

Spec. No. : ODT-W010-95(0)

Issued Date : 2005. 02. 15.

SPECIFICATION

MODEL NAME : Infrared Emitting Diode

MODEL NO. : OL94SFF

Prepared by :

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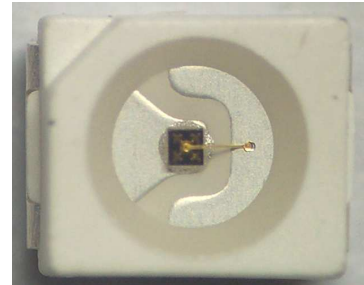
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■ Features

- Top LED package size : 3.2(L) x 2.8(W) x 1.9(H)mm
- Colorless transparency lens

■ Applications

- VCR, Camcorders
- Floppy disk drivers
- Optical detectors



■ Absolute Maximum Ratings

(Ta= 25℃)

Parameter	Symbol	Ratings	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	100	mA
Pulse Forward Current *1	I_{FP}	1	A
Power Dissipation	P_D	170	mW
Operating Temperature	T_{OPR}	-25 ~ 85	℃
Storage Temperature	T_{STG}	-30 ~ 100	℃

*1 : Pulse width $t_w=100\mu s$, $T=10ms$

■ Electro–Optical Characteristics

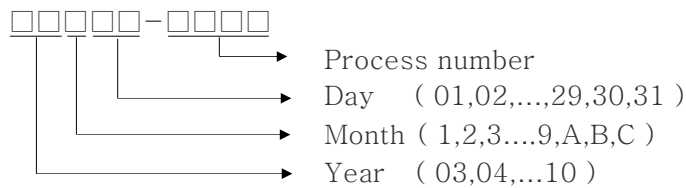
(Ta=25℃)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=50mA$	—	1.3	1.9	V
Reverse Current	I_R	$V_R=5V$	—	—	10	μA
Capacitance	C_T	$f=1MHz$	—	25	—	pF
Radiant Intensity	P_O	$I_F=50mA$	—	1.2	—	mW
Peak Wavelength	λ_p	$I_F=20mA$	—	940	—	nm
Spectral Bandwidth 50%	$\Delta\lambda$	$I_F=20mA$	—	45	—	nm
Half Angle	$\Delta\theta$		—	± 60	—	Deg.

*1 : Be measured by optical power meter. Distance between optical device and probe, $D = 30mm$

■ Lot number

- The first five digits number shows lot number.
- The lot number is composed of the following characters:



■ Cleaning

- When washing is required, isopropyl alcohol should be used.
- The influence of ultrasonic cleaning on the optical detectors differs depending on factors such as oscillator output and how the optical detectors are mounted. Before cleaning by ultrasonic wave, testing should be performed to ensure this will not cause damage to the optical detectors.

■ Storage

- The optical detectors should be stored at 30℃ or less and 70%R.H or less after being shipped from ODTech and the storage life limits are 3 months. If the optical detectors are stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material.
- ODTech optical detectors leads are comprised of a gold plated iron alloy. The gold surface may be affected by environments which contain corrosive gases and so on. Please avoid conditions which may cause the device to corrode, tarnish or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the optical devices be used as soon as possible.
- Please avoid rapid transitions in ambient temperature, especially, in high humidity environments where condensation can occur.

Infrared Emitting Diode (GaAs)

OL94SFF

■ Typical electrical / Optical characteristic curves

($T_a = 25^\circ\text{C}$)

