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[Http://www.ledtech.com.tw](http://www.ledtech.com.tw)

SPECIFICATION

PART NO. : LT0383N-43-940E-BAA

3.0mm ROUND INFRARED LAMP



Approved by

Checked by

Prepared by

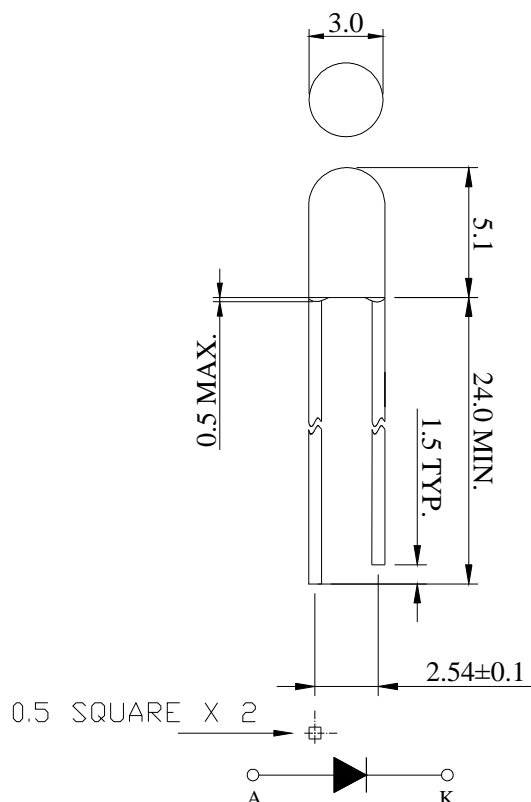
Yang

Lian

Shen

Description

This infrared lamp is made with AlGaAs/GaAs chip and water clear epoxy resin.



Notes:

1. All dimensions are in mm.
2. Tolerance is ± 0.25mm unless otherwise noted.

Description

Part No.	LED Chip		Lens Color
	Material	Emitting Color	
LT0383N-43-940E-BAA	AlGaAs/GaAs	Infrared	Water clear

Absolute Maximum Ratings at Ta=25°C

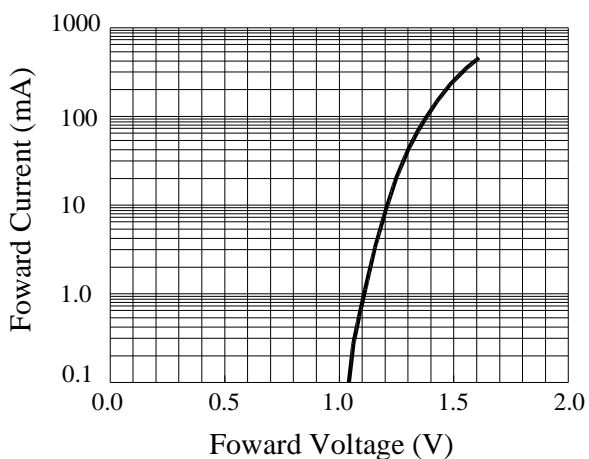
Parameter	Symbol	Rating	Unit
Power Dissipation	PD	145	mW
Reverse Voltage	VR	5	V
D.C. Forward Current	If	100	mA
Reverse (Leakage) Current	Ir	100	μ A
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	If(Peak)	200	mA
Operating Temperature Range	Topr	-25 to +85	°C
Storage Temperature Range	Tstg	-40 to +100	°C
Soldering Temperature(1.6mm from body)	Tsol	Dip Soldering : 260°C for 5 sec. Hand Soldering : 350°C for 3 sec.	

Electrical and Optical Characteristics:

