

Technical Data Sheet

Mini-Top Infrared LEDs

HIR67-21C/L11/TR8

Features

- Peak wavelength λ_p =850nm.
- Low forward voltage.
- Compatible with infrared and vapor phase reflow solder process.
- Package in 8mm tape on 7" diameter reels.
- 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

- HIR67-21C/L11/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.

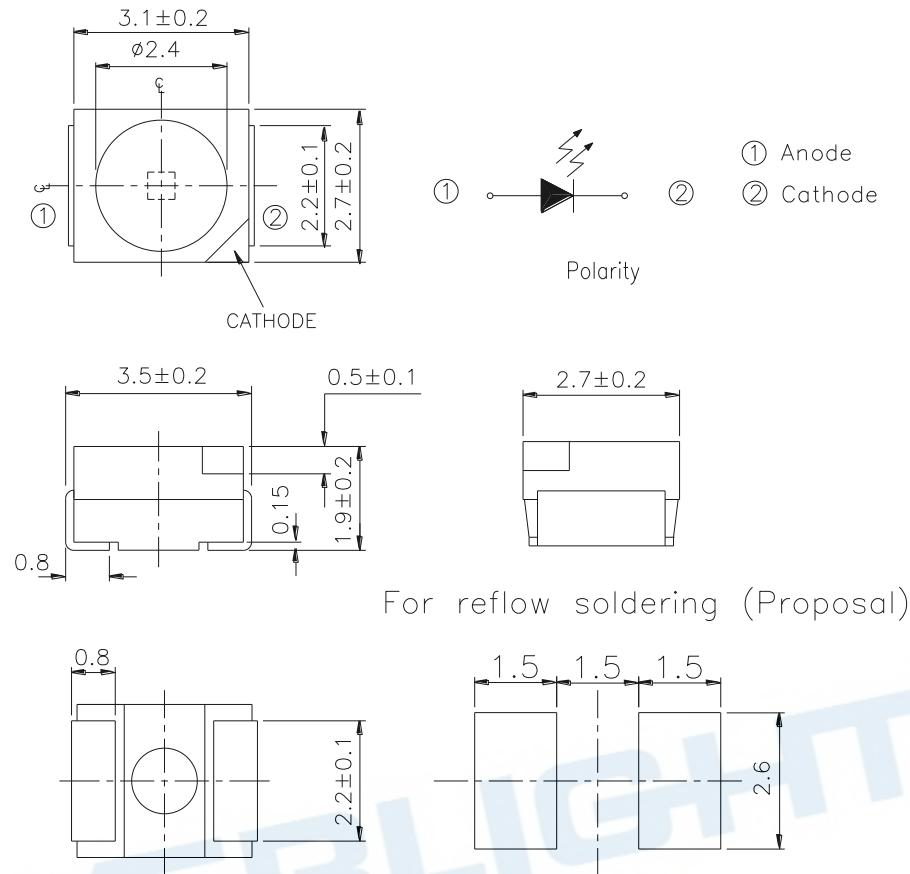
Applications

- Floppy disk drive
- Optoelectronic switch
- Camera
- VCR
- Video
- Smoke detector

Device Selection Guide

Device No.	Chip Material	Lens Color
HIR67-21C/L11/TR8	GaAlAs	Water clear

Package Dimensions



Notes: 1. All dimensions are in millimeters
 2. Tolerances unless dimensions ± 0.1 mm

Absolute Maximum Ratings (Ta=25°C)