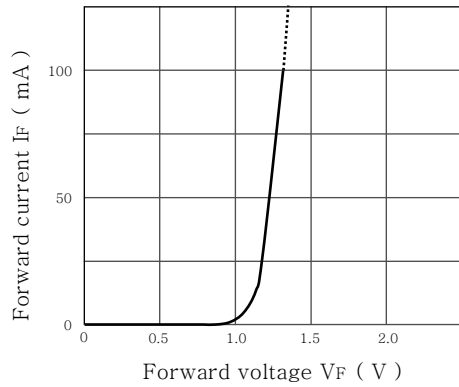


Fig.1 Forward current vs. Forward voltage

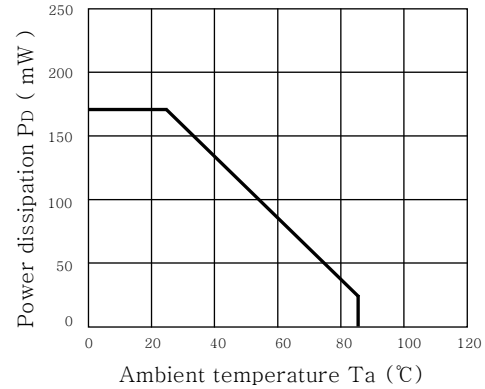


Fig.2 Power dissipation vs. Ambient temperature

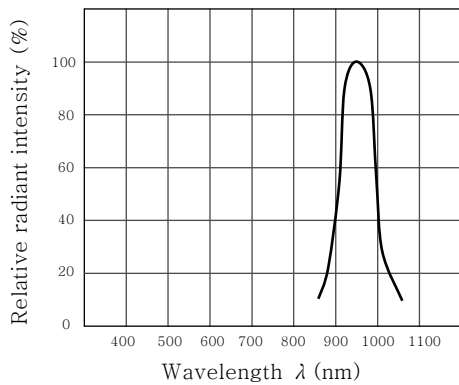