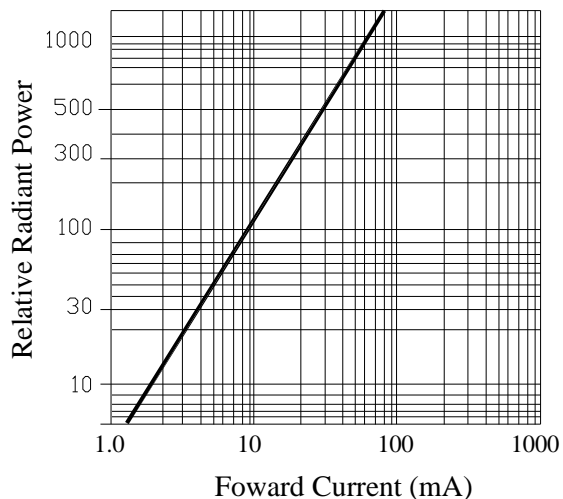
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Radiant Intensity	Ie	If=20mA	7.56	15		mW/sr
Forward Voltage	Vf	If=20mA		1.25	1.45	V
Peak Wavelength	λ_p	If=20mA		940		nm
Dominant Wavelength	λ_d	If=20mA		---		nm
Reverse (Leakage) Current	Ir	Vr=5V			100	μ A
Viewing Angle	$2\theta_{1/2}$	If=20mA		40		deg
Spectrum Line Halfwidth	$\Delta\lambda$	If=20mA		50		nm

Notes: 1.Tolerance of Luminous Intensity is $\pm 15\%$.2.Tolerance of Forward Voltage is $\pm 0.1V$.3.Tolerance of Dominant Wavelength is $\pm 1nm$.

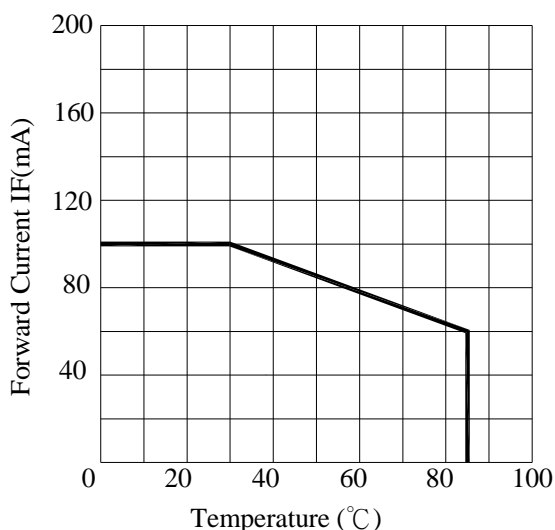
Typical Electrical / Optical Characteristics Curves :



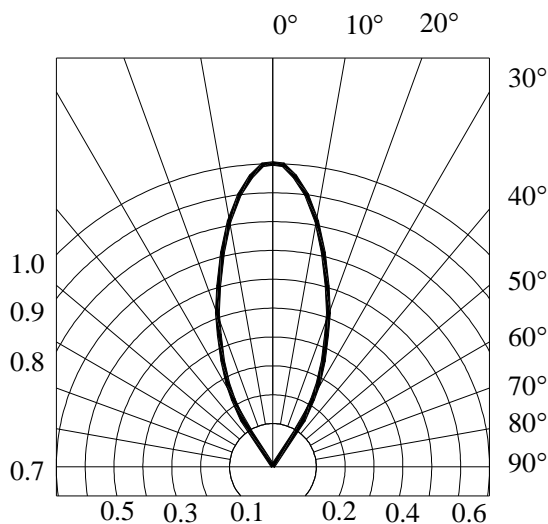
FORWARD CURRENT VS. APPLIED VOLTAGE



FORWARD CURRENT VS. LUMINOUS INTENSITY



FORWARD CURRENT VS. AMBIENT TEMPERATURE



RADIATION DIAGRAM

Precautions:

TAKE NOTE OF THE FOLLOWING IN USE OF LED

1. Temperature in use

Since the light generated inside the LED needs to be emitted to outside efficiently, a resin with high light transparency is used; therefore, additives to improve the heat resistance or moisture resistance (silica gel, etc) which are used for semiconductor products such as transistors cannot be added to the resin. Consequently, the heat resistant ability of the resin used for LED is usually low; therefore, please be careful on the following during use. Avoid applying external force, stress, and excessive vibration to the resins and terminals at high temperature. The glass transition temperature of epoxy resin used for the LED is approximately 120-130°C. At a temperature exceeding this limit, the coefficient of linear expansion of the resin doubles or more compared to that at normal temperature and the resin is softened. If external force or stress is applied at that time, it may cause a wire rupture.

2. Soldering

Please be careful on the following at soldering.

After soldering, avoided applying external force, stress, and excessive vibration until the products go to cooling process (normal temperature), <Same for products with terminal leads>

(1) Soldering measurements:

Distance between melted solder side to bottom of resin shall be 1.6mm or longer.

(2) Dip soldering :

Pre-heat: 90°C max. (Backside of PCB), Within 60 seconds.

