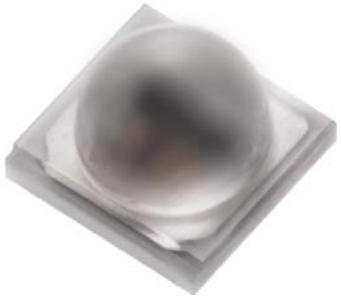
DATASHEET

Technical Data Sheet

High Power Infrared LED

IR-C19D-N90/L562-P03/TR



Features

- Small package with high efficiency
- Peak wavelength λp=940nm
- Soldering methods:SMT
- Thermal resistance (junction to lead): 11℃/W.
- Pb free
- Compliance with EU REACH
- Compliance Halogen Free(Br < 900ppm, Cl < 900ppm, Br+Cl < 1500ppm)
- The product itself will remain within RoHS compliant version.

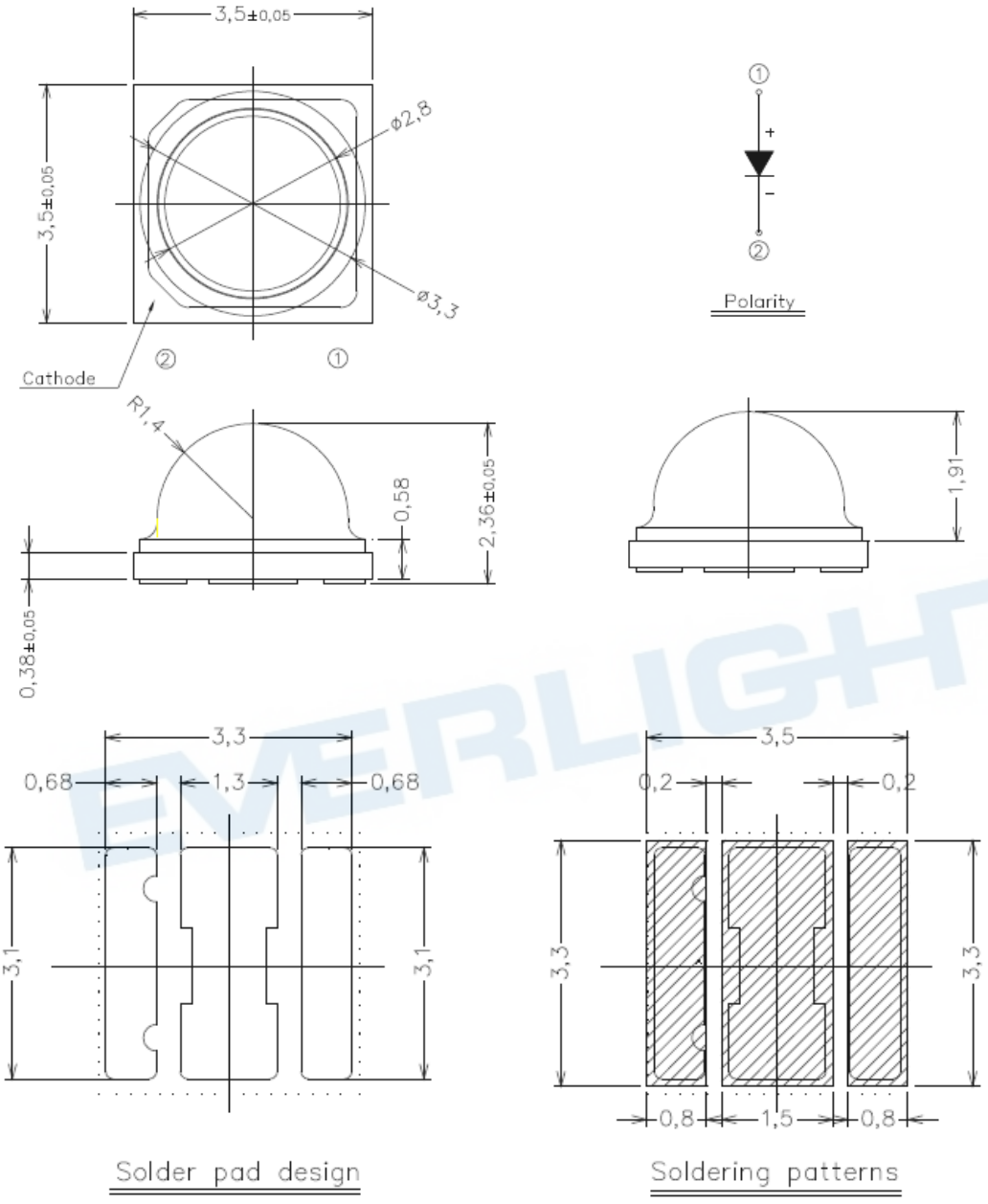
Descriptions

- IR-C19D-N90/L562-P03/TR series is an infrared emitting diode in miniature SMD package which is molded in a water clear silicone with spherical top view lens.
- The device is spectrally matched with silicon photodiode, Phototransistor.

Applications

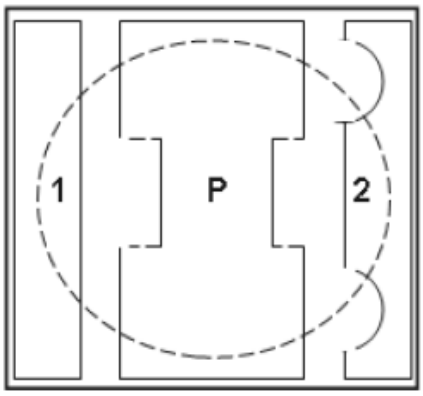
- CCD Camera
- Infrared applied system

Package Dimensions

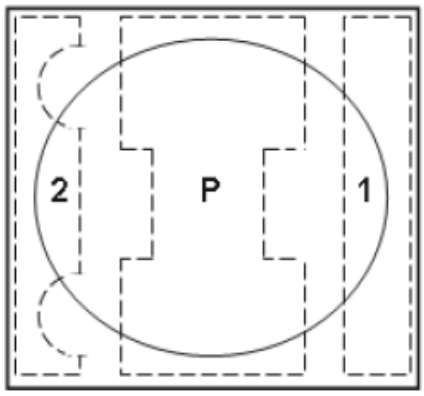


1. Dimensions are in millimeters.
2. Tolerances unless mentioned are ± 0.1mm.
3. Do not handle the device by the lens. Incorrect force applied to the lens may lead to the failure of devices.

