$	--	855	--	nm
Spectral Bandwidth	$\Delta\lambda$	$I_F=20mA$	--	42	--	nm
Forward Voltage	$V_F$	$I_F=20mA$	--	1.45	1.70	V
Reverse Current	$I_R$	$V_R=5V$	--	--	10	$\mu A$
View Angle	2 $\theta_{1/2}$	$I_F=20mA$	--	20	--	deg

**Typical Electro-Optical Characteristics Curves**

Fig.1 Forward Current vs. Ambient Temperature

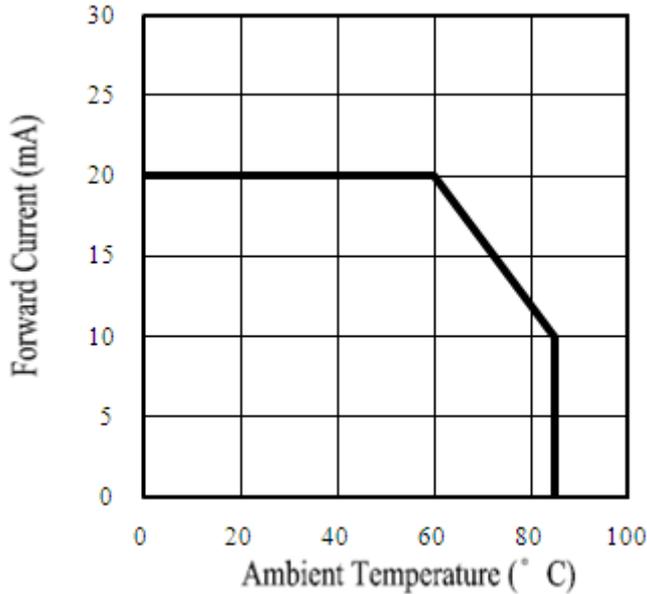


Fig.2 Spectral Distribution

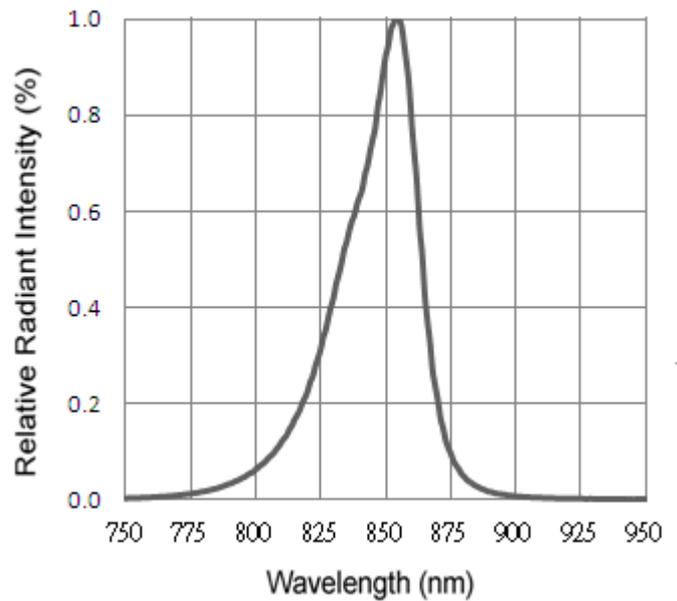


Fig.3 Forward Current vs. Forward Voltage