Fig.3 Relative spectra output

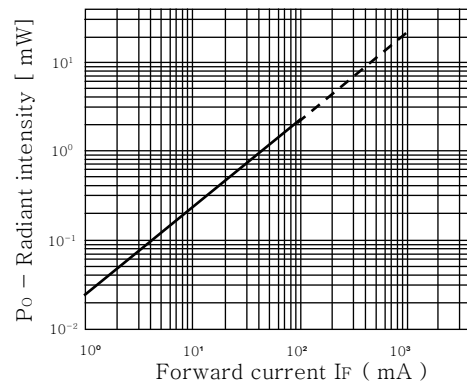


Fig.4 Radiant intensity vs. Forward current

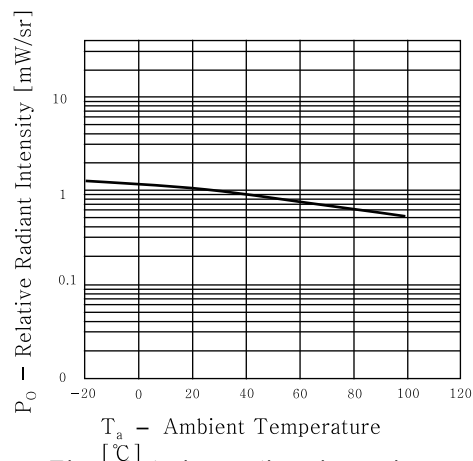


Fig.5 Relative radiant intensity vs. Ambient temperature

