



LIGITEK

LIGITEK ELECTRONICS CO.,LTD.
Property of Ligitek Only

LED ARRAY



Lead-Free Parts

LA38B-68/YG-S2-PF

DATA SHEET

DOC. NO : QW0905-LA38B-68/YG-S2-PF-08

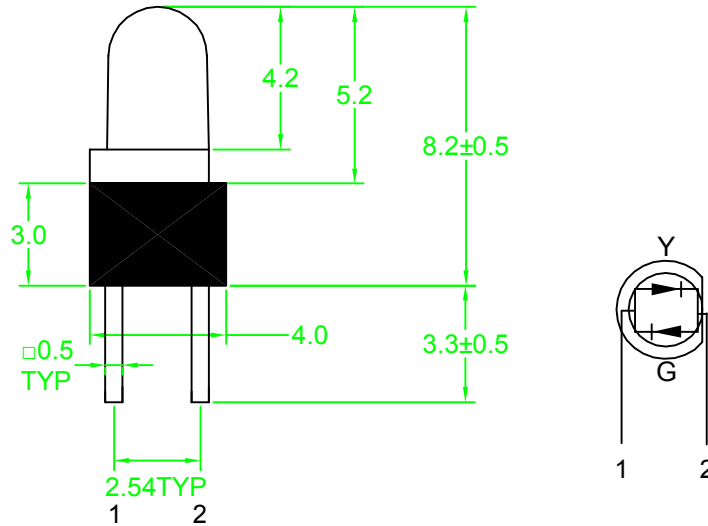
REV. : A

DATE : 14 - May. - 2009

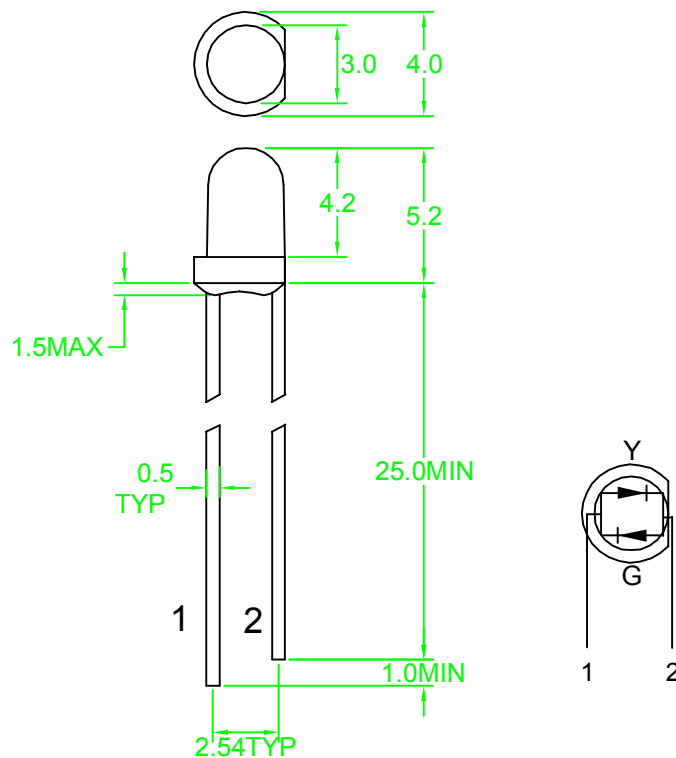




Package Dimensions



LYG2062-PF



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
		Y	G	
Forward Current	IF	15	15	mA
Peak Forward Current Duty 1/10@10KHz	IFP	50	80	mA
Power Dissipation	PD	50	50	mW
Reverse Current @5V	Ir	10	10	μ A
Operating Temperature	Topr	-40 ~ +85		
Storage Temperature	Tstg	-40 ~ +100		

Typical Electrical & Optical Characteristics (Ta=25)

PART NO	MATERIAL	COLOR		Peak wave length Pnm	Spectral halfwidth nm	Forward voltage @10mA(V)		Luminous intensity @10mA(mcd)		Viewing angle 2 1/2 (deg)
		Emitted	Lens			Min.	Typ.	Min.	Typ.	
LA38B-68/YG-S2-PF	GaAsP/GaP	Yellow	White Diffused	585	35	1.7	2.1	4.5	12	70
	GaP	Green		565	30	1.7	2.1	3.0	8.0	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.



