

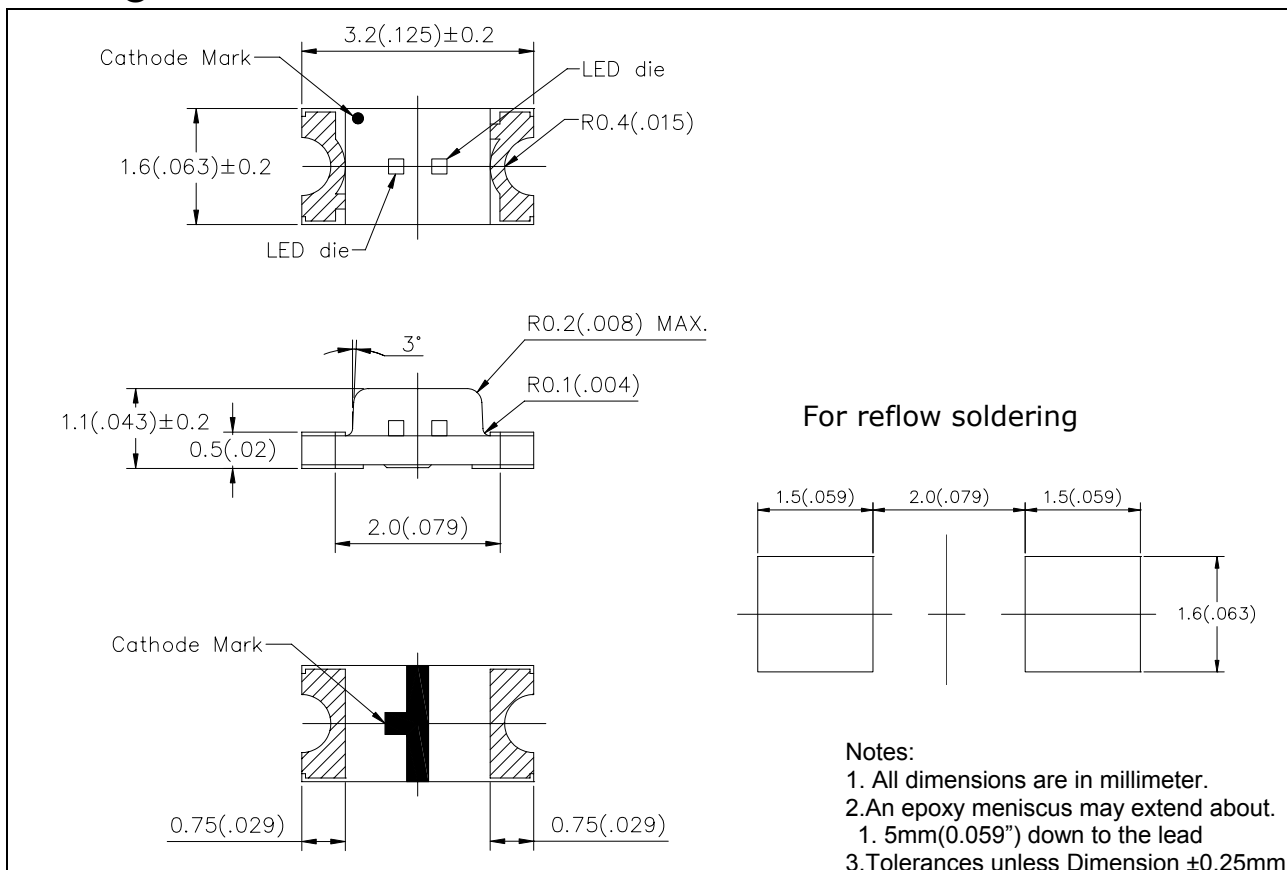
Part No. **AL-HE1Y033**

Diff No.

3.2x1.6x1.1 mm

Type : SMD LED

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

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PART NO.	Chip		Lens Color
	Material	Emitted Color	
AL-HE1Y033	GaAsP/GaP	Hi-Eff Red	Water Clear
	GaAaP/GaP	Yellow	

■ Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Forward Current	I _F	30	mA
Operating Temperature	Topr	-25 to +80	°C
Storage Temperature	Tstg	-30 to +85	°C
Soldering Temperature	Tsol	260 ± 5	°C
Power Dissipation	P _D	80	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	R	5.5	12.0	mcd	I _F =20mA
		G	2.4	12.0		
Viewing Angle	2θ1/2	/	120	/	deg	I _F =20mA
Peak Wavelength	λ _p	R	/	633	nm	I _F =20mA
		G	/	593		
Dominant Wavelength	λ _d	R	/	628	nm	I _F =20mA
		G	/	588		
Spectrum Radiation Bandwidth	Δλ	R	/	40	nm	I _F =20mA
		G	/	32		
Forward Voltage	V _F	R	/	2.0	V	I _F =20mA
		G	/	2.1		
Reverse Current	I _R	/	/	100	μA	V _R =5V

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■ Reliability test items and conditions :