Pad Configuration



BOTTOM VIEW



TOP VIEW

PAD	FUNCTION
1	ANODE
2	CATHODE
P	THERMAL PAD

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Forward Current	I_F	1	A
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-40 ~ +125	℃
Storage Temperature	T_{stg}	-40 ~ +125	℃
Junction temperature	T_j	115	℃
Thermal resistance (junction to leadframe)	$R_{th(j-L)}$	11	℃/W
Power Dissipation @I_F=1000mA	P_d	3.7	W

Note: We suggest that customer should add the heat sink with IR-C19D-N90/L562-P03/TR to exclude the heat.

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Total Radiated Power	Po	IF=350mA	--	370	--	mW
		IF=700mA	--	740	--	
		IF=1A	--	1070	--	
Radiant Intensity	IE	IF=350mA	150	170	--	mW/sr
		IF=700mA	330	350	--	
		IF=1A	450	470	--	
Peak Wavelength	λp	IF=350mA	--	940	--	nm
Spectral Bandwidth	Δλ	IF=350mA	--	25	--	nm
Forward Voltage	VF	IF=350mA	--	3.1	--	V
		IF=700mA	--	3.4	--	
		IF=1A	--	3.7	--	
Reverse Current	IR	VR=5V	--	--	10	μA
View Angle	2θ1/2	IF=20mA	--	90	--	deg

