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# SPECIFICATION

*PART NO. : LPFG83-FG-940-GJ44*

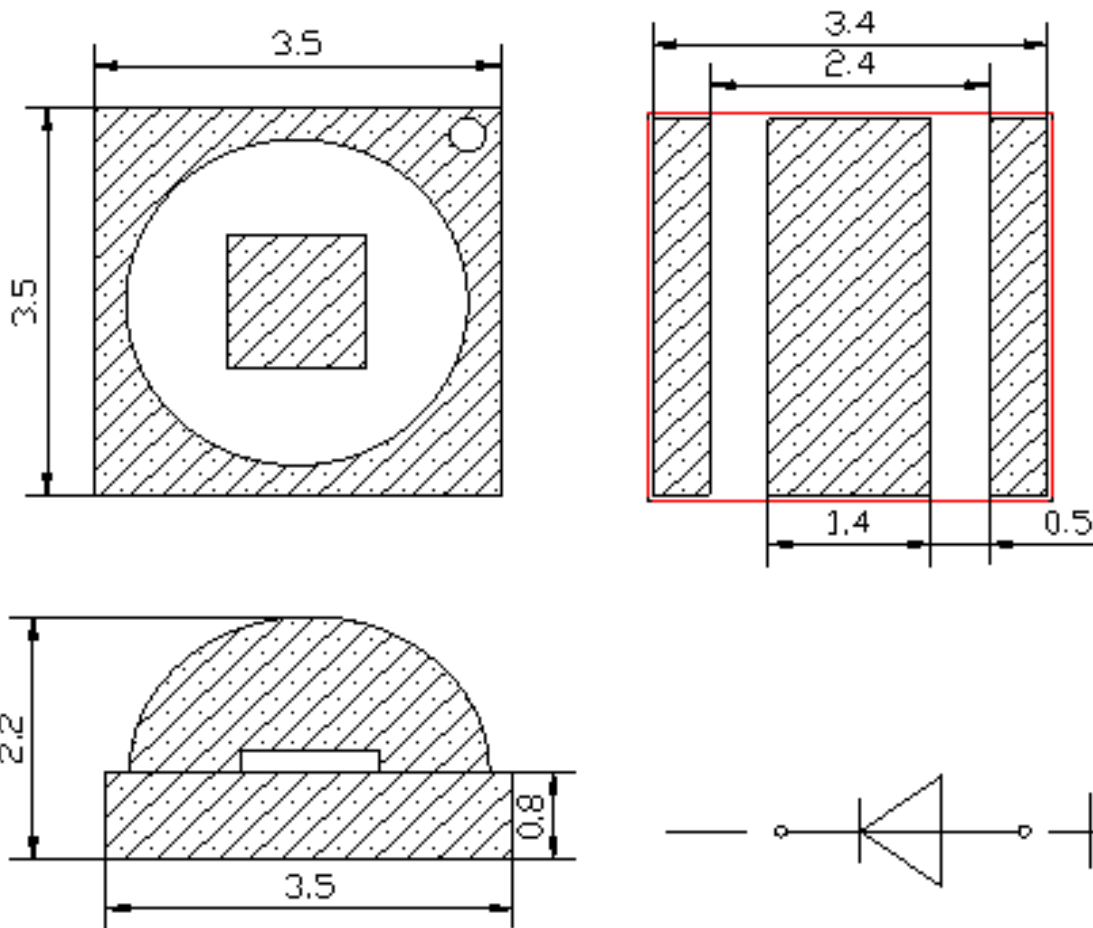
*3.5 x 3.5mm SMD TYPE*

*PRELIMINARY*



Approved by	Checked by	Prepared by
<i>Yue</i>	<i>Lian</i>	<i>JinHui</i>

### Package Dimensions



注：带孔边为正极

### Description

Part No.	LED Chip		Lens Color
	Material	Emitting Color	
LPFG83-FG-940-GJ44	AlGaAs/GaAs	Infrared	Water clear