Classification	Test Item	Reference Standard	Test Conditions	Result
Endurance Test	Operation Life	MIL-STD-750:1026 MIL-STD-883:1005 JIS-C-7021 :B-1	Connect with a power If=20mA Ta=Under room temperature Test time=1,000hrs	0/20
	High Temperature High Humidity Storage	MIL-STD-202:103B JIS-C-7021 :B-11	Ta=+65°C±5°C RH=90%-95% Test time=240hrs	0/20
	High Temperature Storage	MIL-STD-883:1008 JIS-C-7021 :B-10	High Ta=+85°C±5°C Test time=1,000hrs	0/20
	Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-35°C±5°C Test time=1,000hrs	0/20
Environmental Test	Temperature Cycling	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS-C-7021 :A-4	-35°C ~ +25°C ~ +85°C ~ +25°C 60min 20min 60min 20min Test Time=5cycle	0/20
	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011	-35°C±5°C ~ +85°C±5°C 20min 20min Test Time=10cycle	0/20
	Solder Resistance	MIL-STD-202:201A MIL-STD-750:2031 JIS-C-7021 :A-1	Preheating : 140°C-160°C, within 2 minutes. Operation heating : 260°C (Max.), within 10seconds. (Max.)	0/20

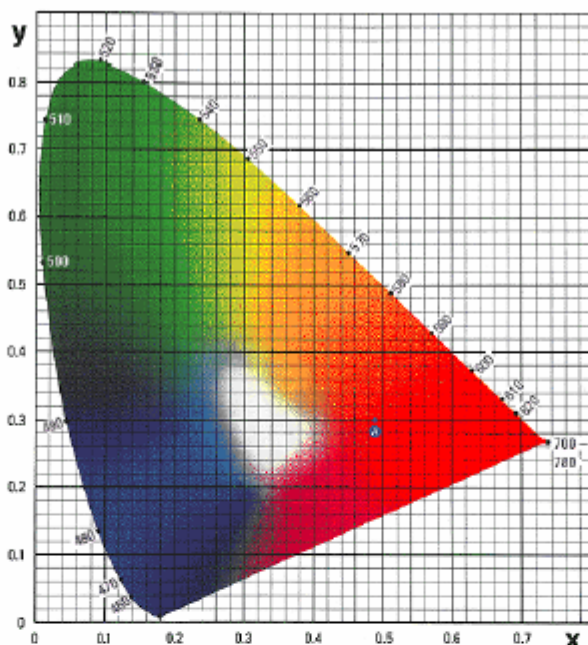
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◆ TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES



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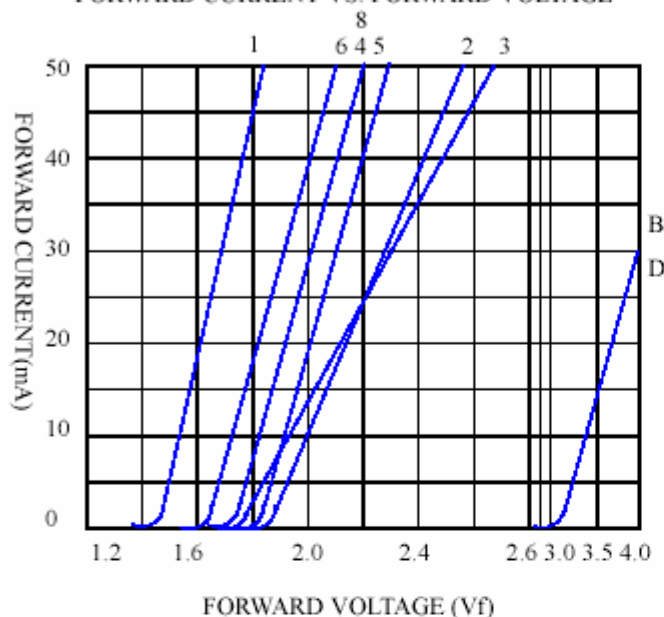
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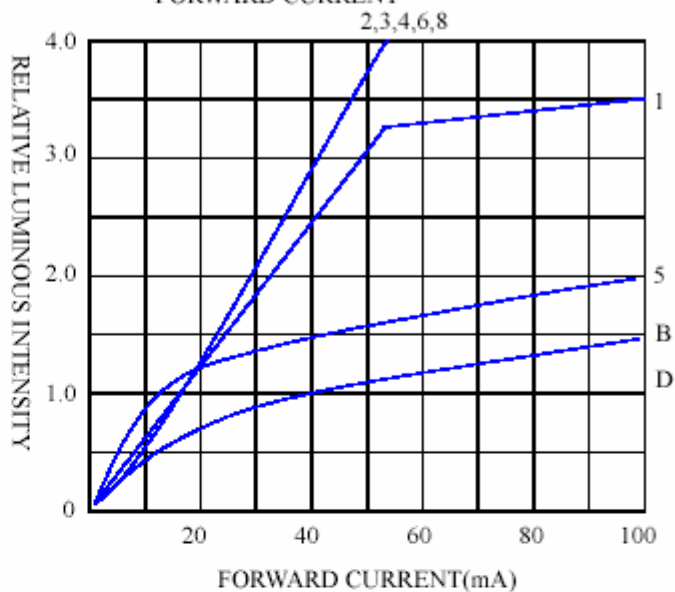
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◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