Typical Electro-Optical Characteristics Curves

Fig.1 Ambient Temperature vs Forward Current

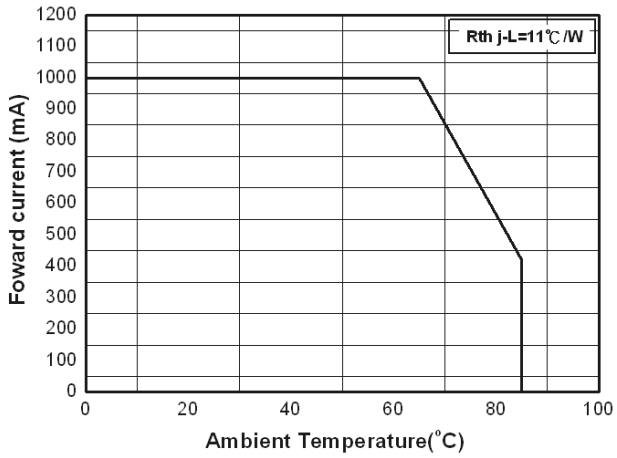


Fig.2 Forward Current vs.. Forward Voltage

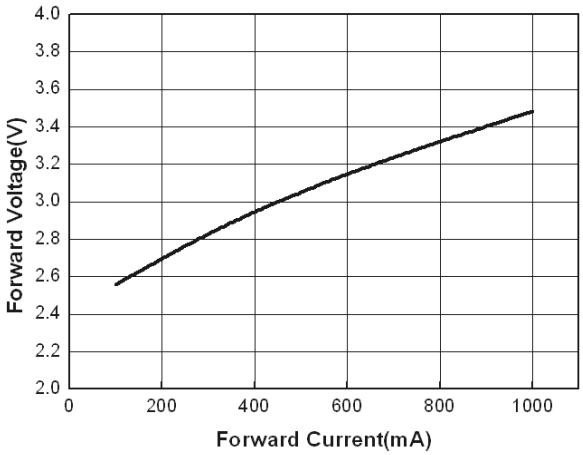


Fig.3 Angular Displacement Relative Radiant Intensity

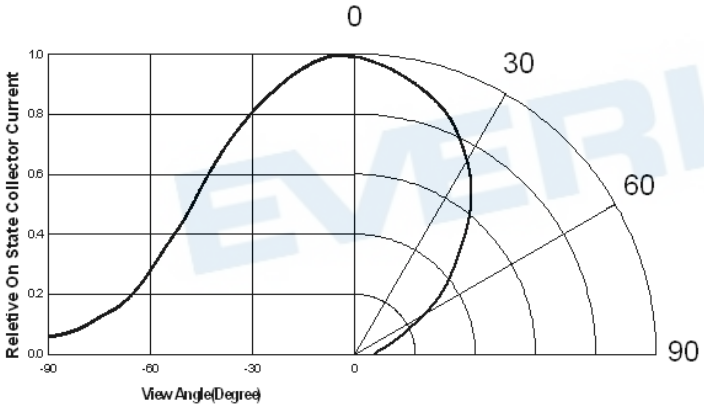


Fig.4 Spectral Distribution

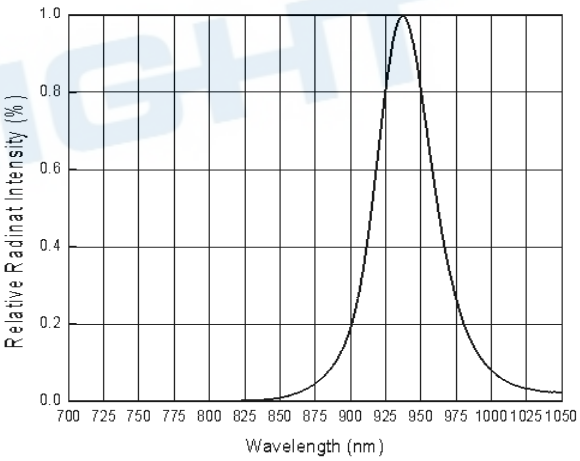
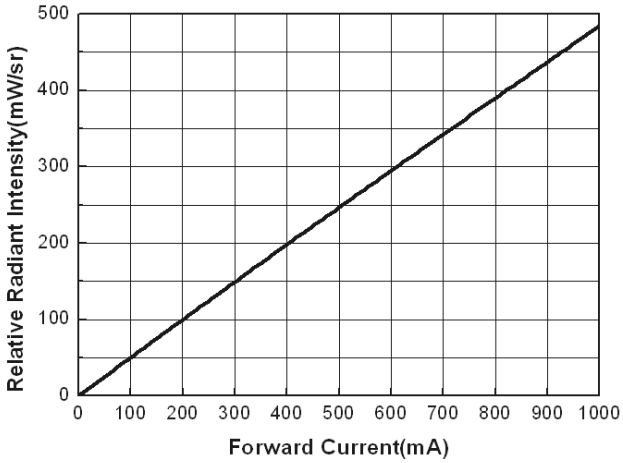


