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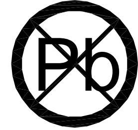
LED ARRAY



Lead-Free Parts

LA208B/SRG-1-PF

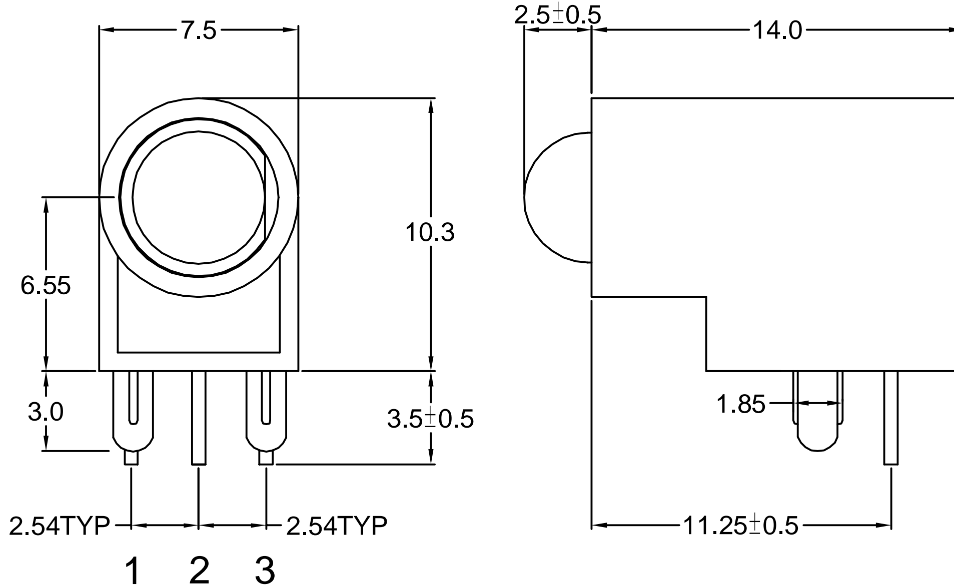
DATA SHEET

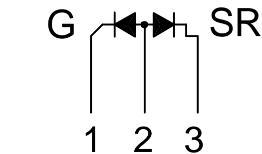
DOC. NO : QW0905-LA208B/SRG-1-PF

REV. : A

DATE : 25 - Apr. - 2005

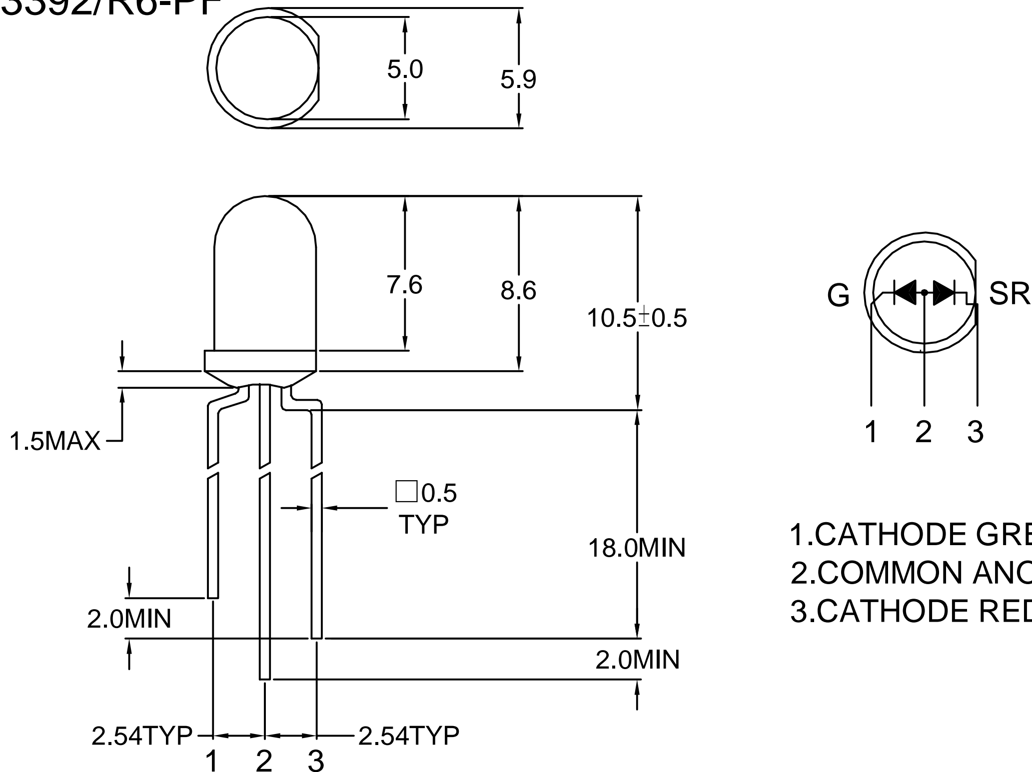
Package Dimensions





1.CATHODE GREEN
2.COMMON ANODE
3.CATHODE RED

LSRG3392/R6-PF



1.CATHODE GREEN
2.COMMON ANODE
3.CATHODE RED

Note : 1.All dimension are in millimeter tolerance is ±0.25mm unless otherwise noted.
2.Specifications are subject to change without notice.

Absolute Maximum Ratings at Ta=25 ℃

Parameter	Symbol	Ratings		UNIT
		SR	G	
Forward Current	I_F	30	15	mA
Peak Forward Current Duty 1/10@10KHz	I_{FP}	100	80	mA
Power Dissipation	PD	100	50	mW
Reverse Current @5V	Ir	10		μA
Operating Temperature	T_{opr}	-40 ~ +85		℃
Storage Temperature	Tstg	-40 ~ +100		℃
Soldering Temperature	Tsol	Max 260℃ for 5 sec Max (2mm from body)		

Typical Electrical & Optical Characteristics (Ta=25 ℃)

PART NO	MATERIAL	COLOR		Peak wave length λPnm	Spectral halfwidth △λnm	Forward voltage @20mA(V)		Luminous intensity @10mA(mcd)		Viewing angle 2θ 1/2 (deg)
		Emitted	Lens			Min.	Max.	Min.	Typ.	
LA208B/SRG-1-PF	GaAlAs	Red	Red Diffused	660	20	1.5	2.4	20	45	70
	GaP	Green	Green Diffused	565	20	1.7	2.1	12	30	70

Note : 1.The forward voltage data did not including ±0.1V testing tolerance.
2. The luminous intensity data did not including ±15% testing tolerance.

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Typical Electro-Optical Characteristics Current