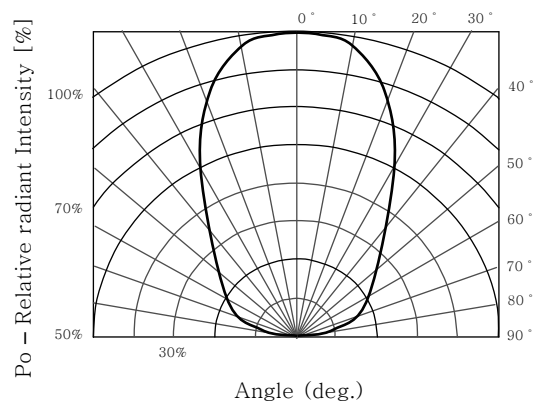
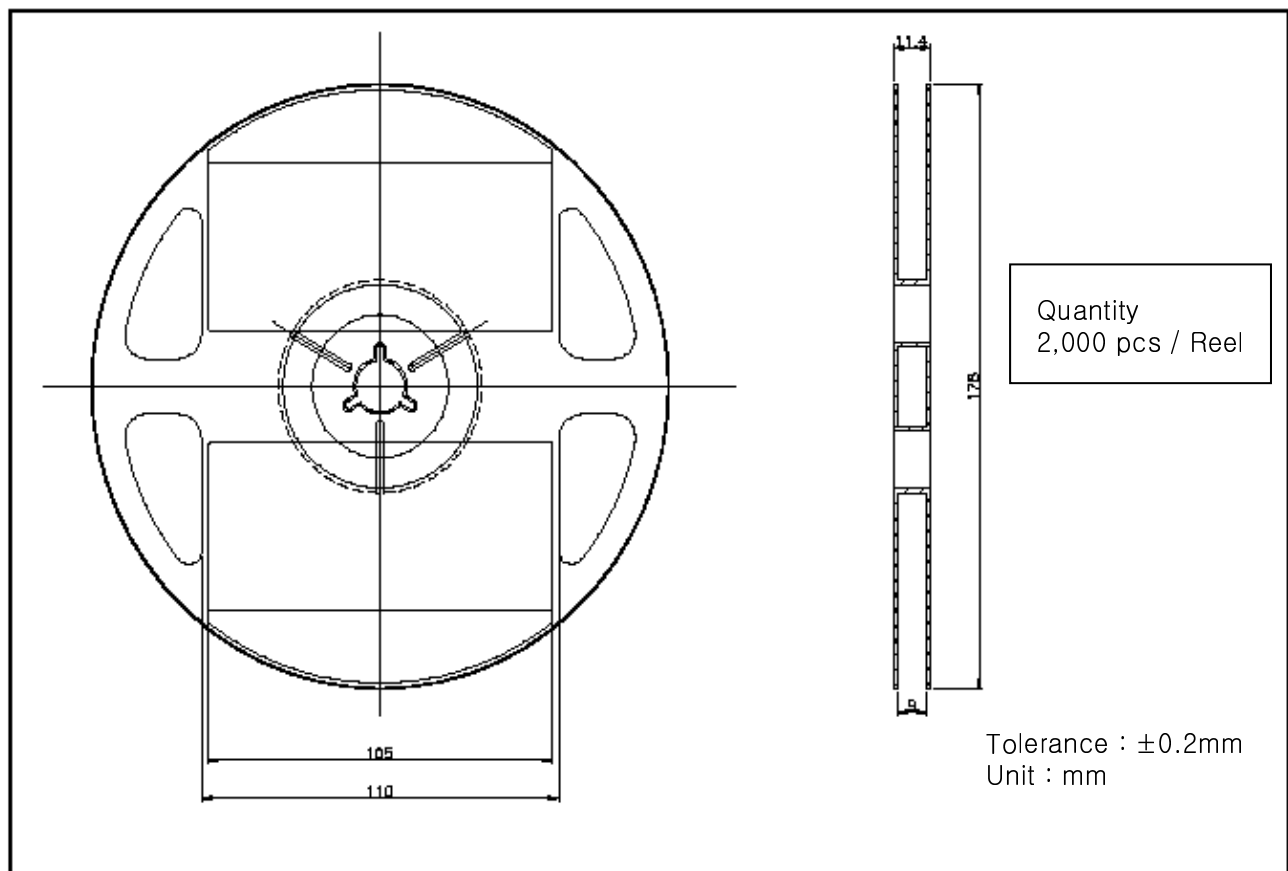
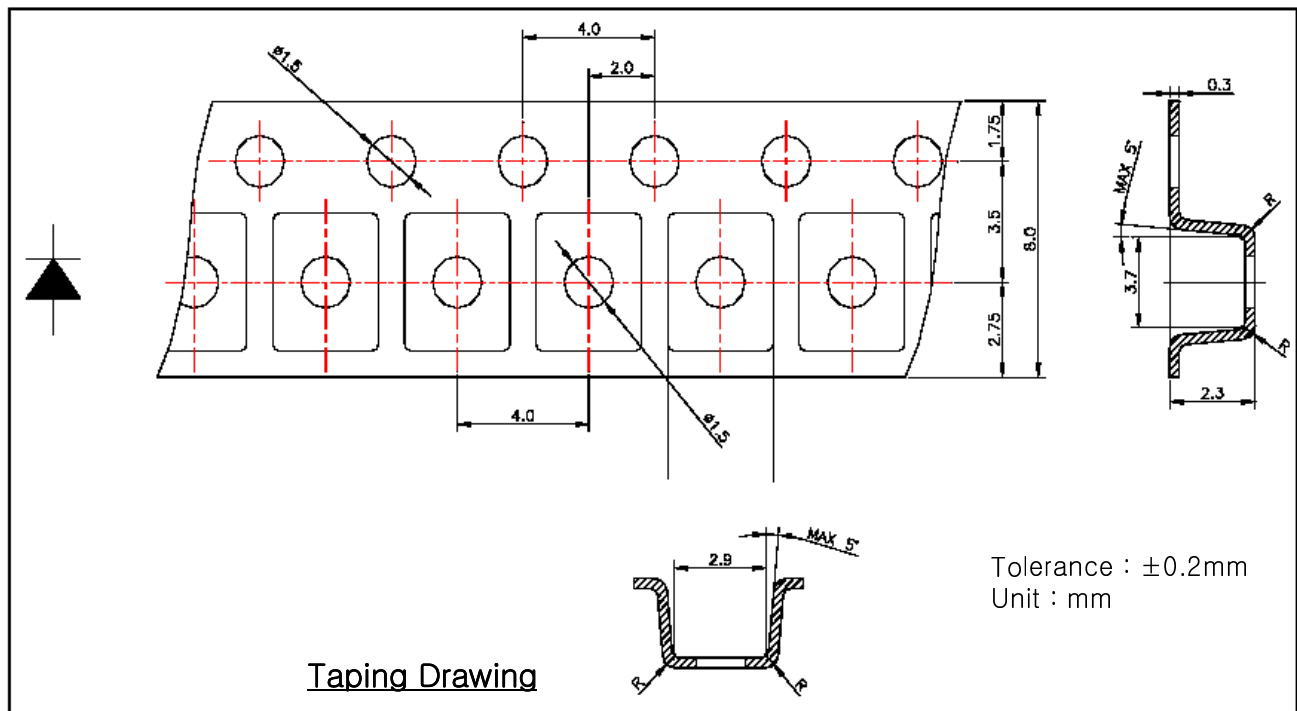
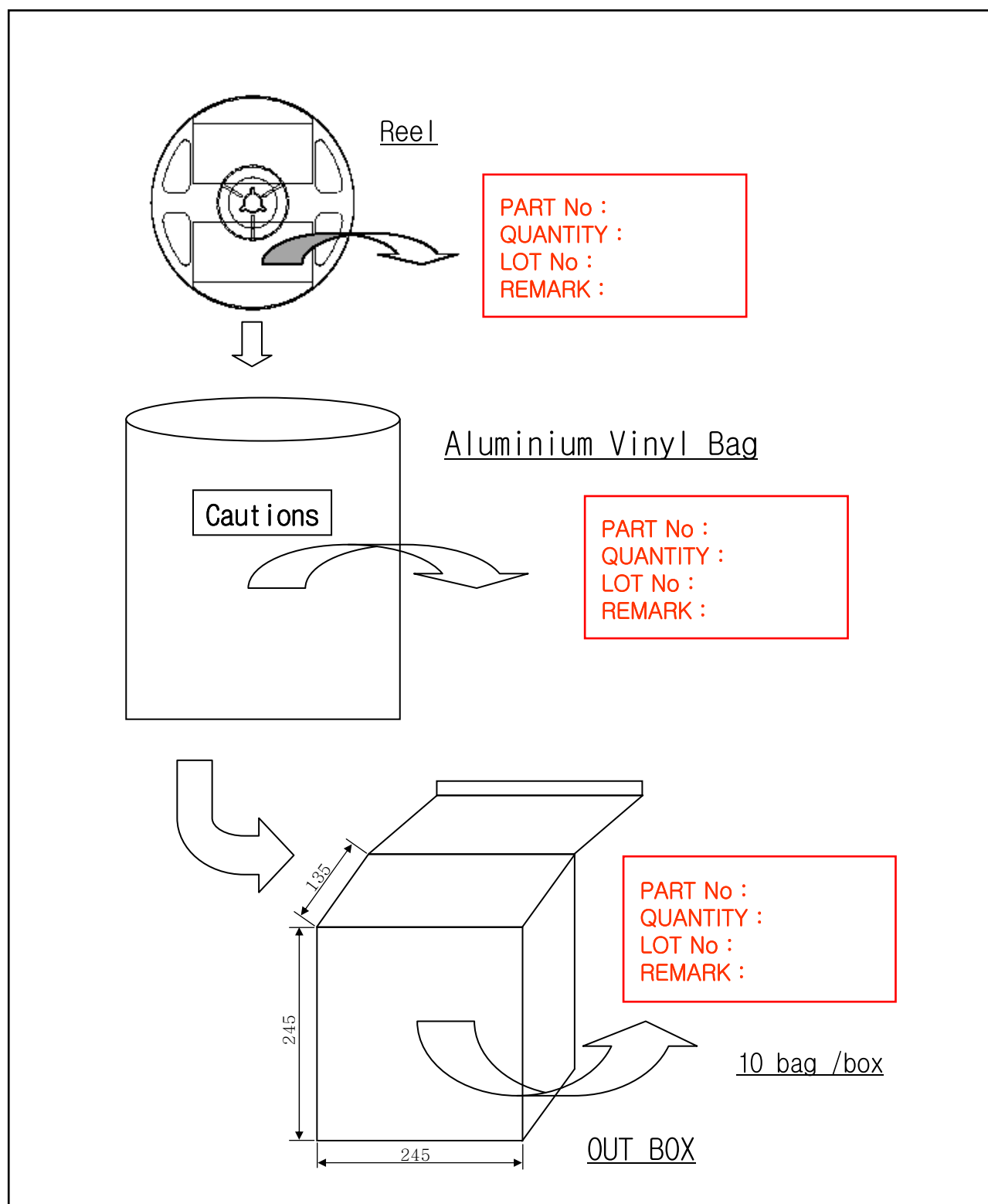


Fig.6 Radiant Pattern





Outline Dimensions

(Unit : mm)

