

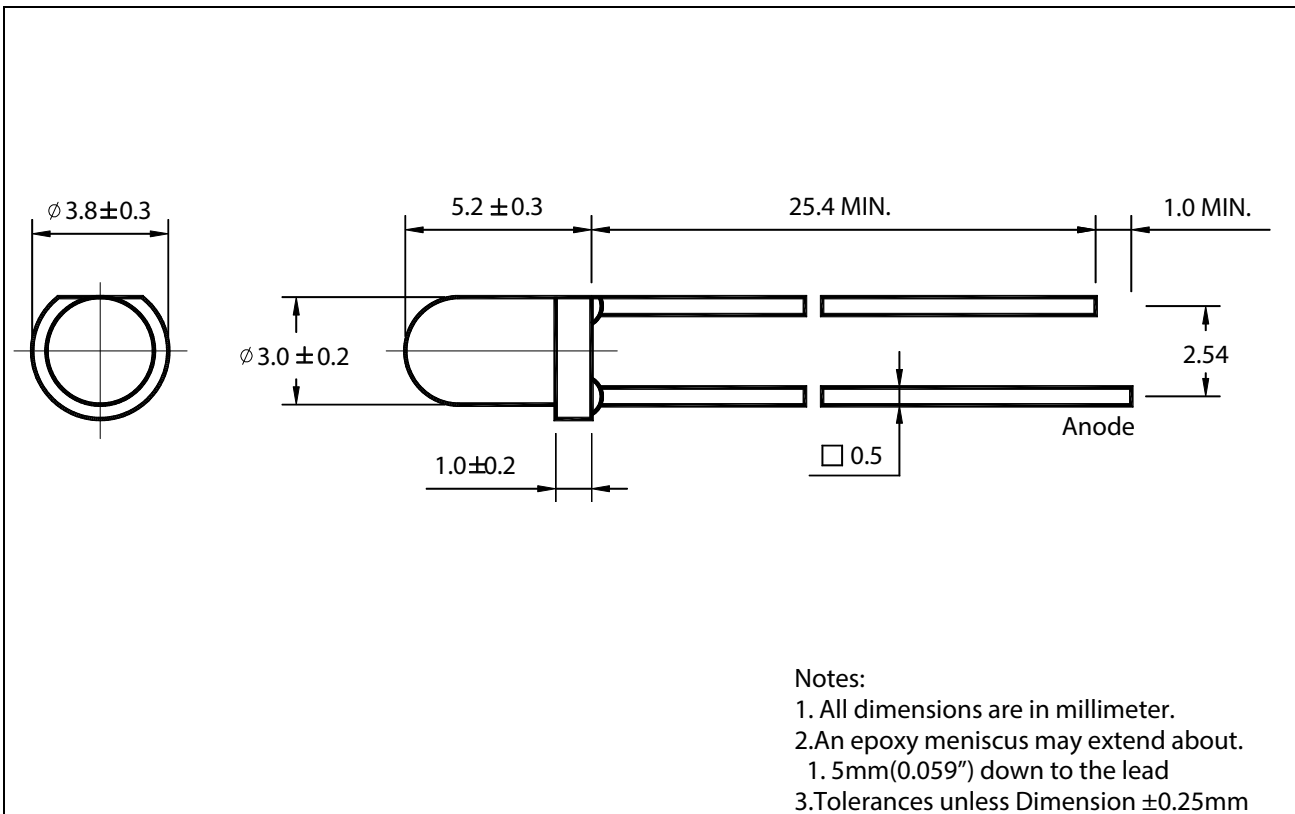
Diff No. 004

3 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 colors, intensity, epoxy colors etc.

■ Applications :

- TV set
- Monitor
- Telephone

PART NO.	Chip		Lens Color
	Material	Emitted Color	
ZD0102	AlGaAs	Red	Water Clear

■ Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Forward Current	I_F	30	mA
Operating Temperature	T_{opr}	-40 to +85	°C
Storage Temperature	T_{stg}	-40 to +100	°C
Soldering Temperature	T_{sol}	260 ± 5	°C
Electrostatic Discharge	ESD	1000	V
Power Dissipation	P_D	110	mW
Peak Forward Current (Duty 1/10@1KHz)	I_F (Peak)	200	mA
Reverse Voltage	V_R	5	V