SR CHIP

Fig.1 Forward current vs. Forward Voltage

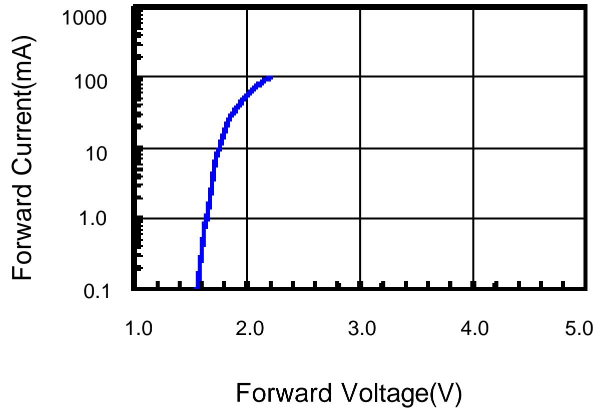


Fig.2 Relative Intensity vs. Forward Current

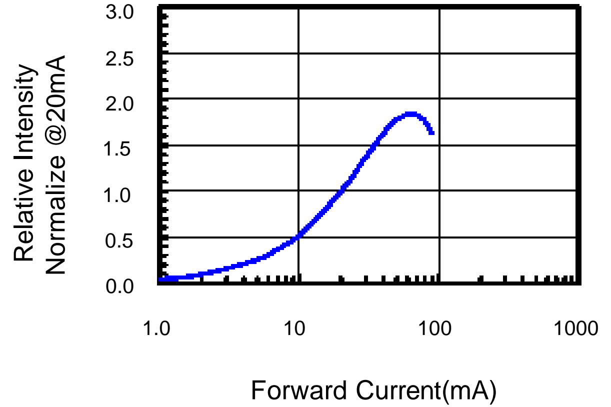


Fig.3 Forward Voltage vs. Temperature

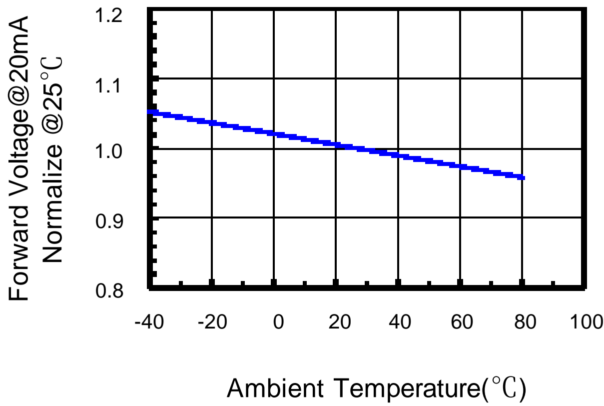


Fig.4 Relative Intensity vs. Temperature

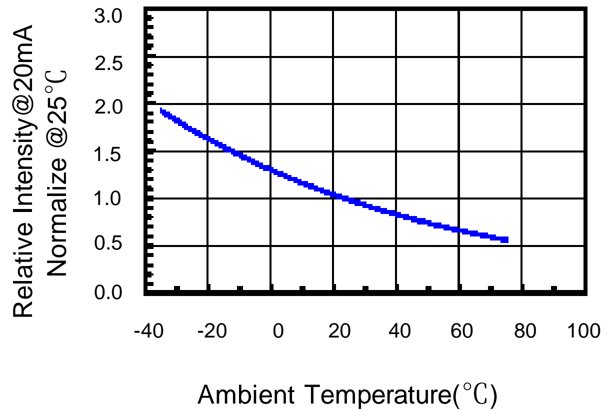
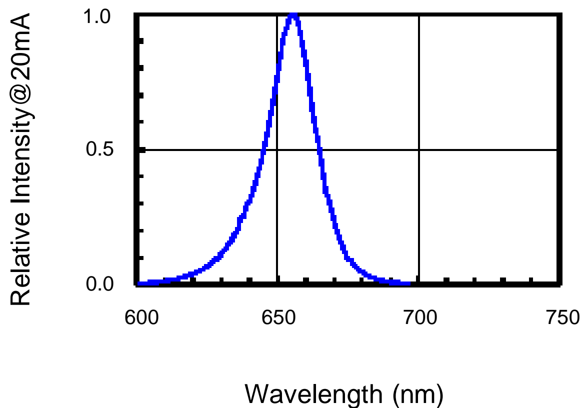