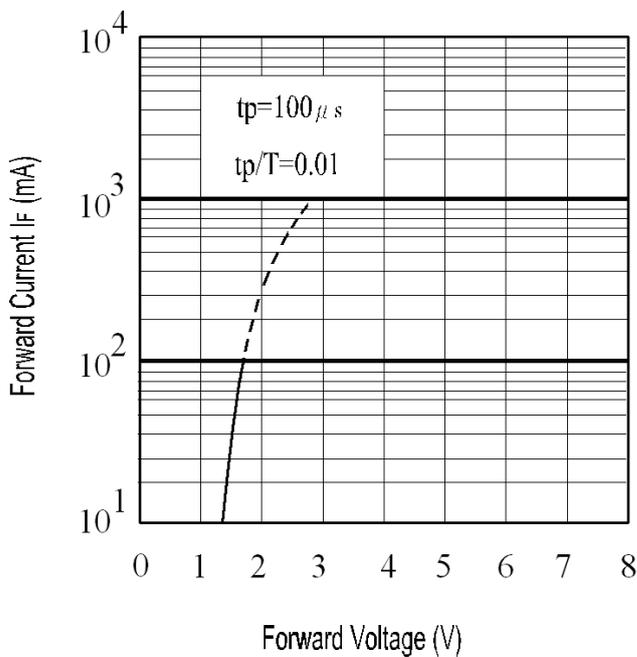
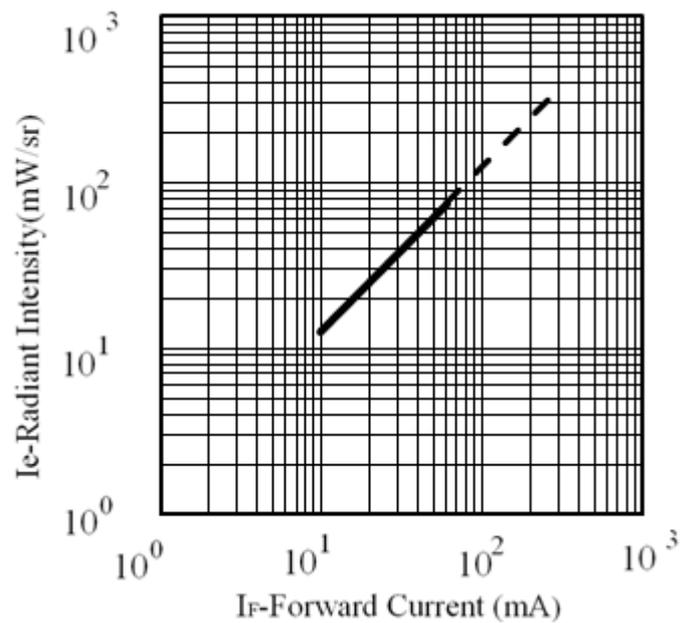
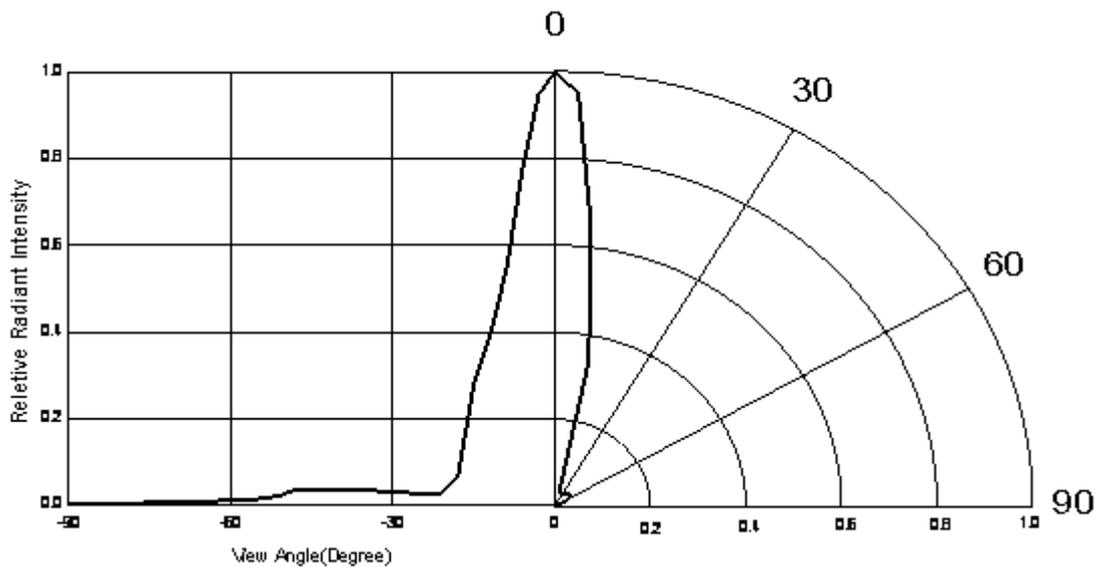


Fig.4 Radiant Intensity vs. Forward Current



## Typical Electro-Optical Characteristics Curves

Fig.5 Relative Radiant Intensity vs.  
Angular Displacement



## 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 After opening the package: The LED's floor life is 168 hours under 30°C or less and 60% RH or less.

