

# **LG-05IR4D94C-003A-B-T**

## **DATA SHEET**

SPEC. NO. : SZ21031301  
DATE : 2021/08/07  
REV. : A/1

Approved By:

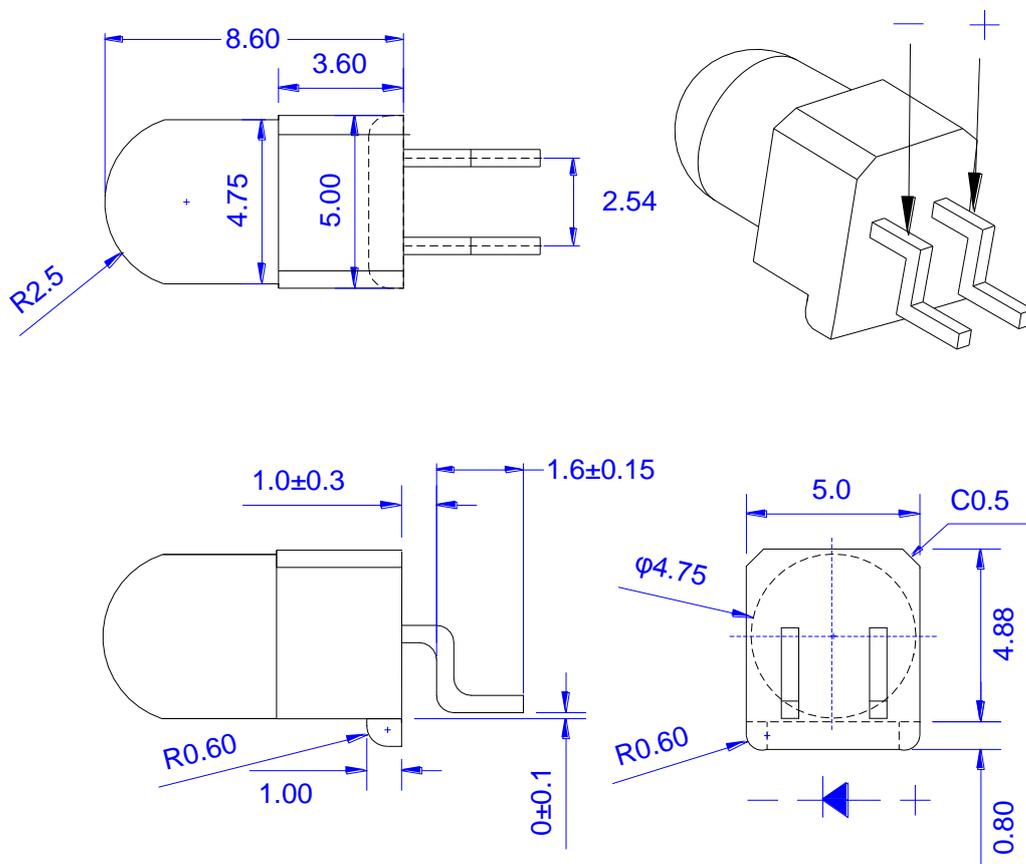
Checked By:

Prepared By:

## Features

- ◆ Pb free product—RoHS compliant
- ◆ Low power consumption, High efficiency
- ◆ General purpose leads
- ◆ Reliable and rugged
- ◆ Long life – solid state reliability
- ◆ Radiant angle: 30 °

## Package Dimension



Part NO.	Chip Material	Lens Color
LG-05IR4D94C-003A-B-T	AlGaAs	Blue diffusion

### Notes:

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.20$ mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

## Absolute Maximum Ratings at Ta=25°C

Parameter	MAX.	Unit
Power Dissipation	200	mW
Continuous Forward Current	100	mA
Peak Forward Current <sup>*3</sup>	200	mA
Reverse Voltage	5	V
Operating Temperature	-40°C to + 85°C	
Storage Temperature	-40°C to + 100°C	
IR Reflow Temperature	245°C for 30 seconds	

### 1. Storage:

The storage ambient for the LEDs should not exceed 30 °C temperature or 70% relative humidity.

It is recommended that LEDs out of their original packaging are used within three months.