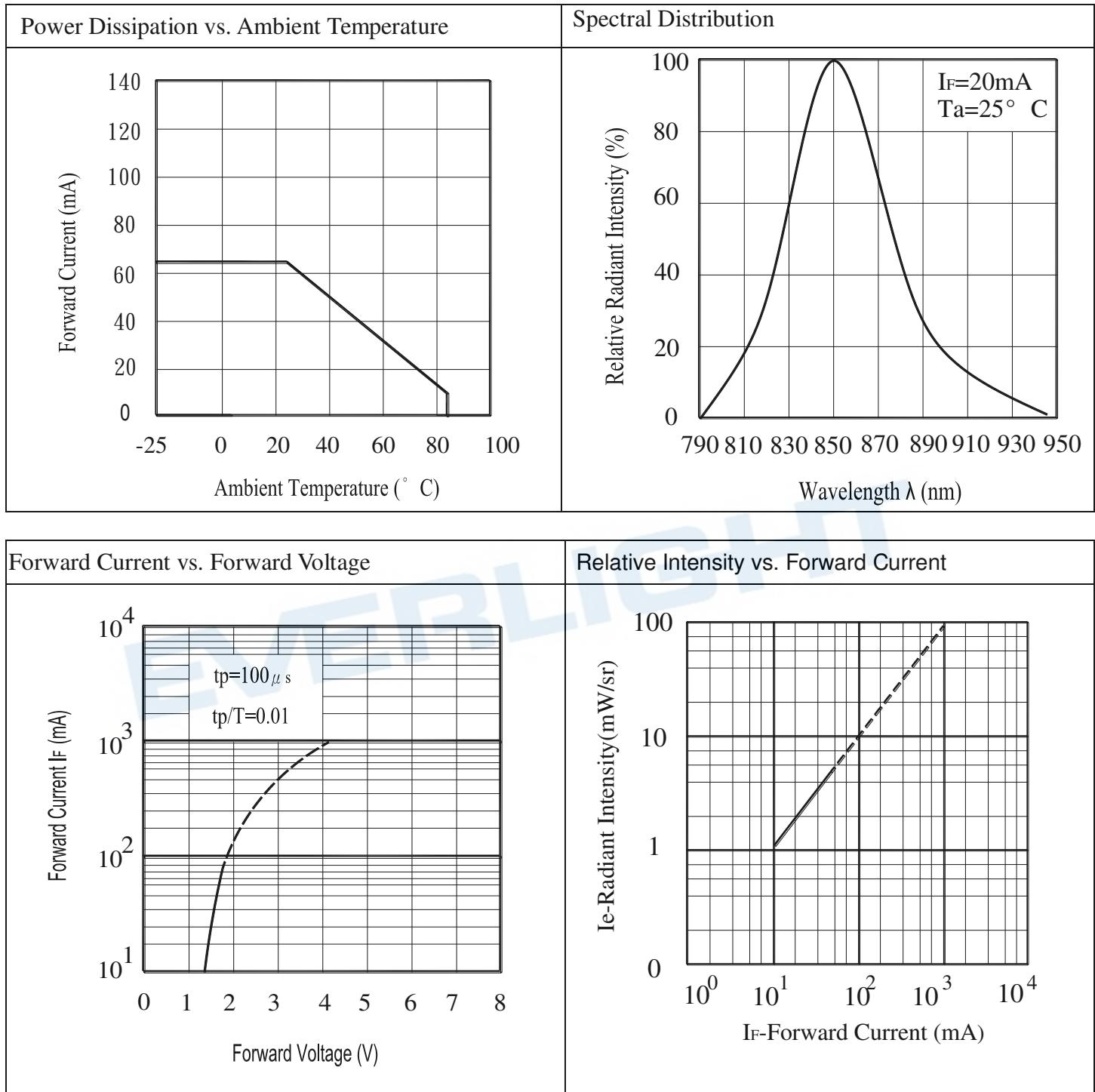
Parameter	Symbol	Rating	Unit
Continuous Forward Current	I _F	65	mA
Reverse Voltage	V _R	5	V
Operating Temperature	T _{opr}	-40 ~ +100	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature *1	T _{sol}	260	°C
Power Dissipation at(or below) 25°C Free Air Temperature	P _d	130	mW

Notes: *1: Soldering time \leq 5 seconds.

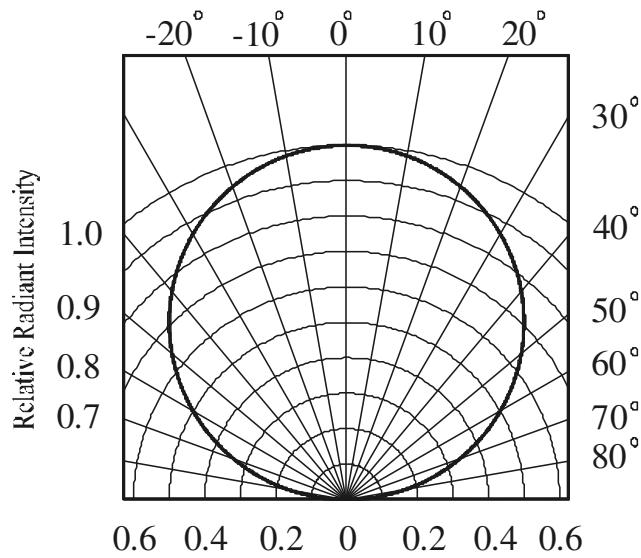
Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Intensity	Ie	1.0	2.0	--	mW /sr	I _F =20mA
		--	10	--		I _F =100mA Pulse Width≤100μ s ,Duty≤1%
Peak Wavelength	λ _p	--	850	--	nm	I _F =100mA
Spectral Bandwidth	Δ λ	--	45	--	nm	I _F =100mA
Forward Voltage	V _F	--	1.45	1.65	V	I _F =20mA
		--	1.80	2.40		I _F =100mA Pulse Width≤100μ s ,Duty≤1%
Reverse Current	I _R	--	--	10	μ A	V _R =5V
View Angle	2θ1/2	--	120	--	deg	I _F =20mA

Typical Electrical/Optical/Characteristics Curves for IR



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 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.