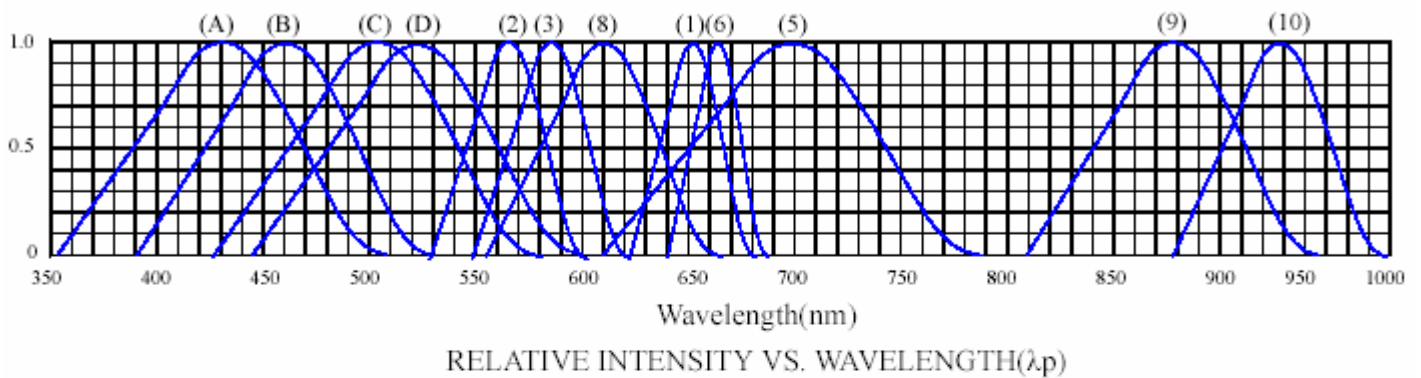
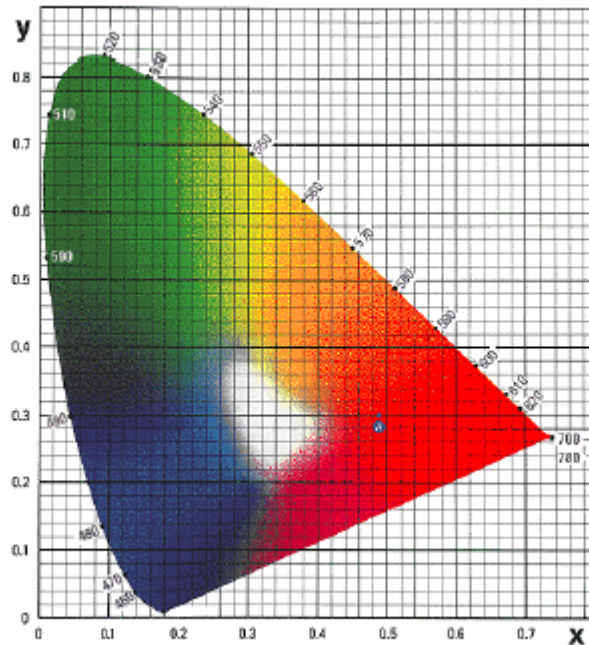
■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	1200	1500	/	mcd	$I_F=20mA$
Viewing Angle	2 θ 1/2	/	15	/	deg	$I_F=20mA$
Peak Wavelength	λ_p	/	/	/	nm	$I_F=20mA$
Dominant Wavelength	λ_d	/	660	/	nm	$I_F=20mA$
Spectrum Radiation Bandwidth	$\Delta\lambda$	/	30	/	nm	$I_F=20mA$
Forward Voltage	V_F	/	1.8	2.2	V	$I_F=20mA$
Reverse Current	I_R	/	/	100	μA	$V_R=5V$

■ Reliability test items and conditions:

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	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 └ 10set 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

◆ TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES

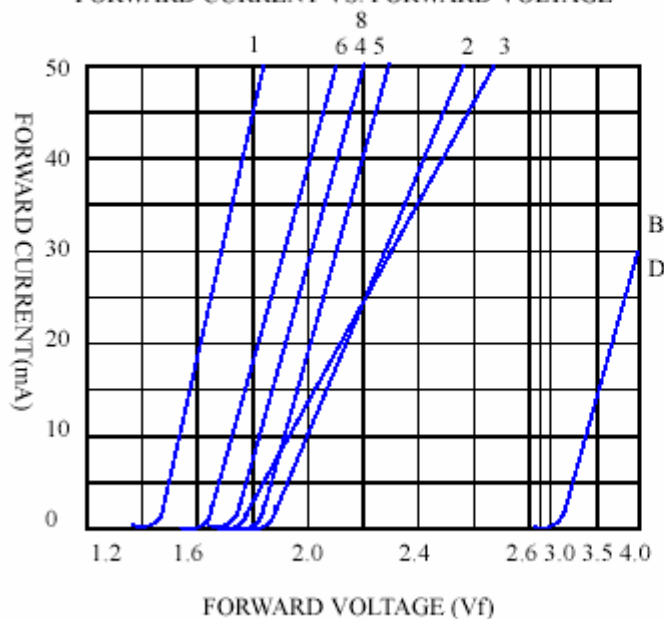


- (1) GaAsP/GaAs 655nm/Red
- (2) GaP 568nm/ Yellow Green
- (3) GaAsP/GaP 585nm/Yellow
- (4) GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) GaP 700nm/Bright Red
- (6) GaAlAs/GaAs 660nm/Super Red
- (8) GaAsP/GaP 610nm/Super Red