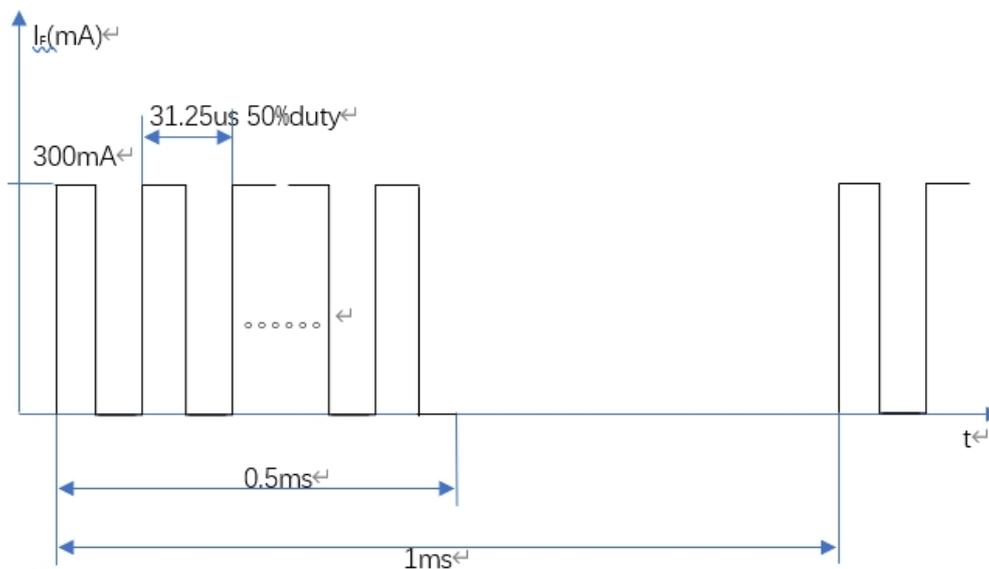
For extended storage out of their original packaging, it is recommended that the LEDs be stored in a sealed container with appropriate desiccant or in desiccators with nitrogen ambient.

### 2. Precautions in handling:

- When soldering, leave 2mm of minimum clearance from the resin to the soldering point.
- Dipping the resin to solder must be avoided.
- Correcting the soldered position after soldering must be avoided.
- In soldering, do not apply any stress to the lead frame particularly when heated.
- When forming a lead, make sure not to apply any stress inside the resin.
- Lead forming must be done before soldering.
- It is necessary to cut the lead frame at normal temperature.

### 3. Peak Forward Current:

Condition for is IFP pulse : At 1ms cycle, 50%duty, emitting 32kHz square wave signal.



#### 4. Caution in ESD:

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

#### Electrical Optical Characteristics at $T_a=25^\circ C$

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Radiant Intensity	$I_e$	40	56	78	mW/sr	$I_F=50mA$ (Note 1,3)
Viewing Angle	$2\theta_{1/2}$	25	30	35	Deg.	(Note 2)
Peak Wavelength	$\lambda_p$	---	940	---	nm	$I_F=50mA$
Spectral Line Half- Width	$\Delta\lambda$	---	30	---	nm	$I_F=50mA$
Forward Voltage	$V_F$	---	1.45	1.70	V	$I_F=50mA$
Reverse Current	$I_R$	---	---	100	$\mu A$	$V_R=5V$

#### Note:

1. Point sources of the amount of radiation per unit time in a given direction within the unit solid Angle radiated energy.
2.  $\theta_{1/2}$  is the off-axis angle at which the Radiant Intensity is half the axial Radiant Intensity.
3. The  $I_e$  guarantee should be added  $\pm 15\%$  tolerance.

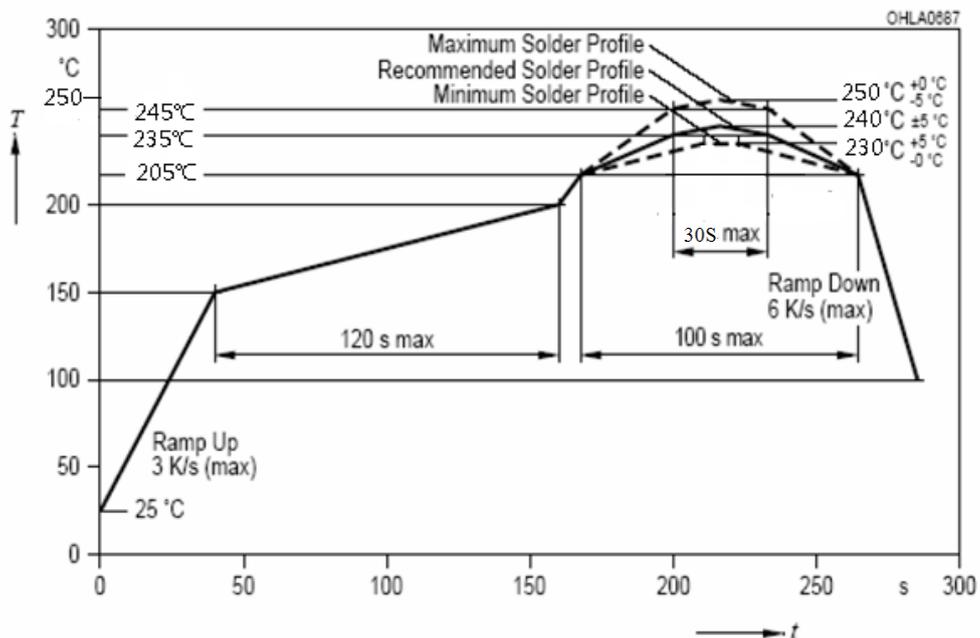
## Infrared Emitting Diode Specification

