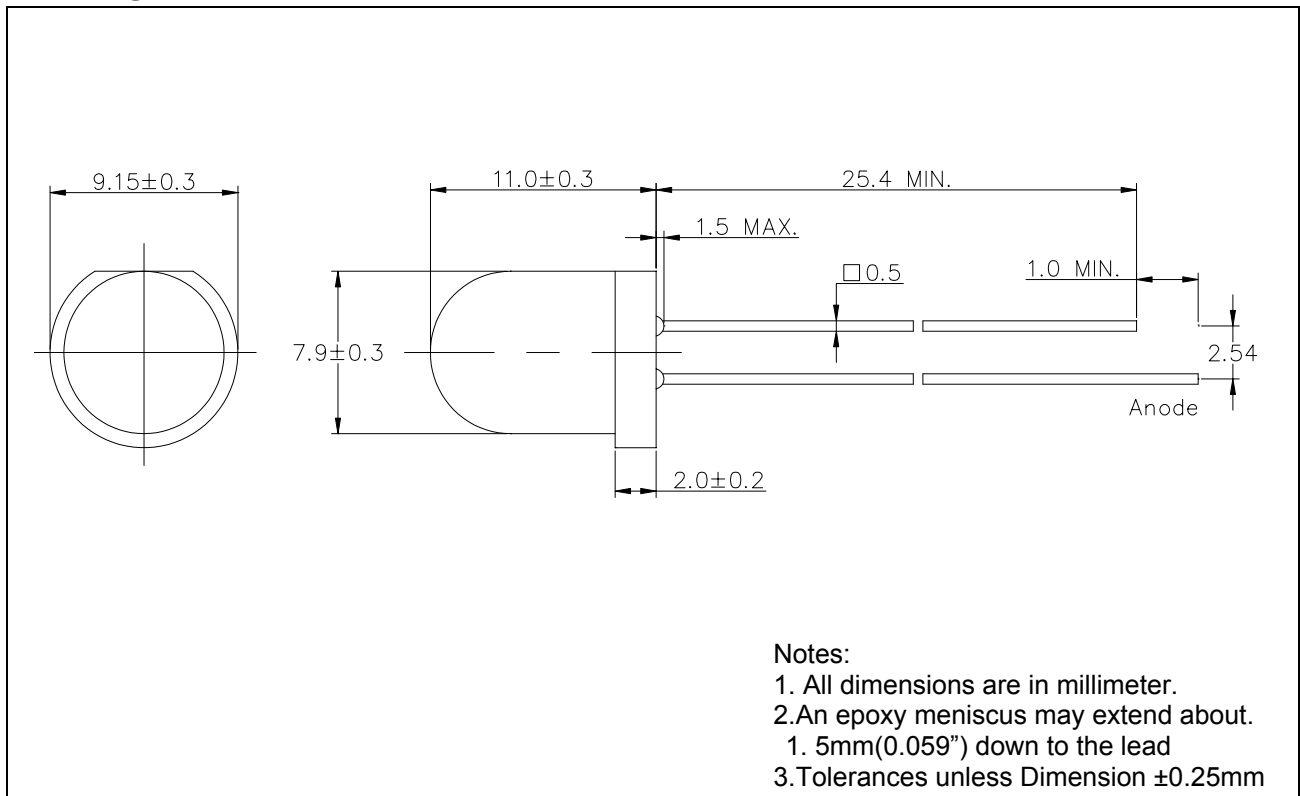


Part No.	AL-813ED	Diff No.
8 mm	Round	Type : LED Lamps

Package Dimension :



■ Features :

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

■ Descriptions :

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

■ Applications :

- TV set
- Monitor
- Telephone

Part No.	AL-813ED	Diff No.
8 mm	Round	Type : LED Lamps

PART NO.	Chip		Lens Color
	Material	Emitted Color	
AL-813ED	GaAsP/GaP	Orange	Orange Diffused

■ Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Rating	Unit
Forward Current	I _F	20	mA
Operating Temperature	T _{opr}	-40 to +85	℃
Storage Temperature	T _{stg}	-40 to +100	℃
Soldering Temperature	T _{sol}	260 ±5	℃
Electrostatic Discharge	ESD	1000	V
Power Dissipation	P _D	100	mW
Peak Forward Current (Duty 1/10@1KHz)	I _F (Peak)	160	mA
Reverse Voltage	V _R	5	V

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	/	50	/	mcd	I _F =20mA
Viewing Angle	2θ1/2	/	45	/	deg	I _F =20mA
Peak Wavelength	λ _p	/	640	/	nm	I _F =20mA
Dominant Wavelength	λ _d	/	635	/	nm	I _F =20mA
Spectrum Radiation Bandwidth	△λ	/	35	/	nm	I _F =20mA
Forward Voltage	V _F	/	2.0	2.6	V	I _F =20mA

Part No.	AL-813ED	Diff No.
8 mm	Round	Type : LED Lamps

■ Reliability test items and conditions :

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260℃ ±5℃	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85℃ 30min └ 5min L : -55℃ 30min	50 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100℃ 5min └ 10set L : -10℃ 5min	50 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP : 100℃	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55℃	1000 HRS	76 PCS	0/1
6	DC Operating Life	TEMP : 25℃ I _F =20mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85℃ / 85%RH	1000 HRS	76 PCS	0/1

Part No.