**Absolute Maximum Ratings at Ta=25°C**

Parameter	Symbol	Rating	Unit
Power Dissipation	P <sub>d</sub>	1	W
Reverse Voltage	V <sub>r</sub>	5	V
D.C. Forward Current	I <sub>f</sub>	500	mA
LED Junction Temperature	T <sub>j</sub>	125	°C
Operating Temperature Range	Topr.	-40 to +85	°C
Storage Temperature Range	Tstg.	-40 to +100	°C
Electric Static Discharge Threshold (HBM)	ESD	8000	V

**Electrical and Optical Characteristics:**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Radiated Output Power	PO	I <sub>f</sub> =350mA	180	240		mW
Forward Voltage	V <sub>f</sub>	I <sub>f</sub> =350mA	1.3		1.9	V
Peak Wavelength	λ <sub>p</sub>	I <sub>f</sub> =350mA	940		950	nm
Reverse Current	I <sub>r</sub>	V <sub>r</sub> =5V			10	μA
Viewing Angle	2θ 1/2	I <sub>f</sub> =350mA		120		deg

Notes: 1.Tolerance of Luminous Intensity is ±10%

2.Tolerance of Forward Voltage is ±0.1V

3.Tolerance of Dominant Wavelength is ±2nm

4. Customer' s special requirements are also welcome

## Typical Electrical/Optical Characteristic Curves (25°C Ambient Temperature Unless Otherwise Noted)

Fig.3 Relative Radiant Flux vs. Forward current

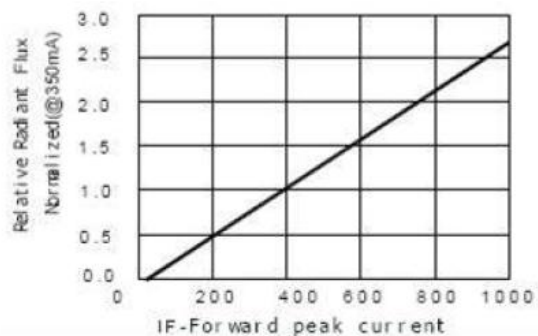


Fig.1 Forward current vs. Forward voltage

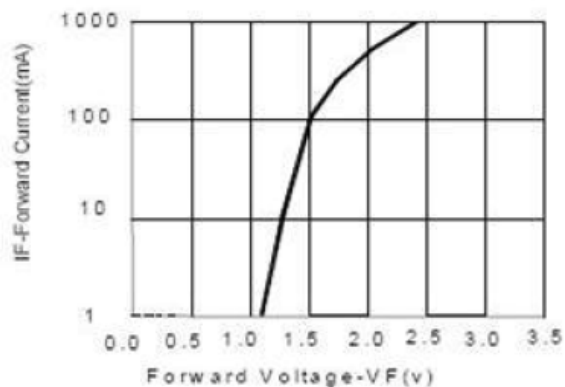
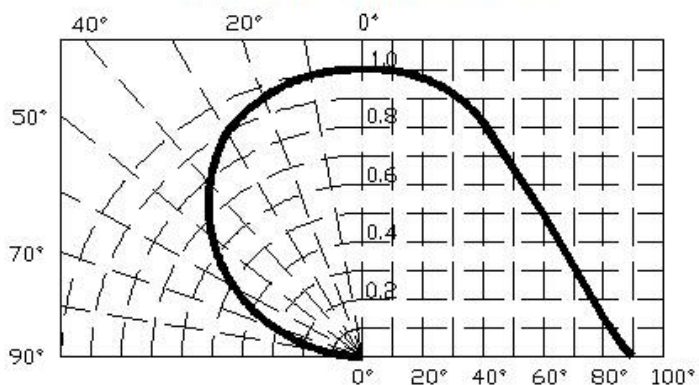


Diagram characteristics of radiation



**PRECAUTION IN USE**

**Storage**

**Recommended storage environment**

**Temperature:** 5°C ~ 30°C (41°F ~ 86°F)

**Humidity:** 60% RH Max.

**Moisture measures:** Please refer to Moisture-sensitive label on reels package bags.

If unused LEDs remain, they should be stored in moisture proof packages, such as sealed container with packages of moisture absorbent material (silica gel). It is also recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.

