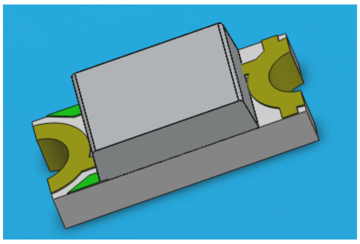
# 1206 Package Chip Infrared LED
# IR15-21C/L10/TR8



## Features

- Small double-end package
- High reliability
- Low forward voltage
- Good spectral matching to Si photodetector
- Compliance with EU REACH.
- Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm)

## Descriptions

- IR15-21C/L10/TR8 is an infrared emitting diode in miniature SMD package molded in a water clear plastic with flat top view lens.
- The spectrally device is matched silicon with photodiode and phototransistor.

## Applications

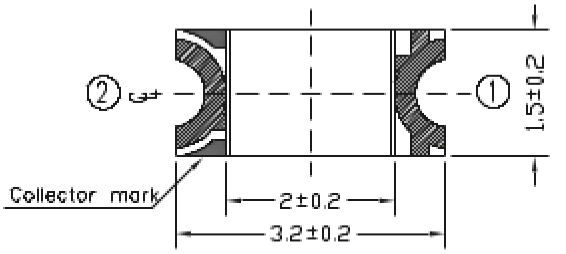
- PCB mounted infrared sensor
- Infrared emitting for miniature light barrier
- Floppy disk drive
- Optoelectronic switch
- Smoke detector

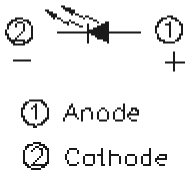
## Device Selection Guide

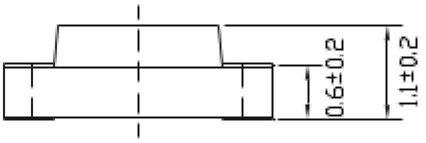
| Part Category | Chip Material | Lens Color |
|---|---|---|
| IR | GaAlAs | Water Clear |

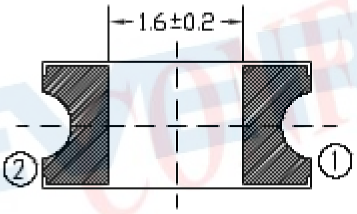
Ver.:4 Release Date:11/22/2021 狀態:Approved(正式發行)

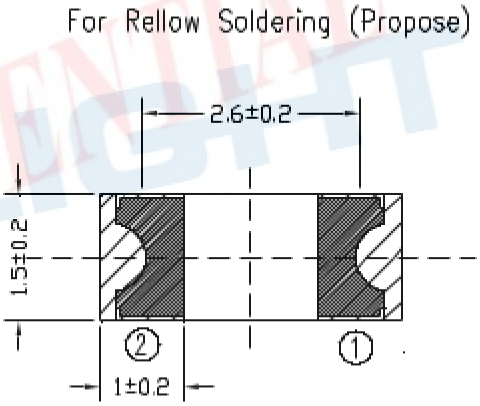
## Package Dimensions











**Notes:** 1.All dimensions are in millimeters
2.Tolerances unless dimensions ±0.1mm
3.Suggested pad dimension is just for reference only
Please modify the pad dimension based on individual need

## Absolute Maximum Ratings (Ta=25℃)

| Parameter | Symbol | Rating | Units |
|---|---|---|---|
| Continuous Forward Current | $I_F$ | 65 | mA |
| Reverse Voltage | $V_R$ | 5 | V |
| Operating Temperature | $T_{opr}$ | -25~ +85 | ℃ |
| Storage Temperature | $T_{stg}$ | -40 ~ +85 | ℃ |
| Soldering Temperature *1 | $T_{sol}$ | 260 | ℃ |
| Power Dissipation at(or below) 25℃ Free Air Temperature | $P_d$ | 130 | mW |