Fig.5 Relative Intensity vs. Wavelength



Typical Electro-Optical Characteristics Curve

G CHIP

Fig.1 Forward current vs. Forward Voltage

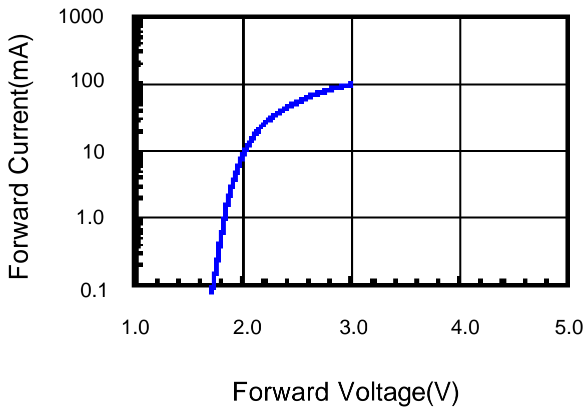


Fig.2 Relative Intensity vs. Forward Current

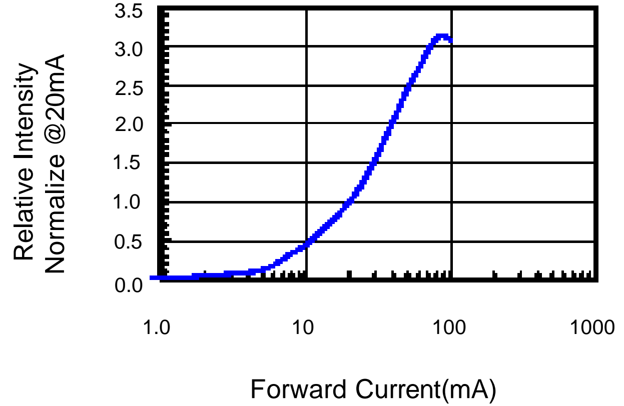


Fig.3 Forward Voltage vs. Temperature

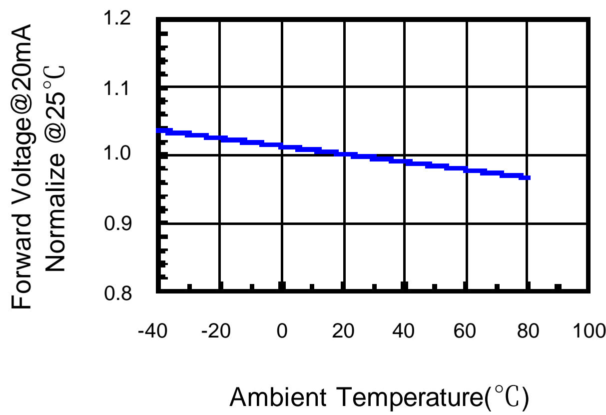


Fig.4 Relative Intensity vs. Temperature

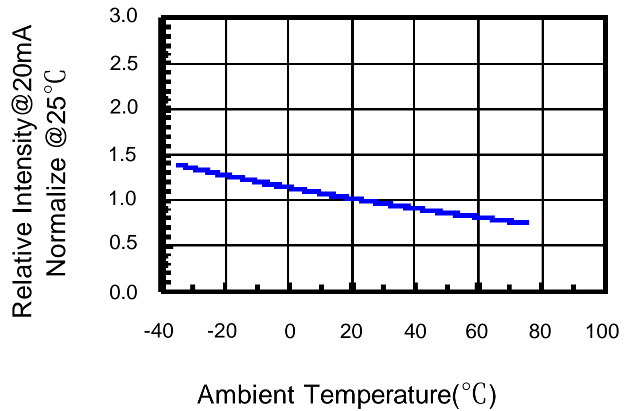


Fig.5 Relative Intensity vs. Wavelength

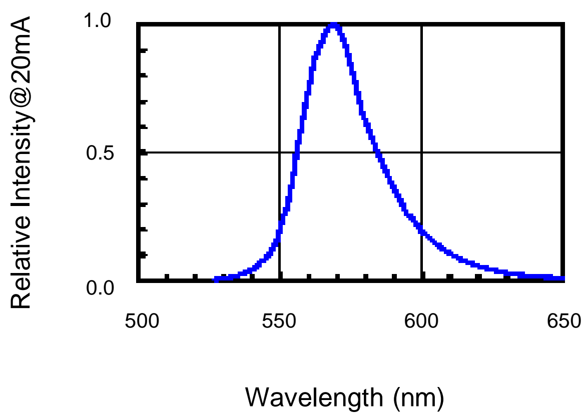
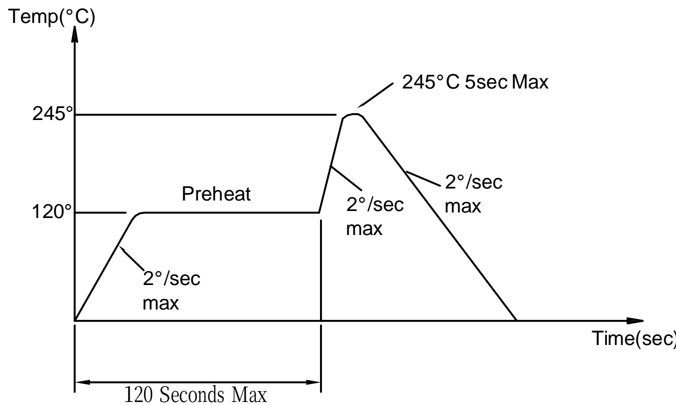