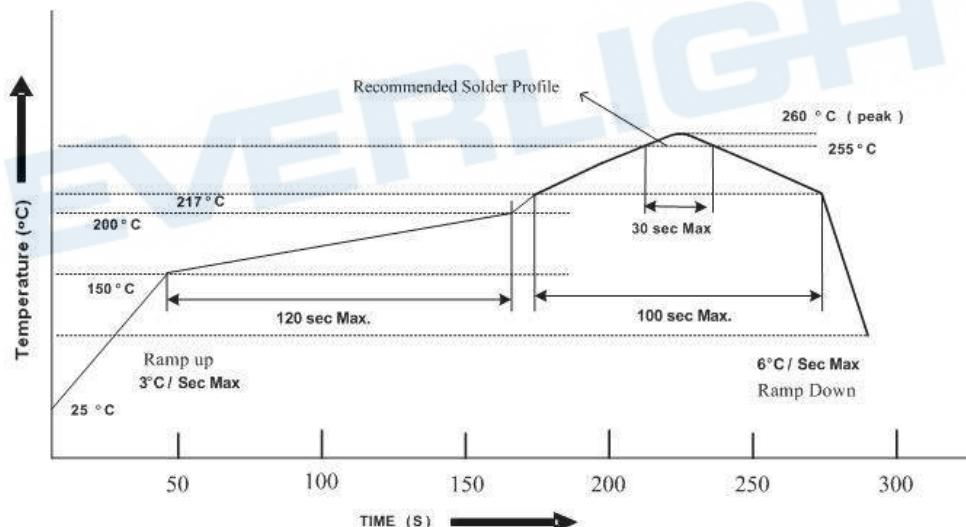
2.5 The LEDs should be used within 168 hours (7 days) after opening the package

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 : $60 \pm 5^\circ\text{C}$ 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.

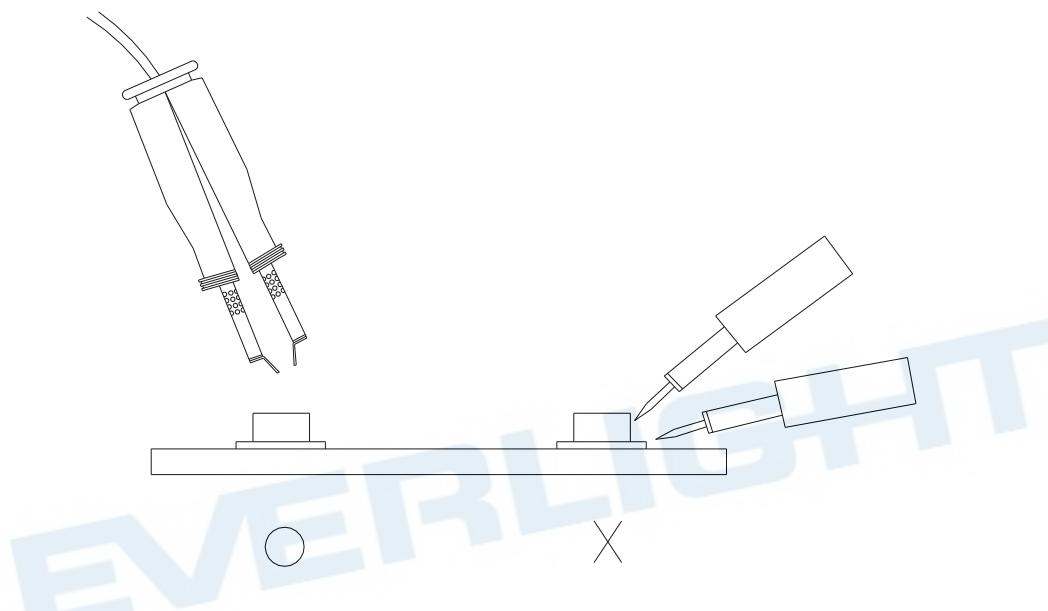
3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