**Notes:** *1: Soldering time≦5 seconds.

## Electro-Optical Characteristics (Ta=25℃)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| Radiant Intensity | $I_E$ | $I_F$=20mA | 0.2 | --- | --- | mW/sr |
| Peak Wavelength | $\lambda p$ | $I_F$=20mA | -- | 940 | -- | nm |
| Spectral Bandwidth | $\Delta \lambda$ | $I_F$=20mA | -- | 45 | -- | nm |
| Forward Voltage | $V_F$ | $I_F$=20mA | -- | 1.2 | 1.5 | V |
| Reverse Current | $I_R$ | $V_R$=5V | -- | -- | 10 | μA |
| View Angle | $2\theta 1/2$ | $I_F$=20mA | -- | 180 | -- | deg |

## Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

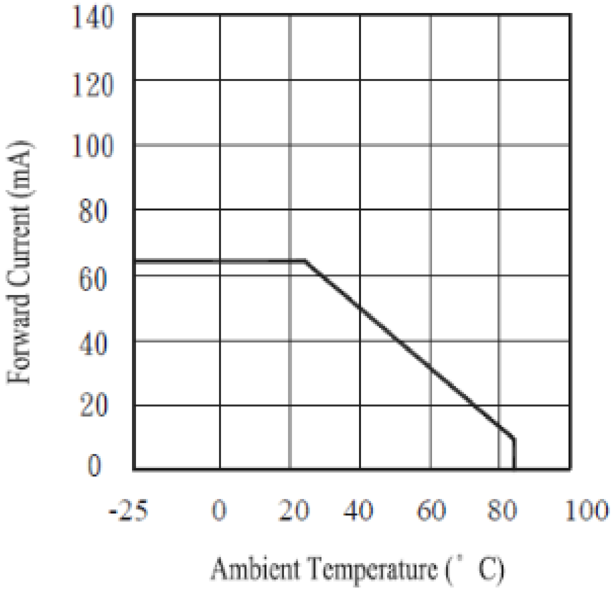