Solder bath: 260±5°C (Solder temperature), Within 5 seconds.

(3) Hand soldering: 350°C max. (Temperature of soldering iron tip), Within 3 seconds.

3. Insertion

Pitch of the LED leads and pitch of mounting holes need to be same.

4. Others

Since the heat resistant ability of the LED resin is low, SMD components are used on the same PCB, please mount the LED after adhesive baking process for SMD components. In case adhesive baking is done after LED lamp insertion due to a production process reason, make sure not to apply external force, stress, and excessive vibration to the LED and follow the conditions below.

Baking temperature: 120°C max. Baking time: Within 60 seconds. If soldering is done sequentially after the adhesive baking, please perform the soldering after cooling down the LED to normal temperature.

5. This LED is designed to be wave solder and dip soldered on to a PCB. If reflow soldered, Ledtech cannot guarantee its reliability.

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.

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. Please contact authorized our department sales agent for special application request.

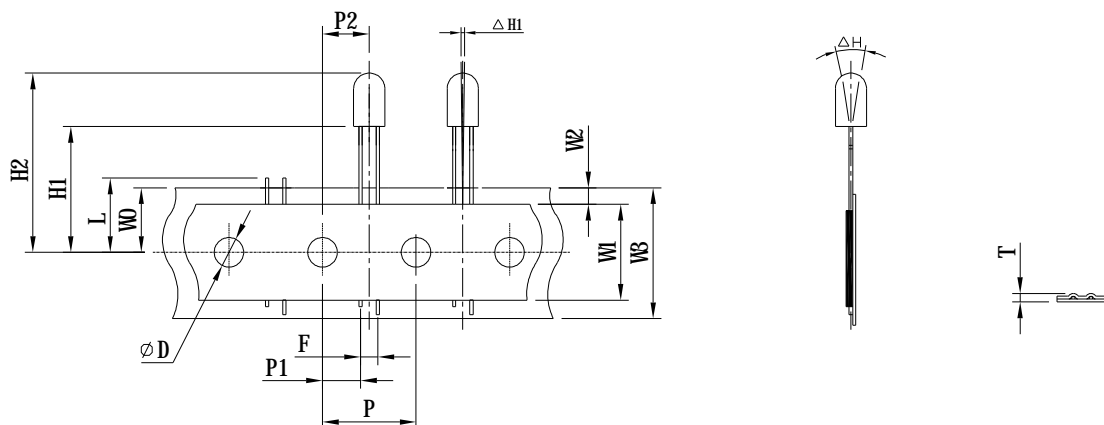
Features

*COMPATIBLE WITH RADIAL LEAD
AUTO INSERTION EQUIPMENT

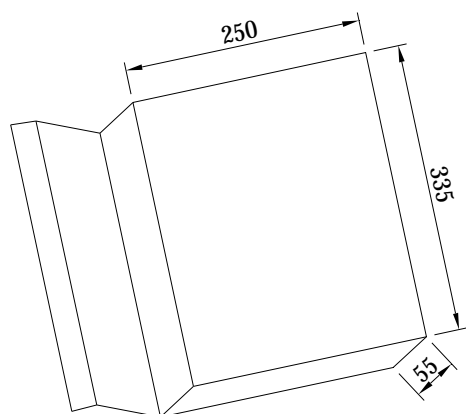
Description

THE ABSOLUTE MAXIMUM RATINGS,
ELECTRICAL/OPTICAL CHARACTERISTICS
AND PACKAGE DIMENSIONS FOR LAMPS
PACKAGED ON T/R ARE INDENTICAL TO

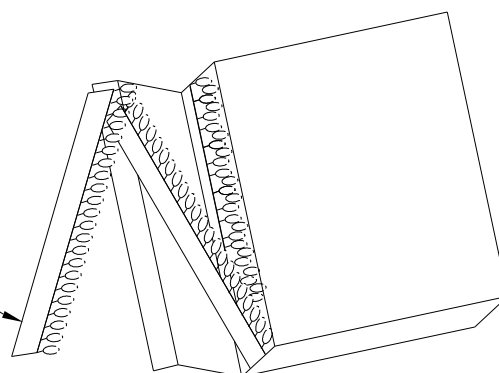
Dimensions for Tape



SYMBOL	SPECIFICATION		SYMBOL	SPECIFICATION	
	MINIMUM (mm)	MAXIMUM (mm)		MINIMUM (mm)	MAXIMUM (mm)
D	3.80	4.20	P1	4.4	5.8
F	2.3	3.0	P2	5.05	7.65
ΔH	----	2.00	T	----	1.42
H1	19.5	20.5	W0	8.75	9.5
L	W0	11.0	W1	14.5	15.5
ΔH1	----	2.00	W2	0.00	4.00
H2	----	34.2	W3	17.5	19.0
P	12.4	13.0			



