

IR26-51C/L110/TR8

Technical Data Sheet 1.6mm round Subminiature Side Looking Infrared LED

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.

Descriptions

• IR26-51C/L110/TR8 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 emitting for miniature light barrier
- Floppy disk drive
- Optoelectronic switch
- Smoke detector

Device Selection Guide

	Chip	
LED Part No.	Material	Lens Color
IR	GaAlAs	Water Clear

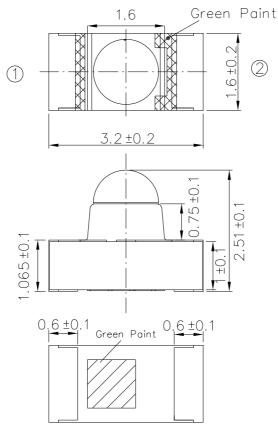
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IR26-51C/L110/TR8

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	Units
Continuous Forward Current	$I_{\rm F}$	65	mA
Reverse Voltage	V _R	5	V
Operating Temperature	T _{opr}	-25 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature *1	T _{sol}	260	°C
Power Dissipation at(or below)	P _d	130	mW
25°C Free Air Temperature			

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

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IR26-51C/L110/TR8

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units	
		I _F =20mA	2.0	4.5			
Radiant Intensity	Ie	$I_F = 100 mA$ Pulse Width $\leq 100 \mu \text{ s}$, Duty $\leq 1\%$		15		mW /sr	
Peak Wavelength	λp	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	
		$I_F = 100 mA$ Pulse Width $\leq 100 \mu \text{ s}$,Duty $\leq 1\%$		1.5	1.8		
		$I_F = 1A$ Pulse Width $\leq 100 \mu$ s ,Duty $\leq 1\%$		2.6	4.0		
Reverse Current	I _R	V _R =5V			10	μA	
View Angle	2 0 1/2	I _F =20mA		20		deg	

Electro-Optical Characteristics (Ta=25°C)

Rankings

Rank	Test Condition	Min	Max	Unit
Н	I _F =20mA	2.0	3.5	
J		3.0	4.5	
K		4.0	6.0	
L		5.0	7.5	mW/sr
М		6.0	9.0	
N		7.0	10.5	

Everlight Electronics Co., Ltd. Device No : DIR-000251 http://www.everlight.com Prepared date : 08-21-2012 Rev 1Page: 3 of 9Prepared by : JasonHo

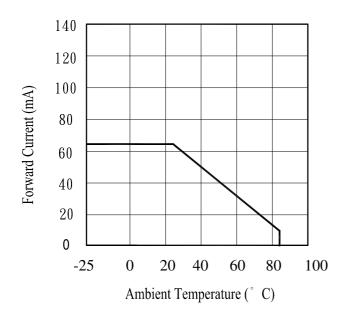
IR26-51C/L110/TR8

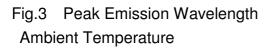
Typical Electro-Optical Characteristics Curves

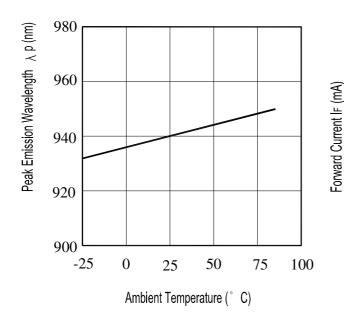
Fig.1 Forward Current vs.

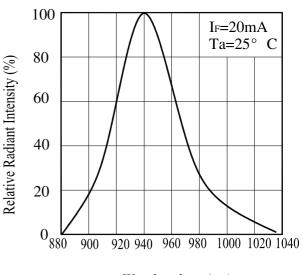
Fig.2 Spectral Distribution

Ambient Temperature









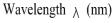
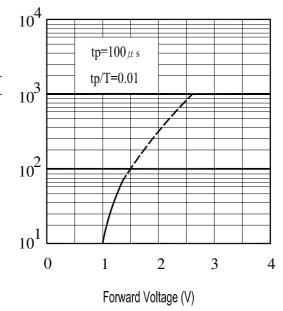


Fig.4 Forward Current vs. Forward Voltage



Everlight Electronics Co., Ltd. Device No : DIR-000251 http://www.everlight.com Prepared date : 08-21-2012 Rev 1Page: 4 of 9Prepared by : JasonHo