Fig.2 Forward Current vs. Forward Voltage

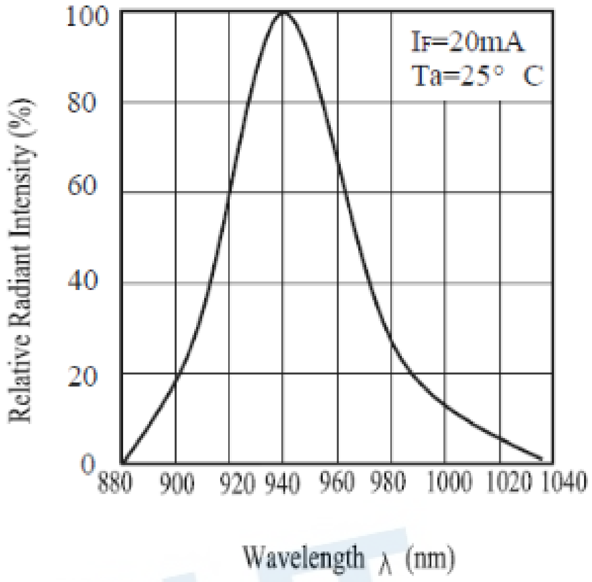


Fig.3Forward Current vs. Forward Voltage

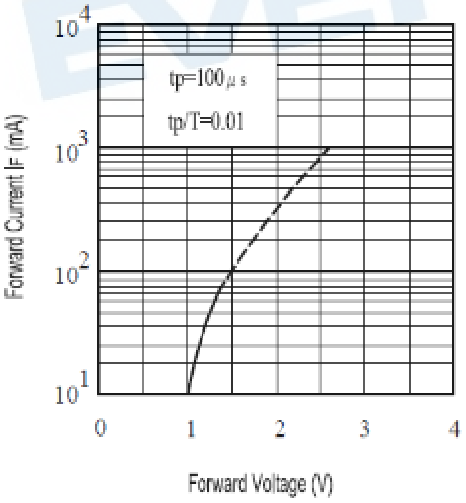
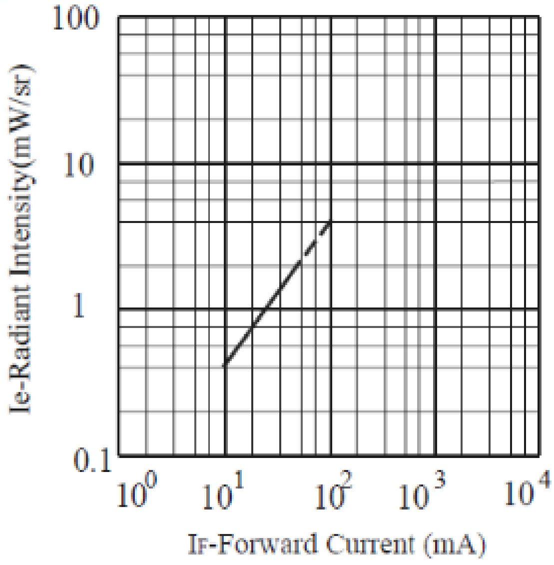
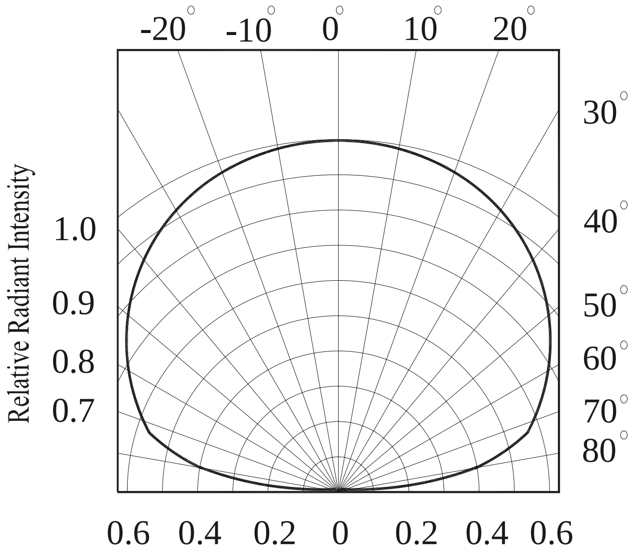


Fig.4Relative Intensity vs. Forward Current



## 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℃ 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℃ or less and 60%RH or less.

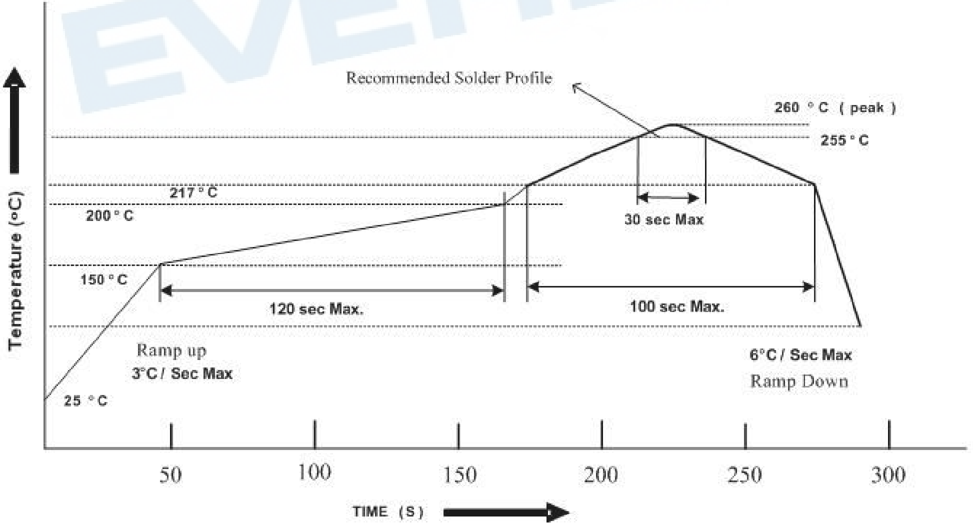
2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

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℃ 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.