CATHODE LEAD LEAVES
BOX FIRST

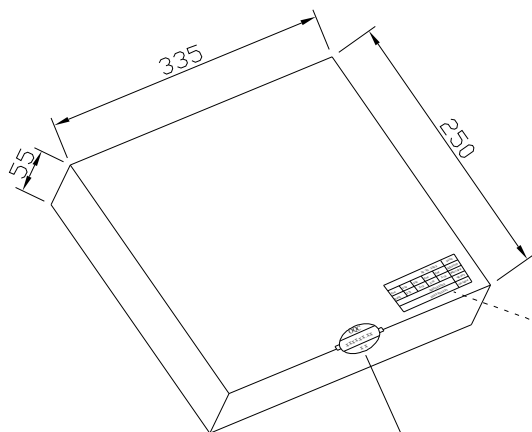


NOTE:

1. ALL DIMENSIONS ARE IN mm, TOLERANCE IS ±2.0mm UNLESS OTHERWISE NOTED.
2. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

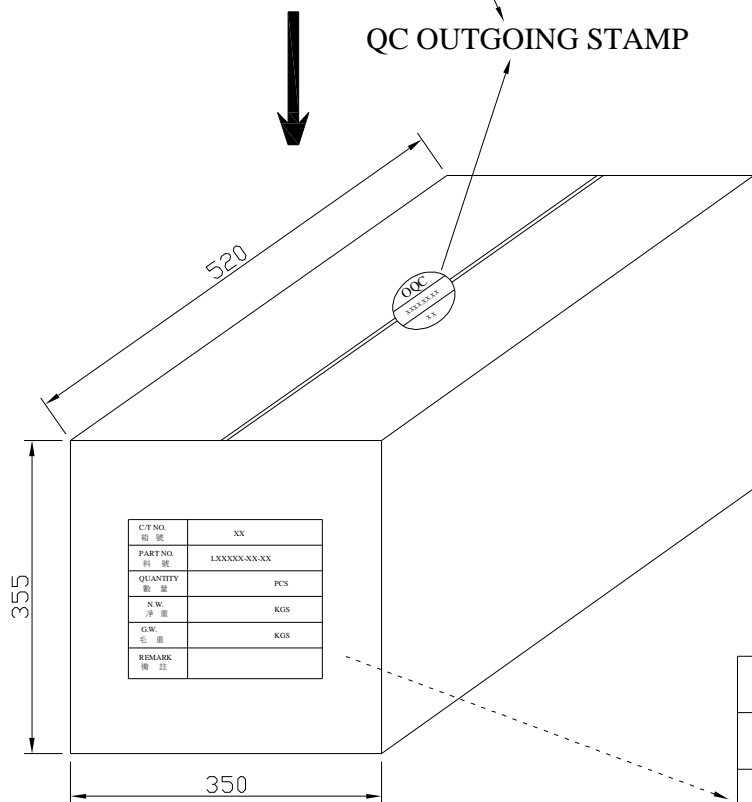
ENCASED TYPE

**SMALL CARTON
QUANTITY: 3000 PCS**



PART NO.	LXXXXX-XX-XX				
LOT NO.	XXXXXXXXXX				
BIN CODE	Xx X	Xx X	Xx X	Xx X	TOTAL
QUANTITY	PCS	PCS	PCS	PCS	PCS
DATE	XXXX, XX, XX				

QC OUTGOING STAMP



**SMALL CARTON
QUANTITY: 36,000 PCS**

C/T NO. 箱號	XX
PART NO. 料號	LXXXXX-XX-XX
QUANTITY 數量	PCS
N.W. 淨重	KGS
G.W. 毛重	KGS
REMARK 備註	

C/T NO. 箱號	XX
PART NO. 料號	LXXXXX-XX-XX
QUANTITY 數量	PCS
N.W. 淨重	KGS
G.W. 毛重	KGS
REMARK 備註	