

APPROVAL STAMP



MESSRS:	
ARTICLE:	RT3-2324SDBS-M
DATE:	2016-12-26

APPROVED	DESIGN	DRAWING
		Daini

## PHOTODIODE

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Resin Color
RT3-2324SDBS-M	Silicon	Non-Visible	Black

### 2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Operating temperature	Topr	-25 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Lead soldering temperature (3mm from body ) 260°C for 5sec.			

### 3.ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25°C

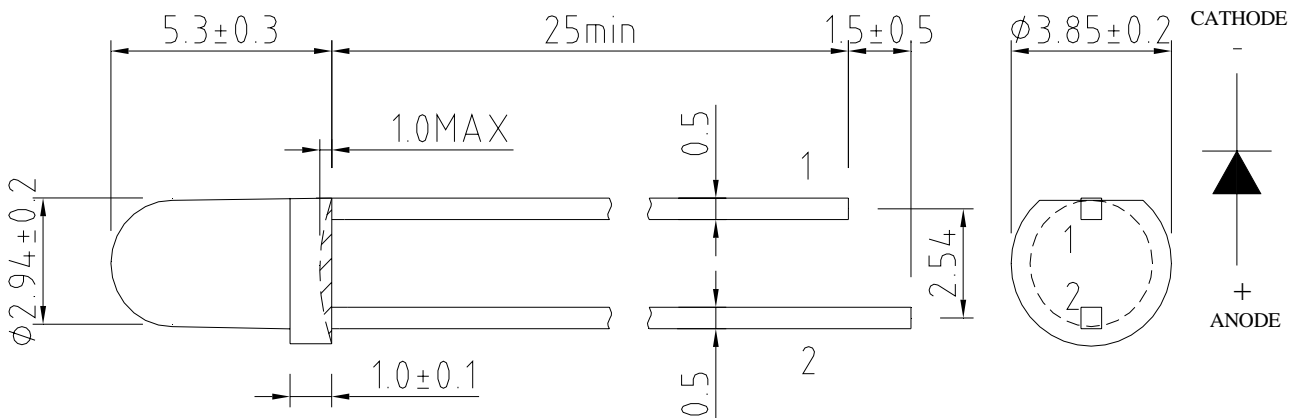
Characteristic	Symbol	Test Conditions	Typical	Max	Min	Unit
Forward Voltage	VF	If=10 mA , H=0	0.5	1.3		V
Reverse breakdown voltage	VBR	IR=100 μA , H=0	35			V
Light current	IL	Vce= 10 V Ee= 0.5 mW/cm <sup>2</sup> λp= 940 nm	10	17	-	mA
Total capacitance	Ct	VR=3V ,H=0, F=1MHZ	4.9			pF
Reverse dark current	ID	VR=10V , H=0	2	10		nA
Peak sensitive wavelength	λp		940			nm
Viewing angle	2θ 1/2		30			deg.