- Commodity: Infrared emitting diode
- Intensity Bin Limits (At 50mA)

BIN CODE	Min.(mW/sr)	Max.( mW/sr)
16	40	56
17	56	78

**Note:** The Ie guarantee should be added  $\pm 15\%$  tolerance.

### Suggest IR Reflow Condition For Lead Free:



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

Fig.1 Spectral Distribution

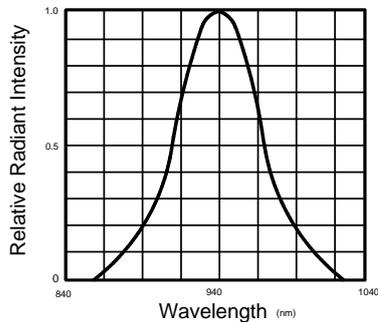


Fig.2 Forward constant current IF Vs Ambient Temperature

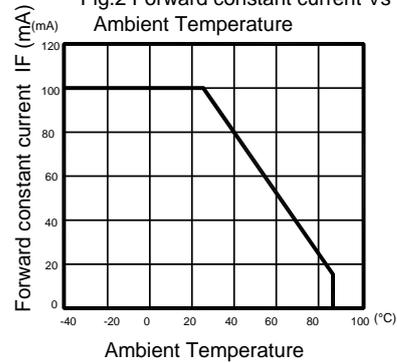


Fig.3 Forward Current Vs Forward Voltage

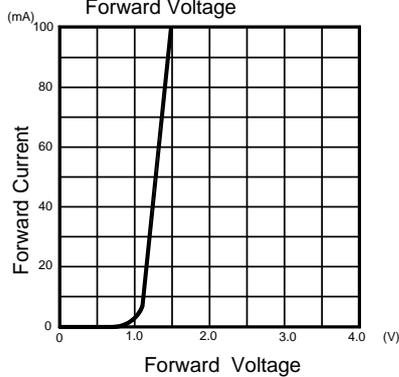


Fig.4 Relative Radiant Intensity Vs Ambient Temperature

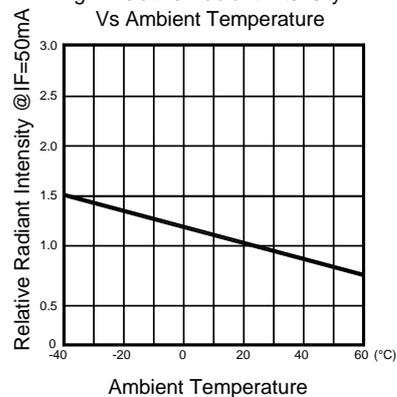


Fig.5 Relative Radiant Intensity Vs Forward Current

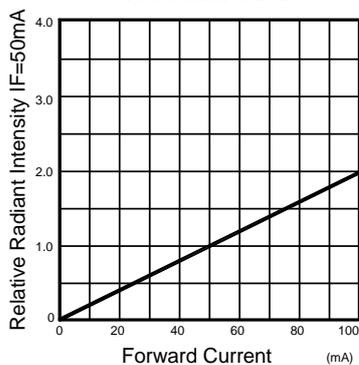


Fig.6 Radiation Diagram

