

Part No.

AL-103ID-004

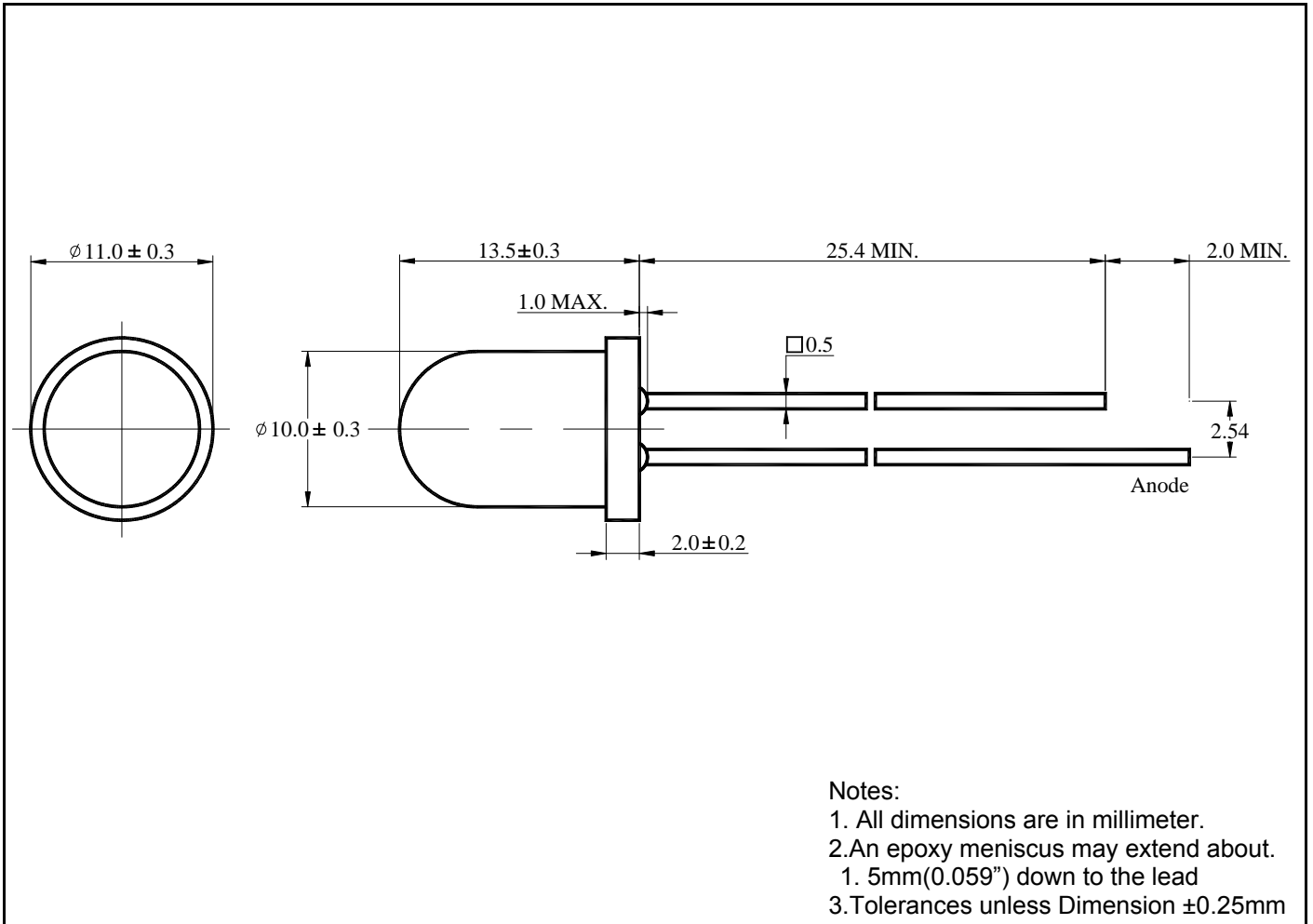
Diff No. 004

10 mm

Round

Type : LED Lamps

■ **Package Dimension:**



■ **Features :**

- Choice of various viewing angles.
- Available on Tape and Reel.
- Reliable and robust.

■ **Descriptions :**

- The series is specially designed for application requiring higher brightness.
- The LED lamps are available with different color, intensities, epoxy colors etc.