※ IL 誤差值±15% μA

4.DIMENSIONS UNIT : m/m

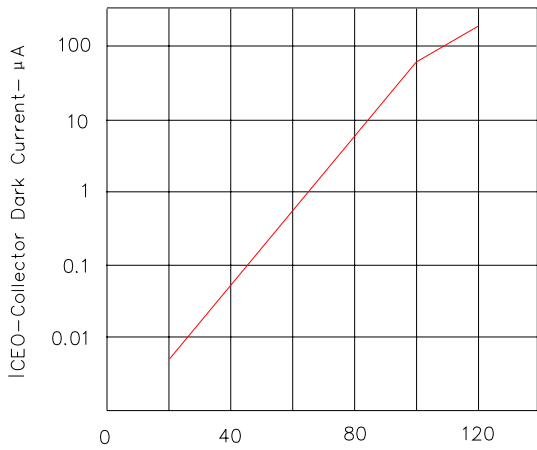
SIGN : 1.CATHODE

2.ANODE

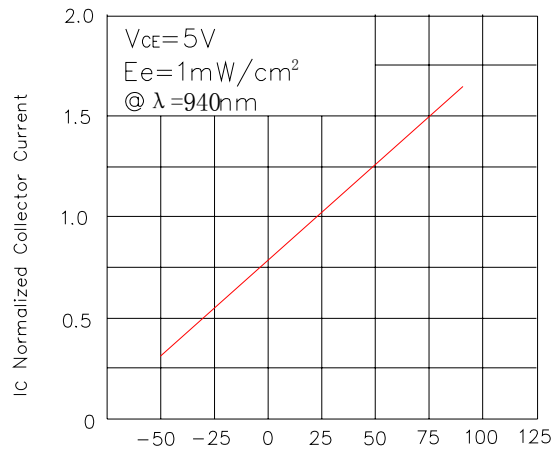


Model : RT3-2324SDBS-M

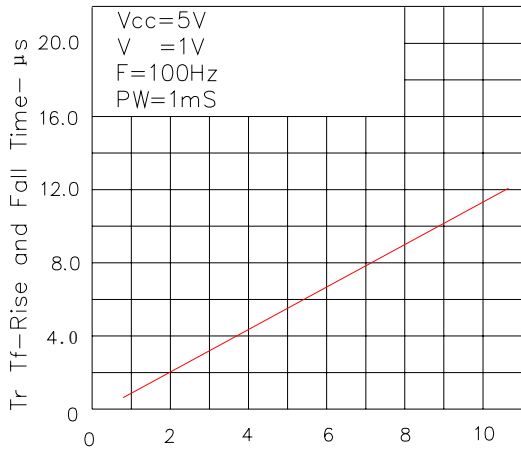
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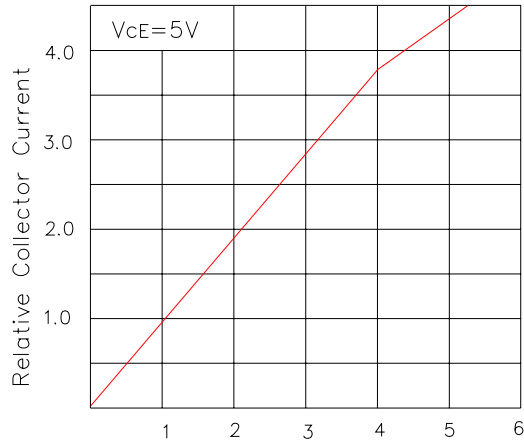
TA—Ambient Temperature—°C  
FIG.1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE



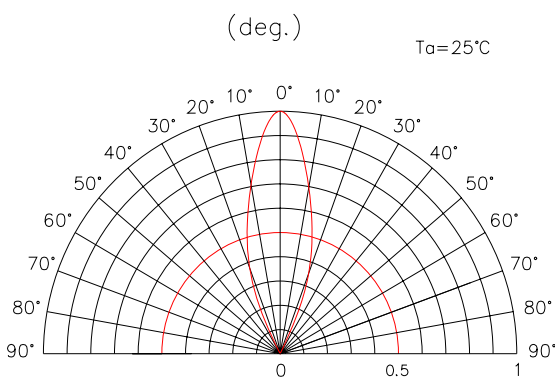
TA—Ambient Temperature—°C  
FIG.2 NORMALIZED COLLECTOR CURRENT VS AMBIENT TEMPERATURE



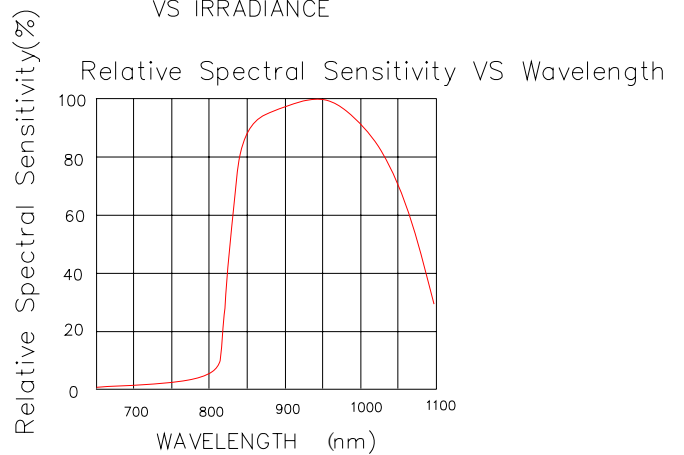
RL—Load Resistance—K Ω  
FIG.3 RISE AND FALL TIME VS LOAD RESISTANCE



Ee—Irradiance—mw/cm<sup>2</sup>  
FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE



ANGULAR DISPIACEMENT



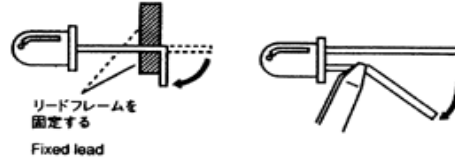
**APPLICATION NOTES:**

**Static Electricity and Surge**

Static electricity and surge damage LEDs. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs. All devices, equipment and machinery must be electrically grounded.

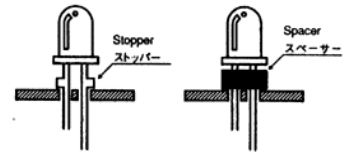
**Lead Forming**

The leads should be bent at a point at least 3mm from the epoxy resin of the LEDs. Bending should be performed with the base firmly fixed by means of a jig or radio pliers.

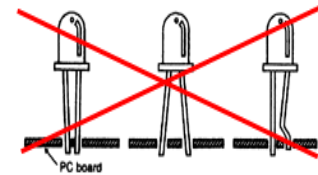


**Mounting Method**

The leads should be formed so they are aligned exactly with the holes on the PC board. This will eliminate any stress on the LEDs. Use LEDs with stoppers or resin spacer to accurately position the LEDs. The epoxy resin base should not be touching the PC board when mounting the LEDs.