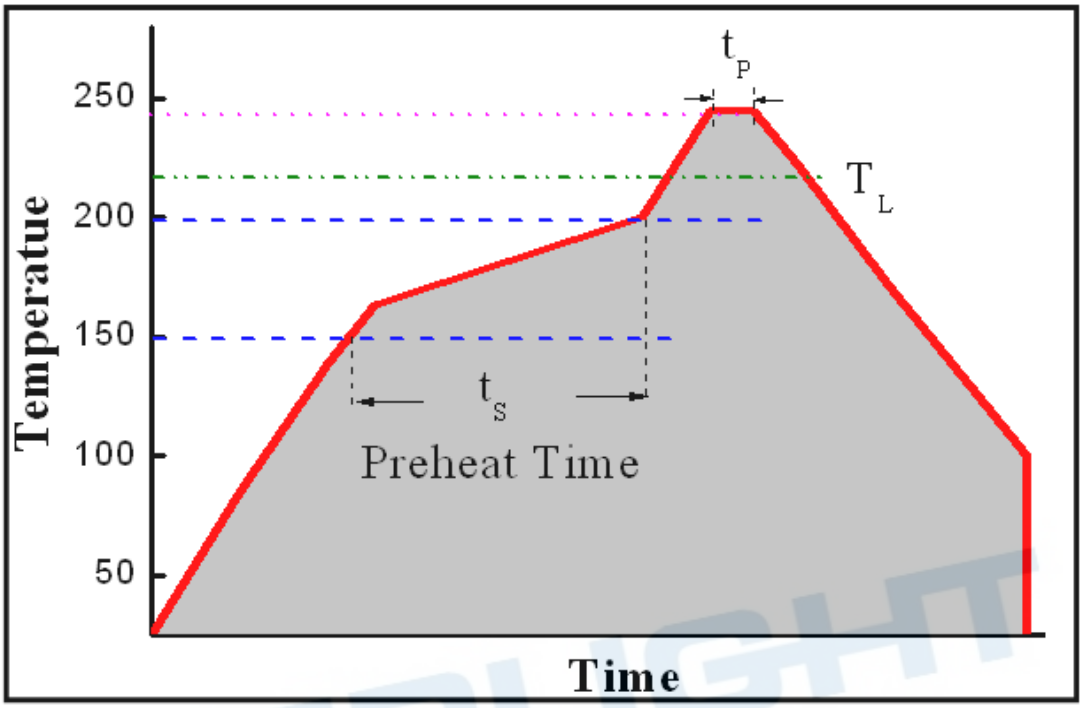
Fig.5 Forward Curren vs. Radiant Intensity



Reflow Soldering Characteristics

For Reflow Process

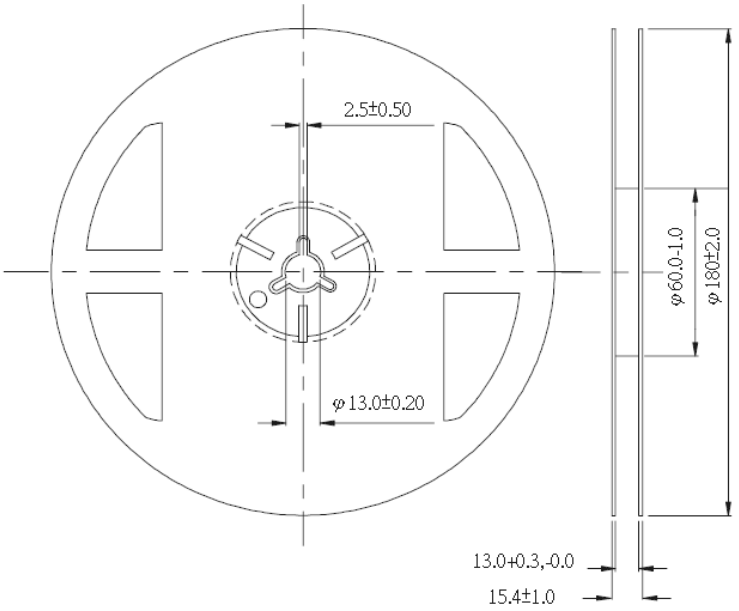
1. C19D series are suitable for SMT processes.
2. Curing of glue in oven must be according to standard operation flow processes.