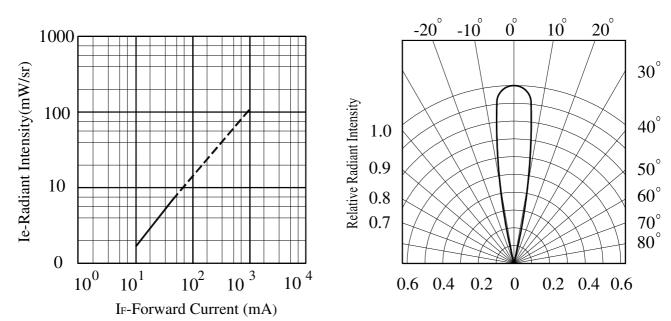
IR26-51C/L110/TR8

Typical Electro-Optical Characteristics Curves

Fig.5 Relative Intensity vs.

Forward Current

Fig.6 Relative Radiant Intensity vs. Angular Displacement



Everlight Electronics Co., Ltd. Device No : DIR-000251 http://www.everlight.com Prepared date : 08-21-2012 Rev 1Page: 5 of 9Prepared by : JasonHo

IR26-51C/L110/TR8

Precautions For Use

1. Over-current-proof

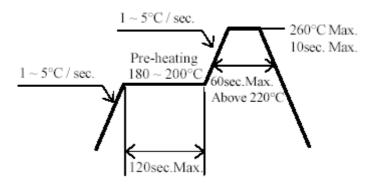
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

- 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 : $60\pm5^{\circ}$ 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.

Everlight Electronics Co., Ltd. Device No : DIR-000251 http://www.everlight.com Prepared date : 08-21-2012 Rev 1Page: 6 of 9Prepared by : JasonHo

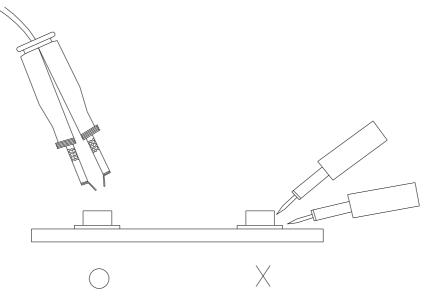
IR26-51C/L110/TR8

4.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 280° 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.

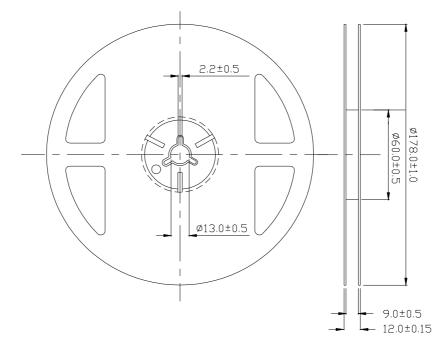


Everlight Electronics Co., Ltd. Device No : DIR-000251 http://www.everlight.com Prepared date : 08-21-2012 Rev 1Page: 7 of 9Prepared by : JasonHo

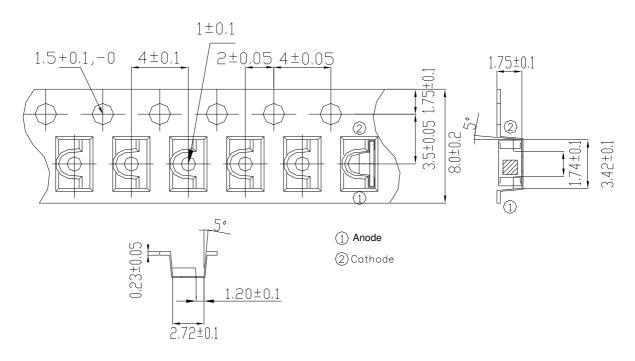


IR26-51C/L110/TR8

Package Dimensions



Taping Dimensions Unit:mm



Everlight Electronics Co., Ltd. Device No : DIR-000251 http://www.everlight.com Prepared date : 08-21-2012 Rev 1 Page: 8 of 9 Prepared by : Jason Ho

IR26-51C/L110/TR8

Packing Quantity Specification

1.1500Pcs/1Volume , 1Volume/1Bag

2.10Boxes/1Carton

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

Notes

- 1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
- 2. When using this product, please observe the absolute maximum ratings and the instructions for using 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.
- 3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.

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