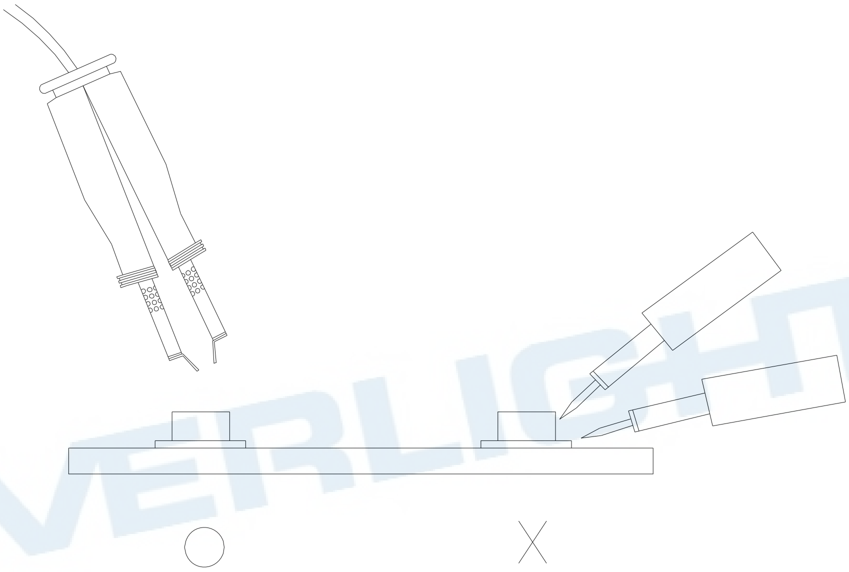
3.4 After soldering, do not warp the circuit board.

### 4.Soldering Iron

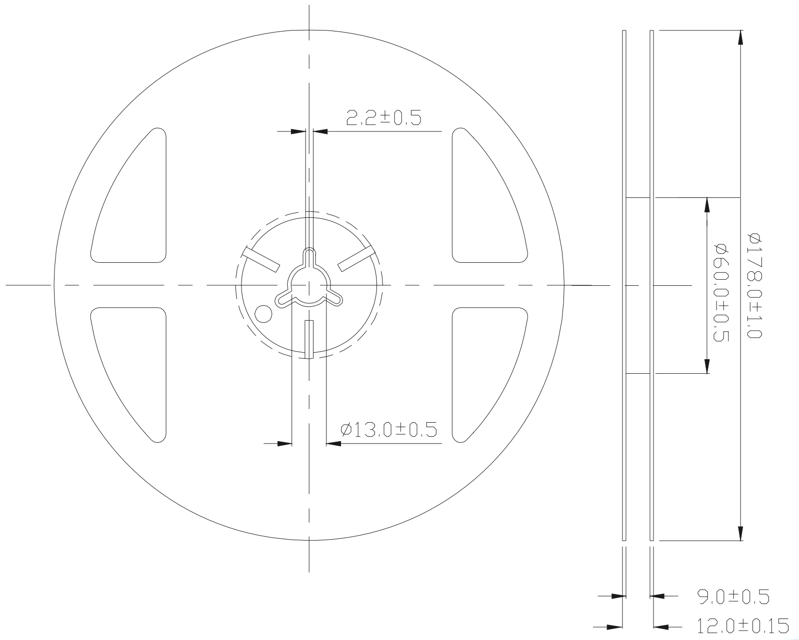
Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