Fig.6 Directive Radiation

Recommended Soldering Conditions

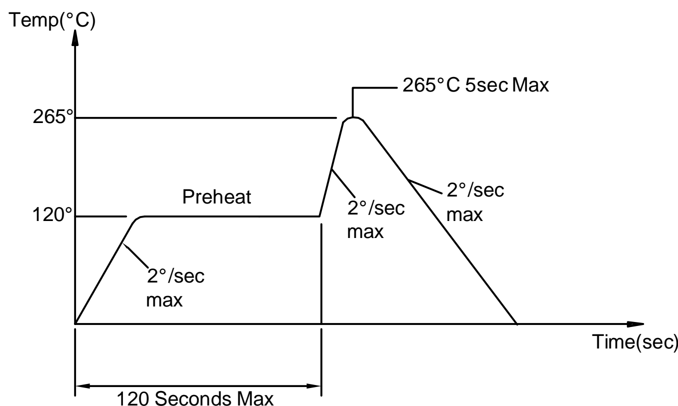
1. Wave Solder



Soldering
Soldering Iron:30W Max
Temperature 300°C Max
Soldering Time:3 Seconds Max
Distance:2mm Min(From solder joint to case)

Dip Soldering
Preheat: 120°C Max
Preheat time: 120 seconds Max
Ramp-up:2°C/sec(max)
Ramp-Down:2°C/sec(max)
Solder Bath:245°C Max
Dipping Time:5 seconds Max
Distance:2mm Min(From solder joint to case)

2. PB-Free Wave Solder



Soldering
Soldering Iron:30W Max
Temperature:350 °CMax
Soldering Time:3seconds Max
Distance:2mm Min(From solder joint to case)

Dip Soldering
Preheat: 120°C Max
Preheat time: 120seconds Max
Ramp-up:2°C/sec(max)
Ramp-Down:2°C/sec(max)
Solder Bath:265°C Max
Dipping Time:5 seconds Max
Distance:2mm Min(From solder joint to case)

Reliability Test:

Test Item	Test Condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=20mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of detemining the resisance of a part in electrical and themal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1
High Temperature Storage Test	1.Ta=105℃±5℃ 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under ondition of high temperature for hours.	MIL-STD-883:1008 JIS C 7021: B-10
Low Temperature Storage Test	1.Ta=-40℃±5℃ 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of low temperature for hours.	JIS C 7021: B-12
High Temperature High Humidity Test	1.Ta=65℃±5℃ 2.RH=90%~95% 3.t=240hrs ±2hrs	The purpose of this test is the resistance of the device under tropical for hous.	MIL-STD-202:103B JIS C 7021: B-11
Thermal Shock Test	1.Ta=105℃±5℃&-40℃±5℃ (10min) (10min) 2.total 10 cycles	The purpose of this is the resistance of the device to sudden extreme changes in high and low temperature.	MIL-STD-202: 107D MIL-STD-750: 1051 MIL-STD-883: 1011
Solder Resistance Test	1.T.Sol=260℃±5℃ 2.Dwell time= 10 ±1sec.	This test intended to determine the thermal characteristic resistance of the device to sudden exposures at extreme changes in temperature when soldering the lead wire.	MIL-STD-202: 210A MIL-STD-750: 2031 JIS C 7021: A-1
Solderability Test	1.T.Sol=230℃±5℃ 2.Dwell time=5 ±1sec	This test intended to see soldering well performed or not.	MIL-STD-202: 208D MIL-STD-750: 2026 MIL-STD-883: 2003 JIS C 7021: A-2