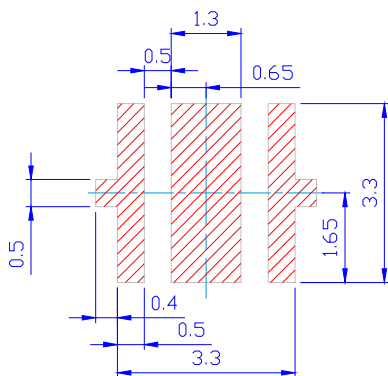
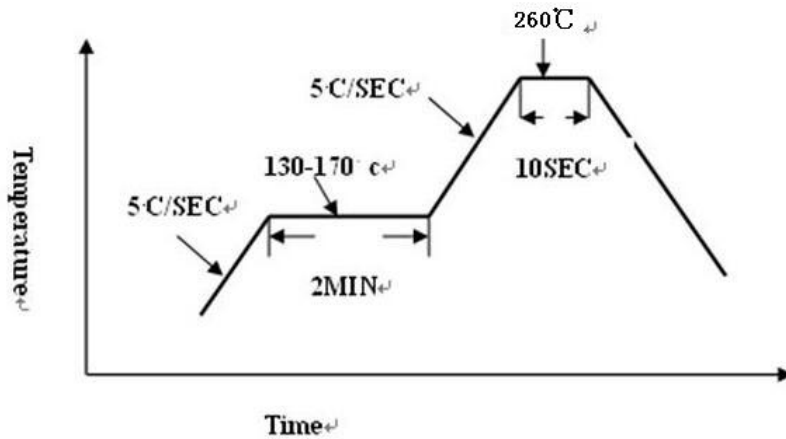
Fold the opened bag firmly and keep in dry environment.

**Soldering**

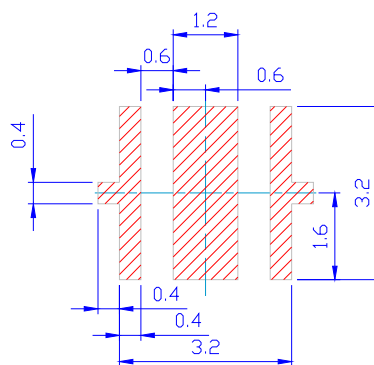
Reflow Soldering	
Lead – free Solder	
Pre-heat	130~170°C
Pre-heat time	120sec. Max.
Peak temperature	260°C Max.
Soldering time	10sec. Max.

\*After reflow soldering rapid cooling should be avoided.

Reflow Temp/Time:



RECOMMENDED PCB SOLDER PAD



RECOMMENDED STENCIL PATTERN  
(HATCHED AREA IS OPENING)