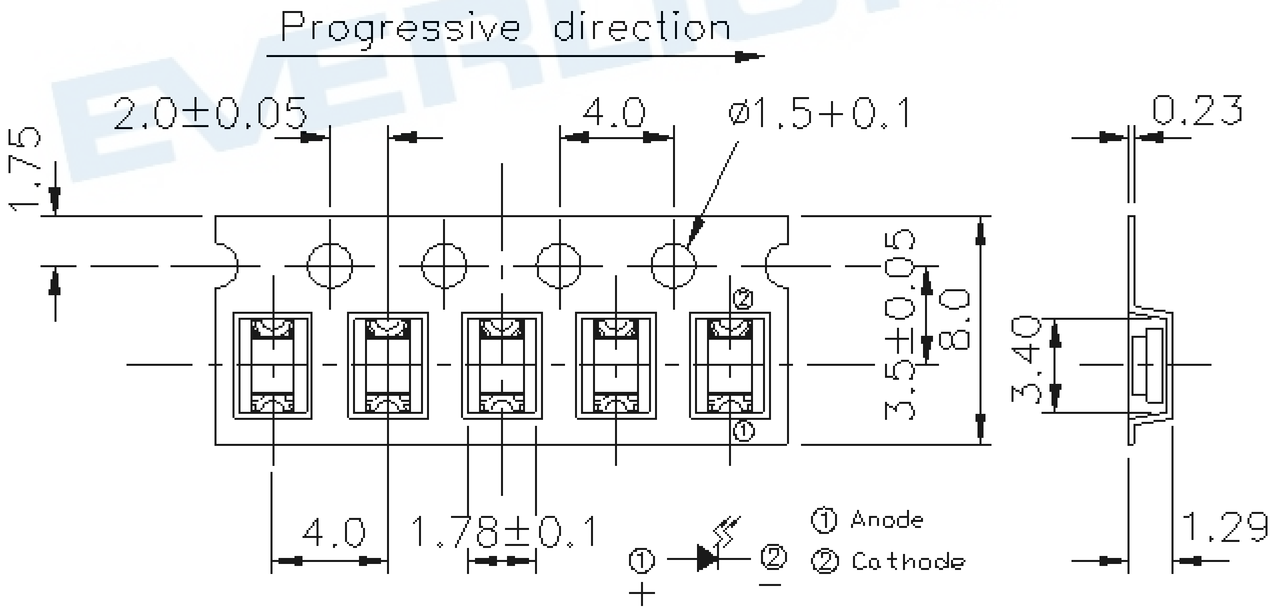


## Package Dimensions



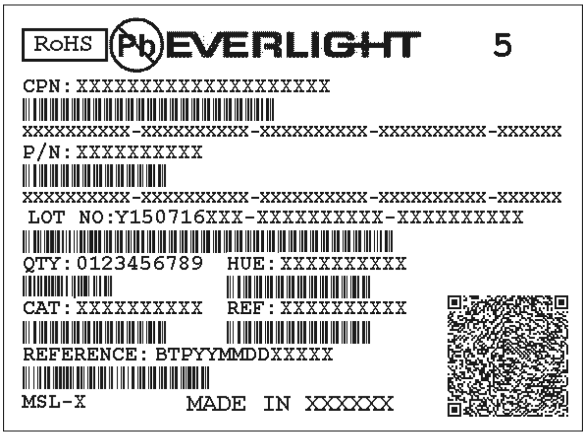
**Note:** The tolerances unless mentioned is ±0.1mm ,Unit = mm

**Carrier Tape Dimensions: (Quantity: 3000 PCS per Reel)**



**Note:** The tolerances unless mentioned is ±0.1mm ,Unit = mm

## Label Form Specification



RoHS Pb EVERLIGHT 5
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XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX
P/N: XXXXXXXXXX
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX
LOT NO:Y150716XXX-XXXXXXXXXX-XXXXXXXXXX
QTY: 0123456789 HUE: XXXXXXXXXX
CAT: XXXXXXXXXX REF: XXXXXXXXXX
REFERENCE: BTPYYMMDDXXXXX
MSL-X MADE IN XXXXXX

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

## Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
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