Profile Feature	Lead Free Assembly
Ramp-Up Rate	2-3 ℃/S
Preheat Temperature	150-200 ℃
Preheat Time (t_S)	60-120 S
Liquid Temperature (T_L)	217 ℃
Time maintained above T_L	60-90 S
Peak Temperature (T_P)	240±5 ℃
Peak Time (t_P)	Max 20 S
Ramp-Down Rate	3-5 ℃/S

3. Reflow soldering should not be done more than twice.
4. In soldering process, stress on the LEDs during heating should be avoided.

Package Dimensions

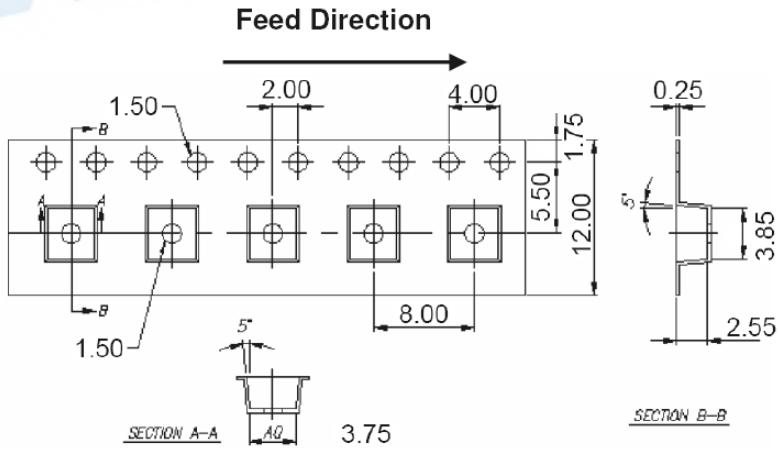


Note: 1. Dimensions are in millimeters

2. The tolerances unless mentioned is ±0.1mm

Carrier Tape Dimensions:

Loaded quantity 400 PCS per reel.



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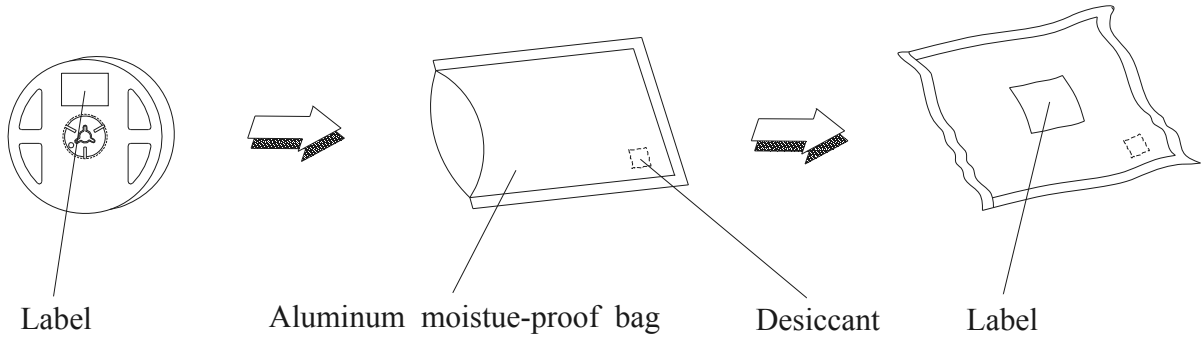
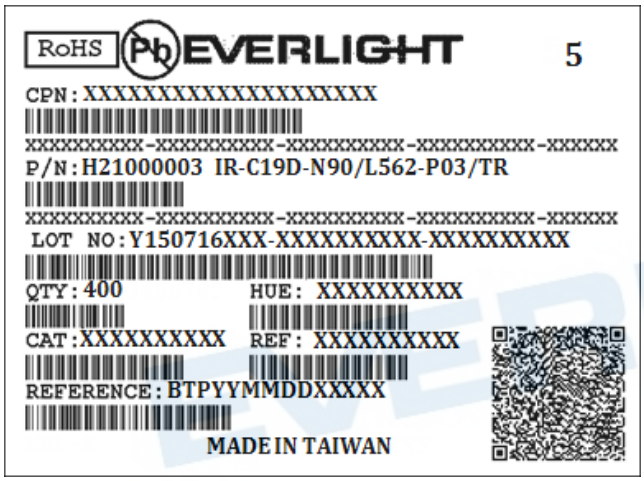
Moisture Resistant Packaging



Label Form Specification



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

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DISCLAIMER

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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.
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