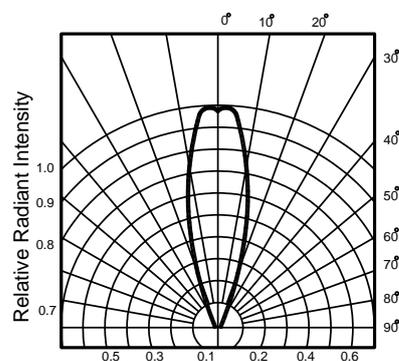
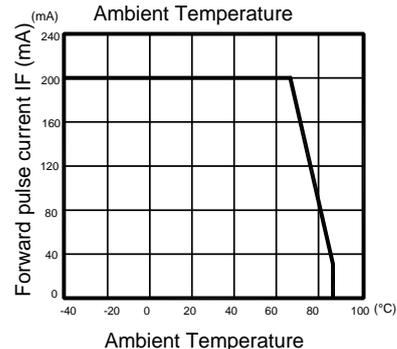
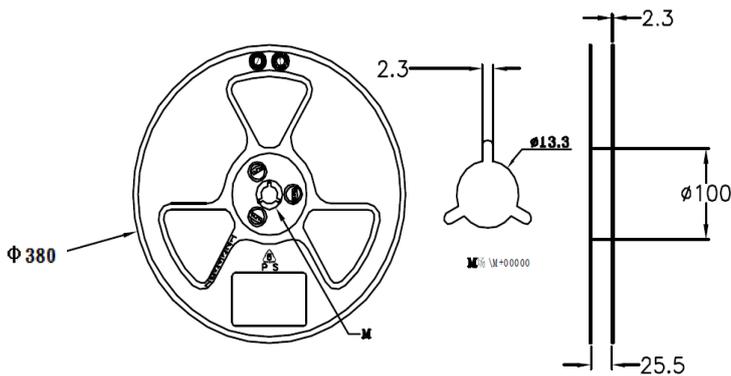
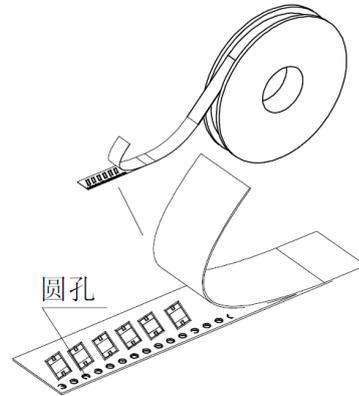
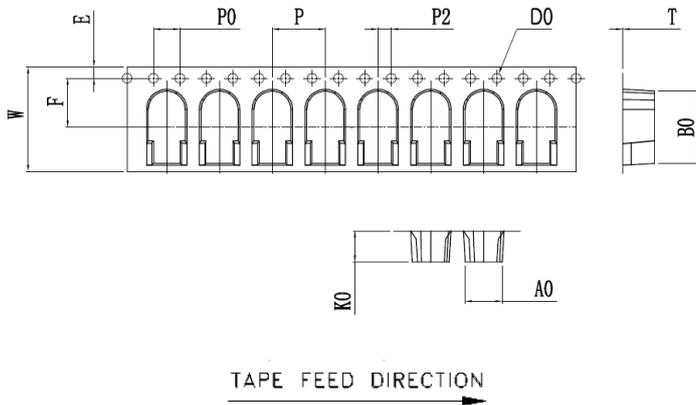


Fig.7 Forward pulse current Vs Ambient Temperature



## Package

### Package Dimensions



Item	Specification	
	Minum	Maximum
W	15.97	16.3
P	7.9	8.1
E	1.65	1.85
F	7.4	7.6
D	1.5	1.6
P0	3.9	4.1
P0x10	39.8	40.2
P2	1.9	2.1
A0	5.2	5.4
B0	10.6	10.8
K0	4.8	5.0

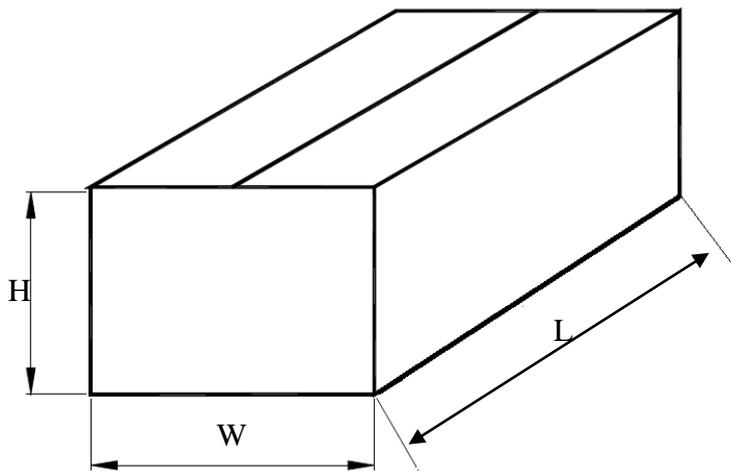
### Notes:

1. All dimensions in millimeters.
2. All dimensions meet EIA-481-C requirements.
3. Cover tape by a heat sealing manner.

## Package Spec:

**1.2000pcs per reel .**

**15 reel per carton/Total 30000pcs per carton.**



Item	Specification	
	minnum	Maximum
L	465	475
W	405	415
H	405	415