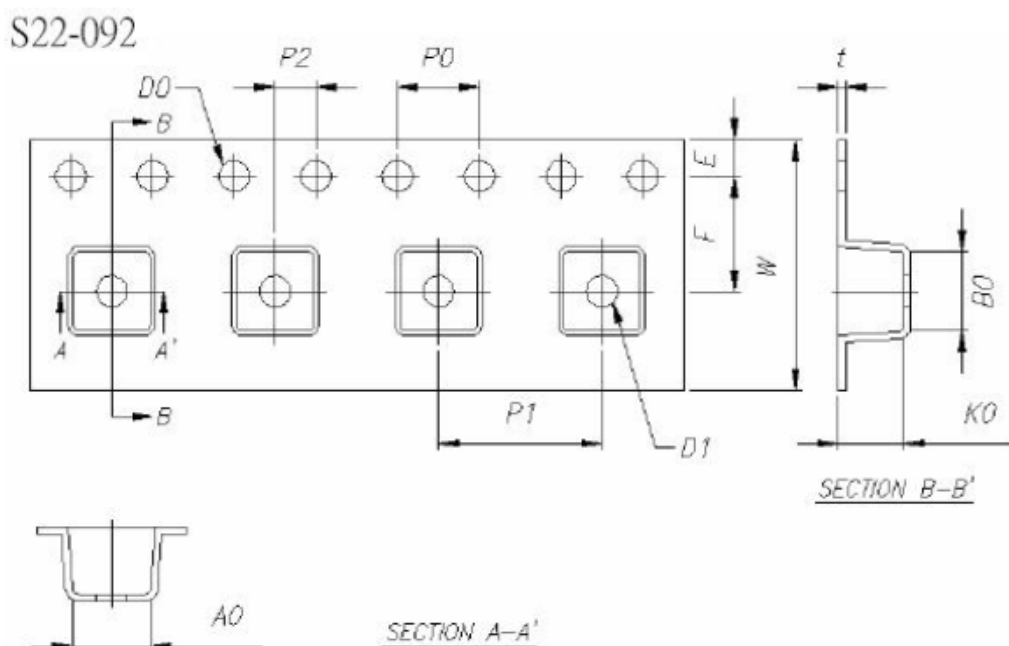
## **Sulfur-sensitive**

- I There is silver-plated metal part on the inner/outer side of the outer package.  
If exposed to the condition with corrosive gas, the silver plating surface may go bad, which will affect soldering strength and optical properties. Therefore, after opening it must be kept in a sealed container, etc.**
- I Materials contain sulfur component (gasket, adhesive, etc.) may have bad effects on the surface of the coating, so please do not use such materials in the product.**
- I In cardboard boxes and rubber, even in the atmosphere may contain minute amount of corrosive gases; In addition, the resin material may also contain halogen which has a bad effect on the surface of the coating.**
- I Even if the soldering installation and product assembly finished, by the effect of corrosive gas generated by relative materials of LED and external injected, the coating surface may go bad, so it is necessary to design the product taking into account the above factors.**
- I If requires, it is best to use a silicone washer, but be aware that low molecular silicone may cause the product poor contact.**
- I Keep the product in location where has less temperature change, because moisture condensation would be generated under a condition of strong temperature change.**

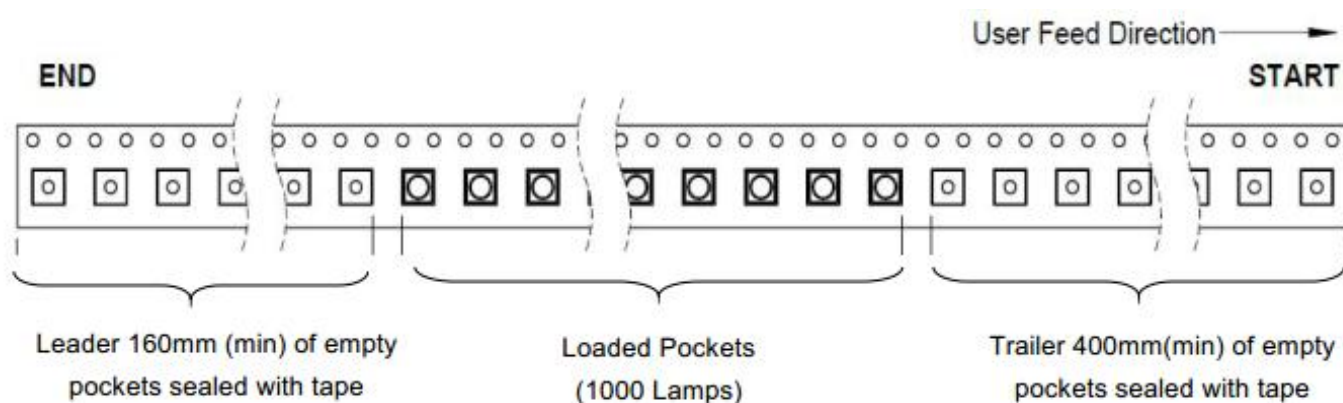
## **DISCLAIMER**

- 1. Our department reserves the right(s) on the adjustment of product material mix for the specification.**
- 2.The product meets our department 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.**
- 4.When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Our department assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.**
- 5.These specification sheets include materials protected under copyright of our department.  
Reproduction in any form is prohibited without obtaining our department's prior consent.**
- 6.This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death.**

### Dimensions for Tape



### Dimensions for Reel



**Notes:**

1. All dimensions are in mm, tolerance is  $\pm 2.0$ mm unless otherwise noted.
2. Specifications are subject to change without notice.
3. 1000 pcs/Reel.