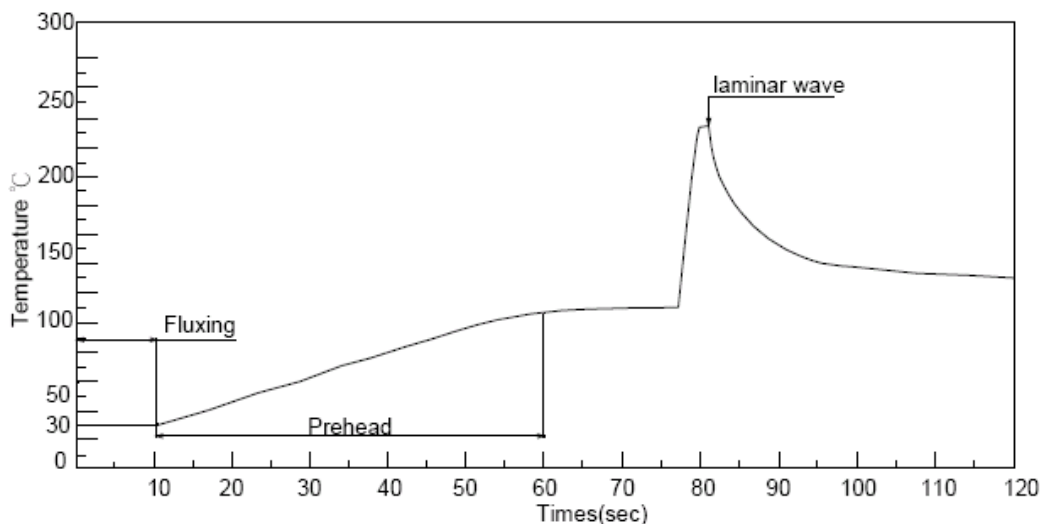
Mechanical stress to the resin may be caused by the warping of the PC board when soldering. The LEDs must not be designed into a product or system where the epoxy lens is pressed into a plastic or metal board. The lens part of the LED must not be glued onto plastic or metal. The mechanical stress to the leadframe must be minimized.



**Soldering**

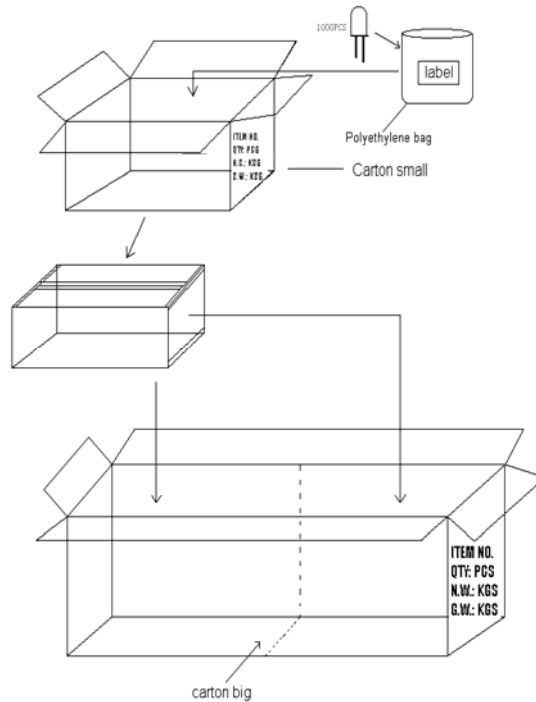
Solder the LEDs no closer than 3mm from the base of the epoxy resin. For solder dipping, it may be necessary to fix the LEDs for correct positioning. When doing this, any mechanical stress to the LEDs must be avoided. When soldering, do not apply any mechanical force to the leadframe while heating. Repositioning after soldering must be avoided.

Soldering conditions:			
Lamp LED	Soldering Iron	Dip Soldering	Reflow Soldering
	300degC(max), 3sec(max)	260degC(max), 5sec(max)	Not allowed.



## PACKAGING STANDARD

The boxes are not water resistant and they must be kept away from water and moisture. The LEDs are packed in cardboard boxes after packaging in normal or anti-electrostatic bags. Cardboard boxes will be used to protect the LEDs from mechanical shocks during transportation. 1000pcs/bag



## CONDITIONS:

The reliability of products shall be satisfied with items listed below.

NO.	Item	Condition	Time/Cycle	Number of Damaged
1	Soldering Heat Test	260°C	5 sec	0/60
2	Thermal Shock	0°C (15sec) ~100°C (15sec)	20 cycle	0/60
3	High Temp. Storage	100°C	1000 Hrs	0/60
4	Low Temp. Storage	-25°C	1000 Hrs	0/60
5	Temperature Cycle Test	-40°C ~85°C	100 Cycles 200Hr	0/60
6	High Temp. High Humidity Test	85°C, 85% RH	1000Hrs	0/60