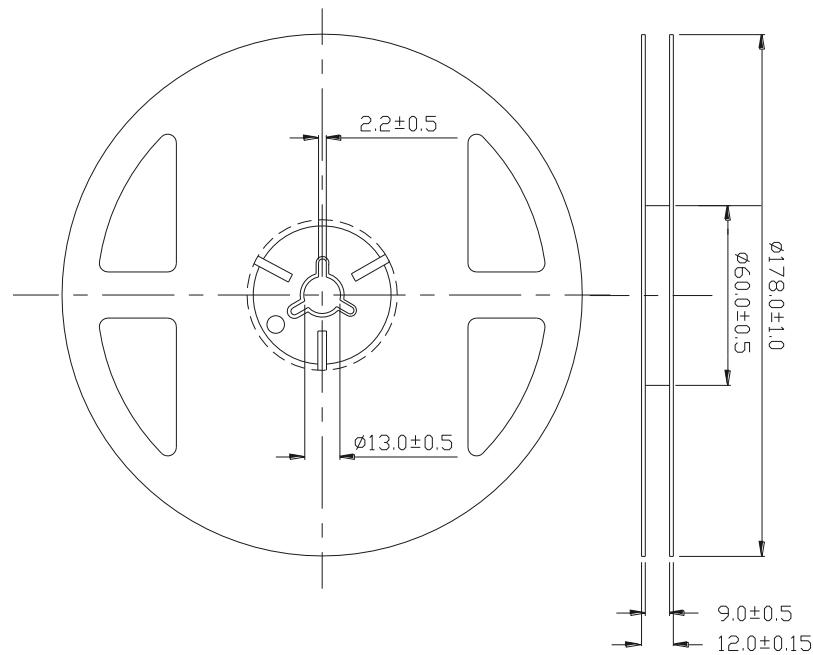
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

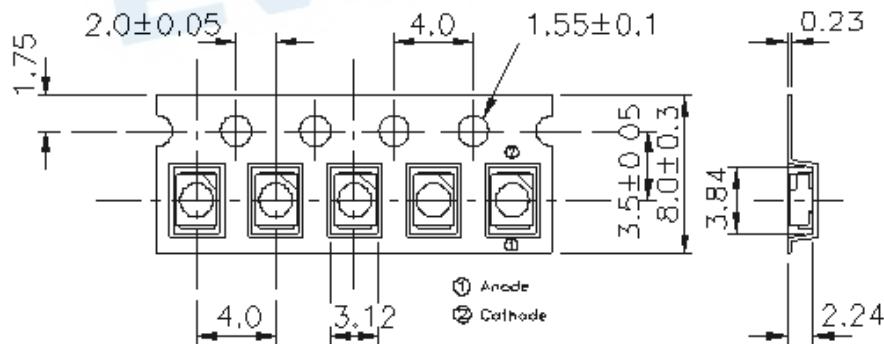


Package Dimensions



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

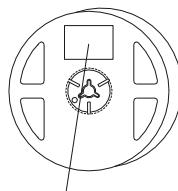
2. Carrier Tape Dimensions:(Quantity: 2000pcs/reel)



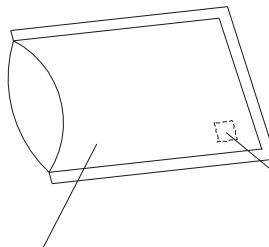
TOLERANCES UNLESS DIMENSION ± 0.1
ANGLE ± 0.5
UNIT:mm

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

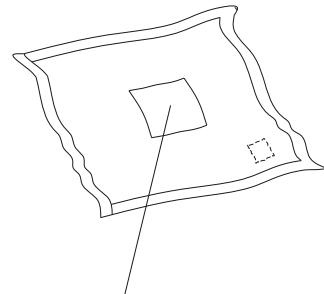
Packing Procedure



Label



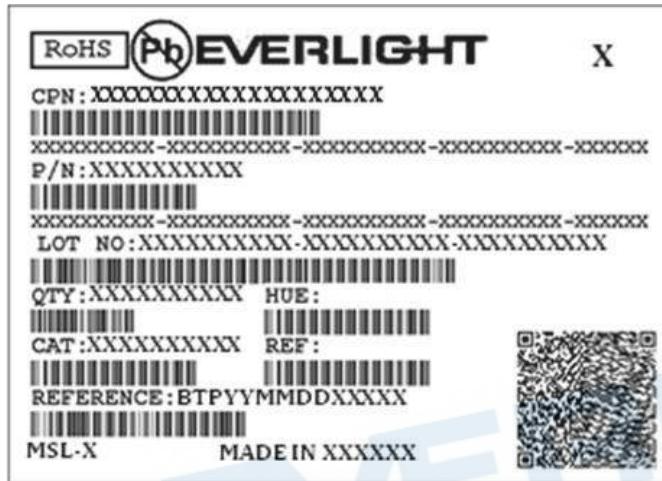
Aluminum moisture-proof bag



Desiccant

Label

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

DISCLAIMER

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