AL-813ED

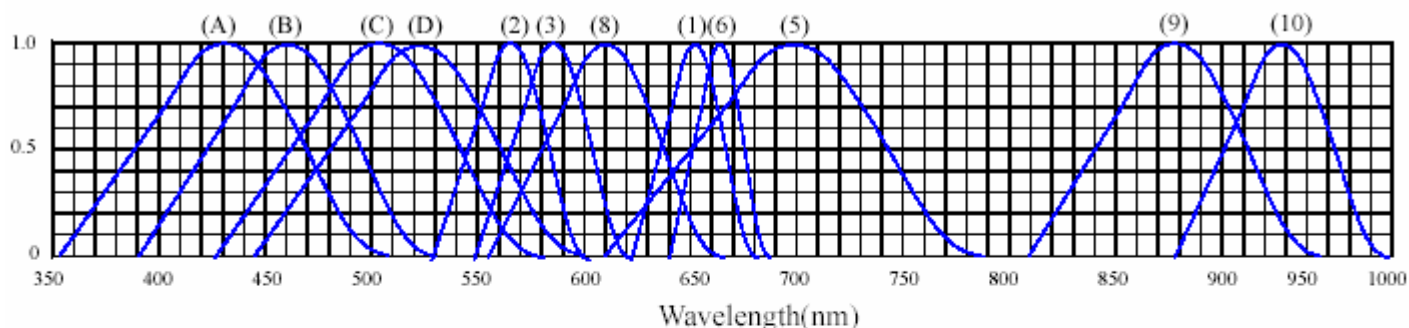
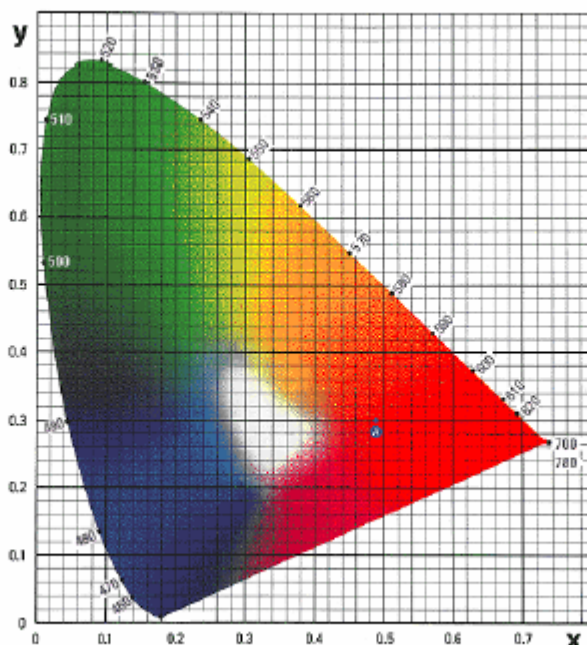
Diff No.

8 mm

Round

Type : LED Lamps

◆ TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES



RELATIVE INTENSITY VS. WAVELENGTH(λ_p)

- (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

Part No.

AL-813ED

Diff No.

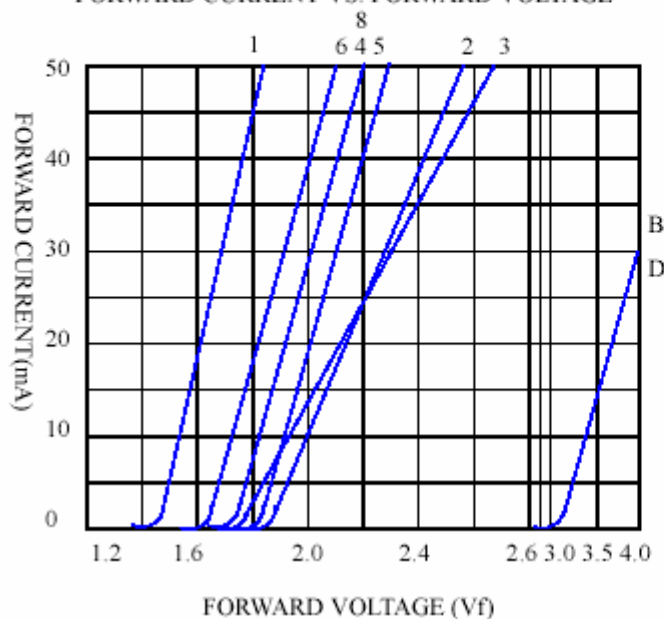
8 mm

Round

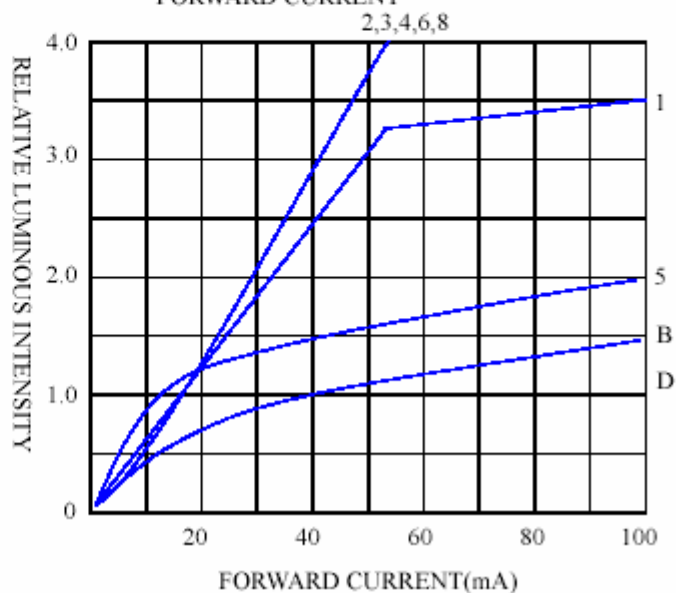
Type : LED Lamps

◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