■ **Applications :**

- TV set
- Monitor
- Telephone

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LED Parts P/N.	Chip		Lens Color
	Material	Emitted Color	
AL-103ID-004	GaAsP/GaP	Red	Red Diffused

■ Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Continuous Forward Current	I_F	30	mA
Operating Temperature	T_{opr}	-30 to +100	°C
Storage Temperature	T_{stg}	-30 to +100	°C
Soldering Temperature	T_{sol}	260 ±5	°C
Electrostatic Discharge	ESD	1000	V
Power Dissipation	P_D	70	mW
Peak Forward Current (Duty 1/10@1KHz)	I_F (Peak)	100	mA
Reverse Voltage	V_R	5	V

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	/	45	/	mcd	$I_F=20mA$
Viewing Angle	2θ 1/2	/	50	/	deg	$I_F=20mA$
Peak Wavelength	λ_p	630	/	640	nm	$I_F=20mA$
Dominant Wavelength	λ_d	/	/	/	nm	$I_F=20mA$
Spectrum Radiation Bandwidth	$\Delta\lambda$	/	20	/	nm	$I_F=20mA$
Forward Voltage	V_F	/	2.0	2.5	V	$I_F=20mA$
Reverse Current	I_R	/	/	100	μA	$V_R=5V$

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■ Reliability test items and conditions :

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

Confidence level: 90%

LTPD: 10%

NO	ITEM	Test Conditions	Test hours/cycle	Sample Q'ty	Ac/Re
1	Solder Heat	Temp : 260°C±5°C	5 sec	76 pcs	0/1
2	Temperature Cycle	H : +85°C 30min ∟ 5min L : -55°C 30min	50 cycles	76 pcs	0/1
3	Thermal Shock	H : +100°C 5min ∟ 10min L : -10°C 5min	50 cycles	76 pcs	0/1
4	High Temperature Storage	Temp : 100°C	1000 hrs	76 pcs	0/1
5	Low Temperature Storage	Temp : -55°C	1000 hrs	76 pcs	0/1
6	DC Operating Life	Temp : 25°C I _F =20mA	1000 hrs	76 pcs	0/1
7	High Temperature / High Humidity	85°C / 85%RH	1000 hrs	76 pcs	0/1

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■ Typical electro-optical characteristics curves :

The data typical, and the value is not guaranteed.

Fig1. Relative Intensity vs. Wavelength

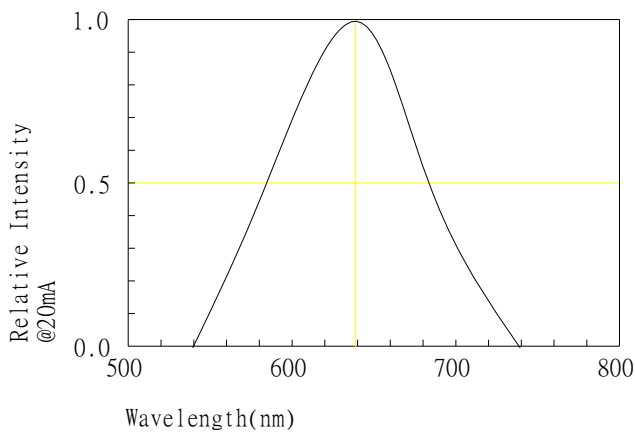


Fig2. Forward Current vs. Forward Voltage

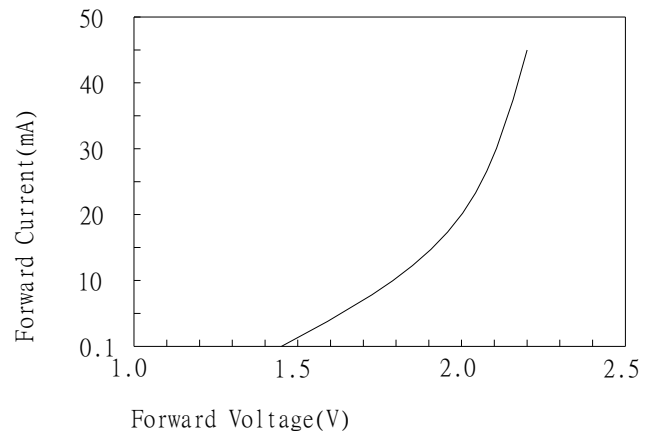


Fig3. Relative Intensity vs. Forward Current

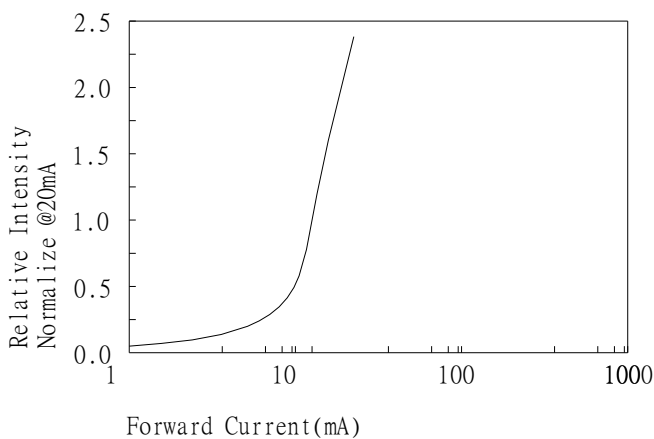


Fig4. Forward Voltage vs. Temperature