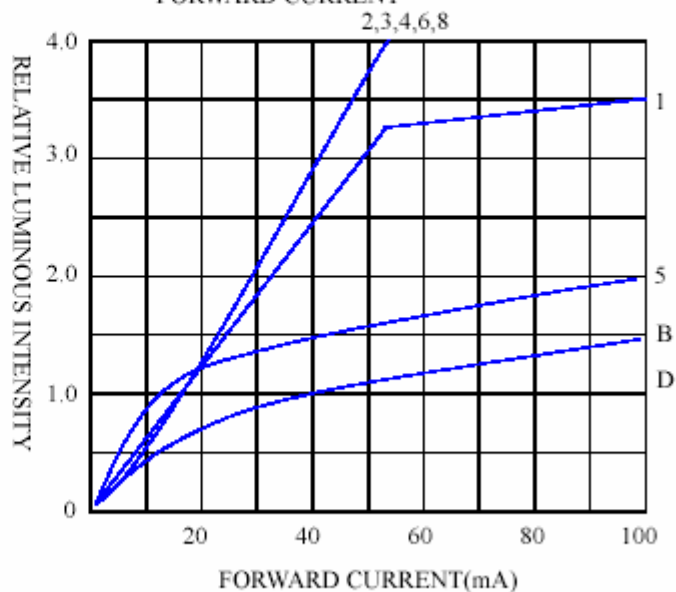
- (9)- GaAlAs 880nm
- (10)-GaAs/GaAs&GaAlAs/GaAs 940nm
- (A)- GaN 430nm/Blue
- (B)- InGaN 470nm/Blue
- (C)- InGaN 502nm/Ultra Green
- (D)- InGaN 523nm/Ultra Green

◆ CHARACTERISTICS DIAGRAMS

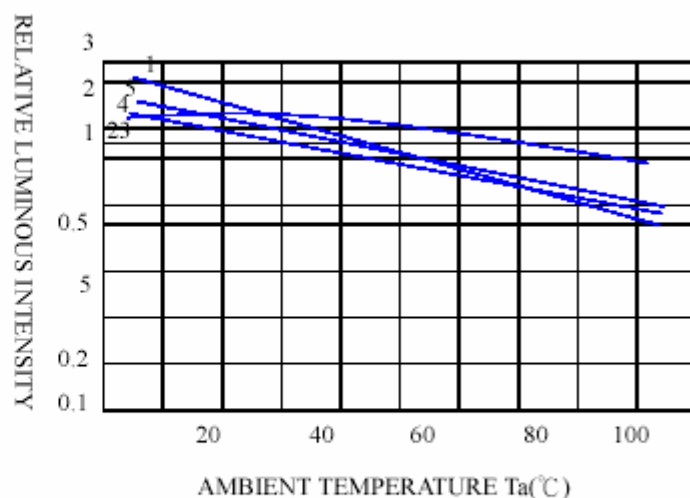
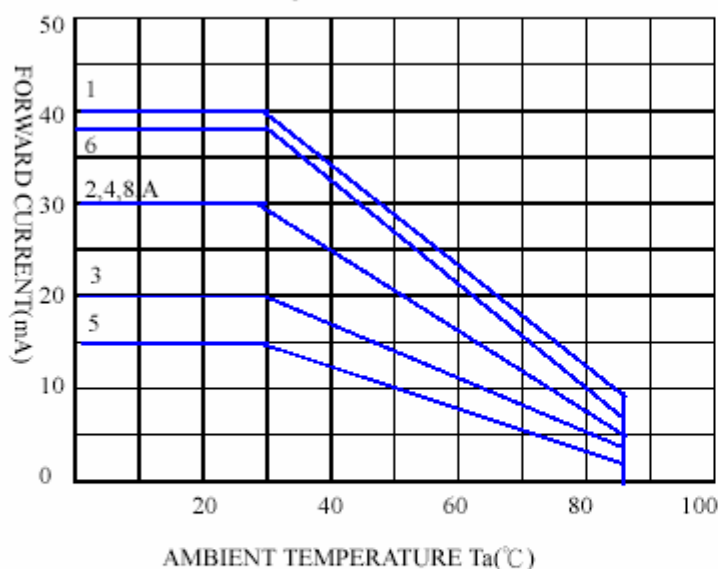
FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE



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