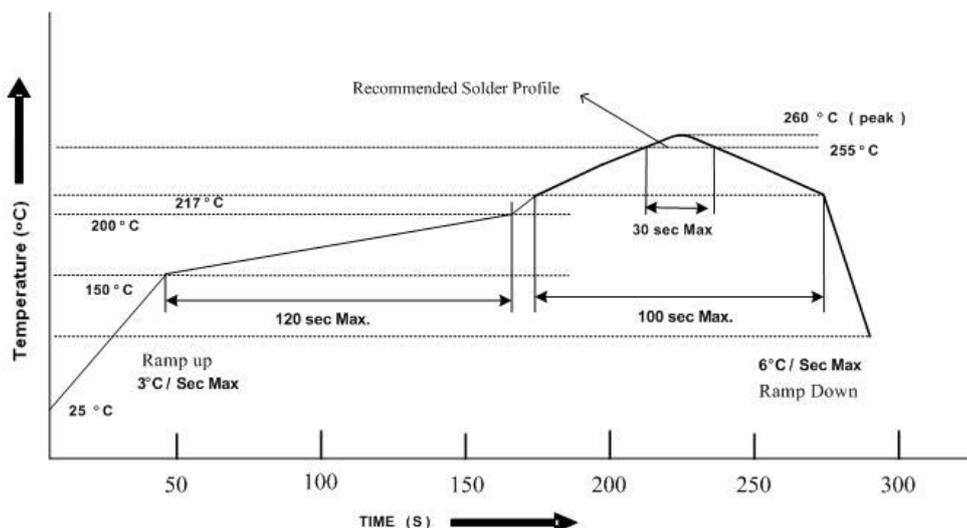
If unused LEDs remain, it should be stored in moisture proof packages.

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 48 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.

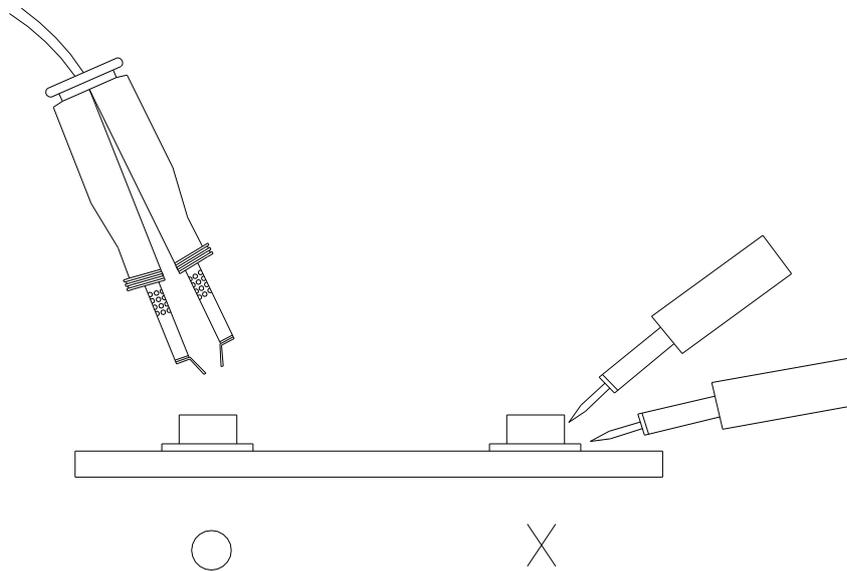
3.4 After soldering, do not warp the circuit board.

#### 4.Soldering Iron

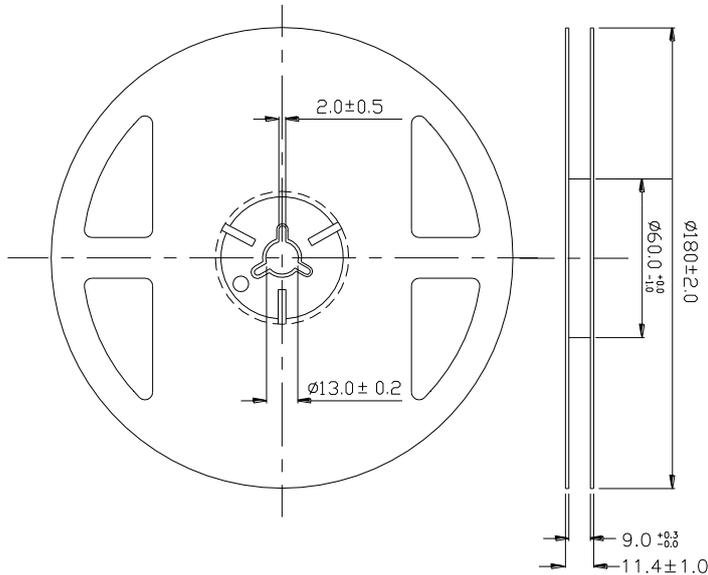
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

