

DATASHEET

0805 Package Infrared Chip LED IR17-21C/TR8



Features

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

- IR17-21C/TR8 is an infrared emitting diode inminiature SMD package which is molded in awater clear plastic with flat top view lens.
- The device is spectrally matched with siliconphotodiode and phototransistor.

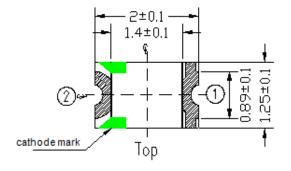
Applications

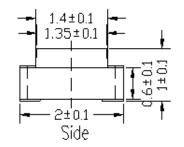
- PCB mounted infrared sensor
- Infrared emitting for miniature light barrier
- Floppy disk drive
- Optoelectronic switch
- Smoke detector

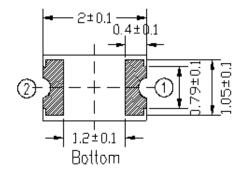
Device Selection Guide

Part Category	ChipMaterial	Lens Color		
IR	GaAlAs	Water Clear		

Package Dimensions



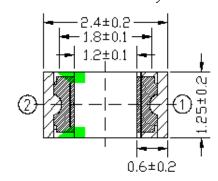






- ① Anode
- ② Cathode

Recommend Sodering Pad



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°C)

Parameter	Symbol	Rating	Units	
Continuous Forward Current	I _F	65	mA	
Reverse Voltage	V_R	5	V	
Operating Temperature	T_{opr}	-40 ~ +85	$^{\circ}\! C$	
Storage Temperature	T_{stg}	-40 ~ +85	$^{\circ}$ C	
Soldering Temperature *1	T_{sol}	260	$^{\circ}$ C	
Power Dissipation at(or below) 25°C Free Air Temperature	P _d	130	mW	

Notes: *1:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Electio Optical Characteristics (14-25 C)								
Parameter	Symbol	Condition	Min.	Тур.	Max.	Units		
Radiant Intensity	le	I _F =20mA	0.2	0.8		mW/sr		
Peak Wavelength	λр	I _F =20mA		940		nm		
Spectral Bandwidth	Δλ	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	201/2	I _F =20mA		120		deg		

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Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs.

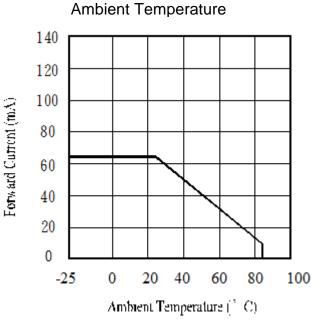


Fig.2 Spectral Distribution

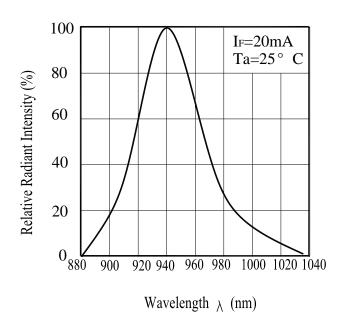


Fig.3 Forward Current vs. Forward Voltage

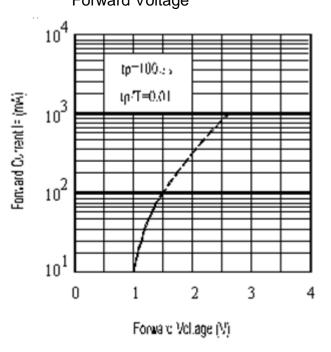
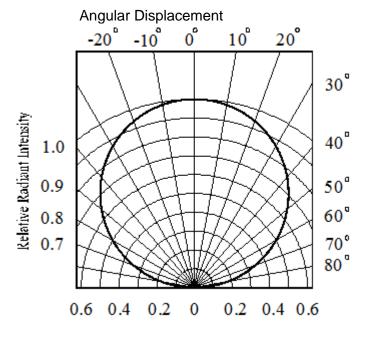


Fig.4 Relative Radiant Intensity vs





Precautions For Use

1. Over-current-proof

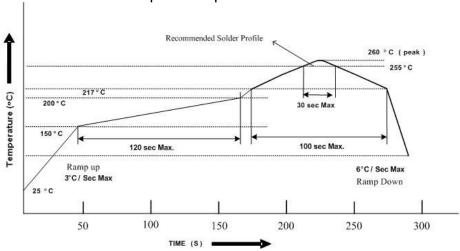
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

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 10°C ~30°C and 90%RH or less.
- 2.3 The LEDs suggested be used within one year.
- 2.4 After opening the package, the devices must be stored at 10°C~30°C and ≤ 60%RH, and used within 168 hours (floor life). If unused LEDs remain, it should be stored in moisture proof packages.
- 2.5 If the moisture absorbent material (desiccant material) has faded or unopened bag has exceeded the shelf life or devices (out of bag) have exceeded the floor life, baking treatment is required.
- 2.6 If baking is required, refer to IPC/JEDEC J-STD-033 for bake procedure or recommend the following conditions:
 - 96 hours at 60°C ± 5°C and < 5 % RH (reeled/tubed/loose units)

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.

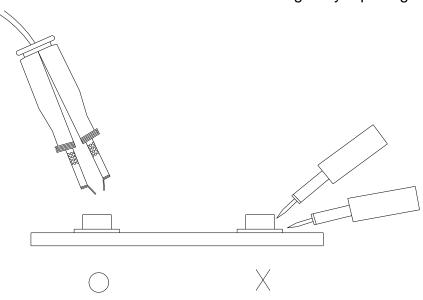
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4. Soldering Iron

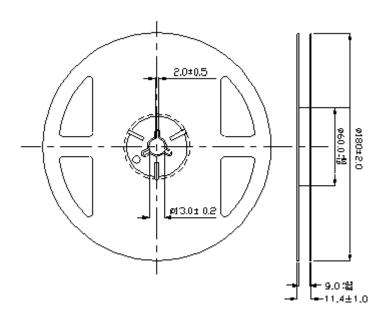
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

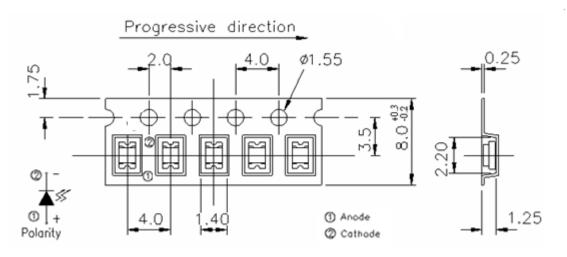


Package Dimensions



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

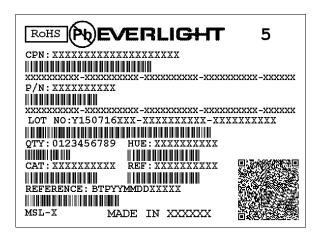
Carrier Taping Dimensions: (Quantity: 3000PCS/Reel)



Note: The tolerances unless mentioned is ±0.1mm, 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

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.
- 3. When using this product, please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from 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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