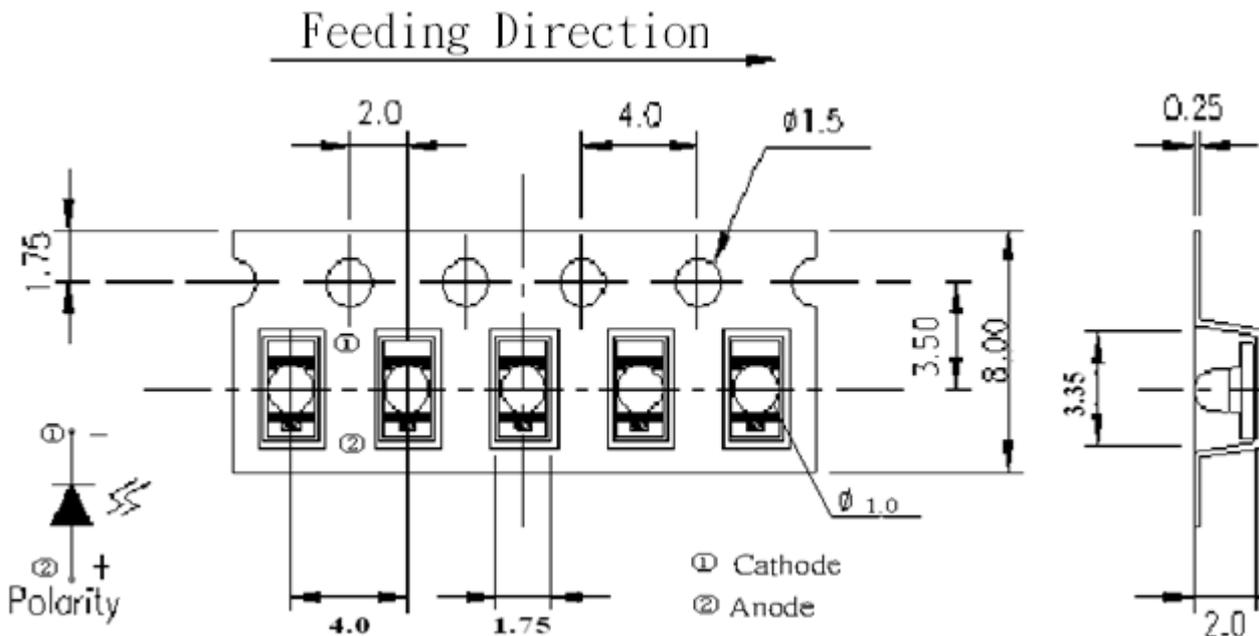


Package Dimensions



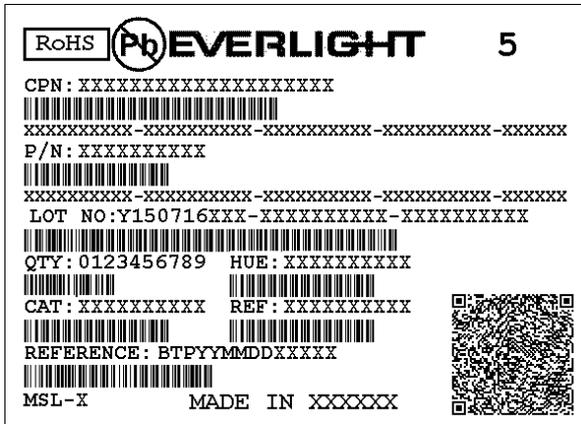
**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm ,Unit = mm

**Carrier Tape Dimensions: Loaded quantity 1500 PCS per reel:**



**Note:** The tolerances unless mentioned is  $\pm 0.1$ 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  
MADE IN TAIWAN: Production Place

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3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
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