Typical Electro-Optical Characteristics Curve

Y CHIP

Fig.1 Forward current vs. Forward Voltage

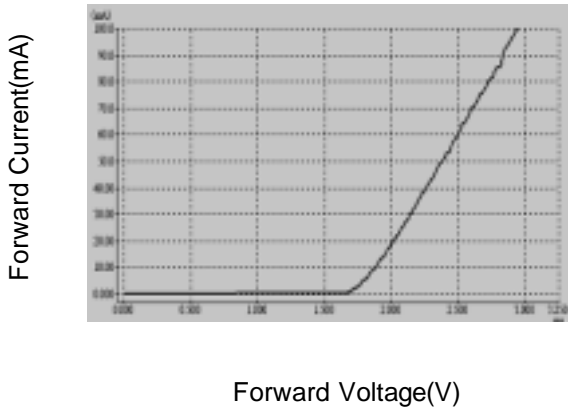


Fig.2 Relative Intensity vs. Forward Current

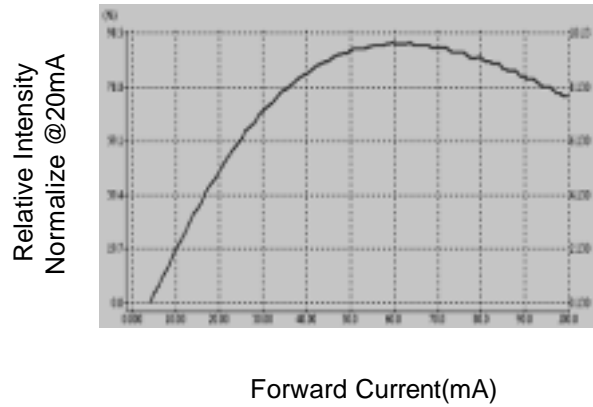


Fig.3 Forward Voltage vs. Temperature

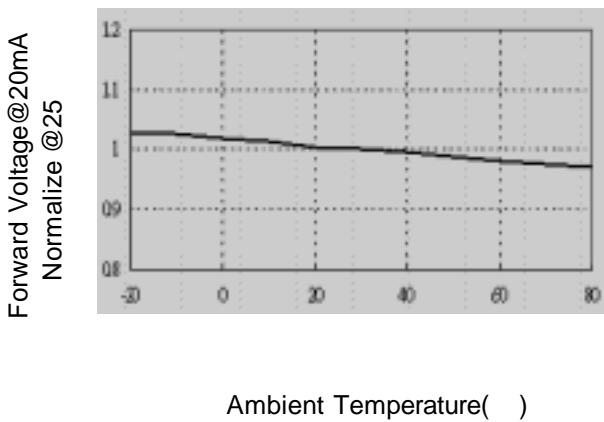


Fig.4 Relative Intensity vs. Temperature

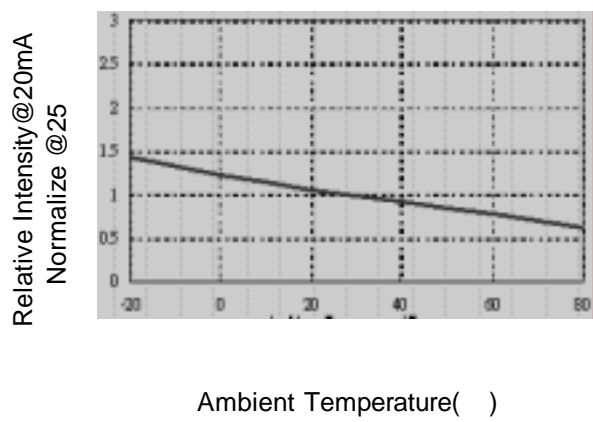
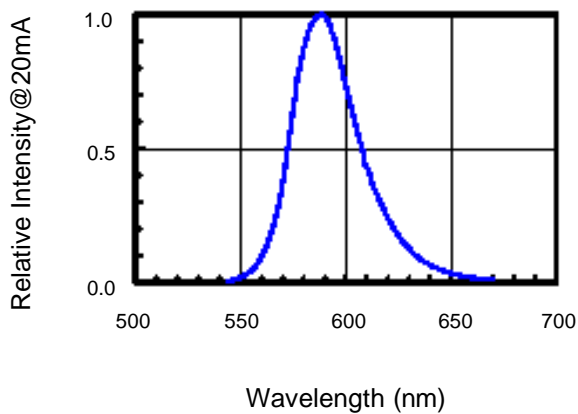


Fig.5 Relative Intensity vs. Wavelength

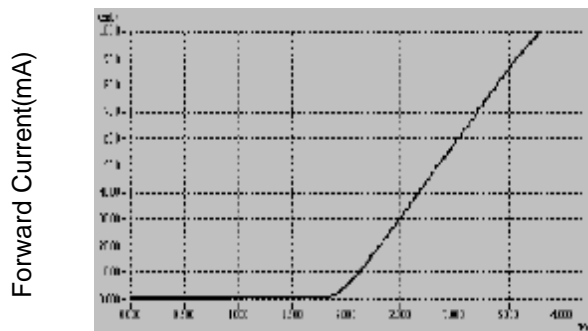




Typical Electro-Optical Characteristics Curve

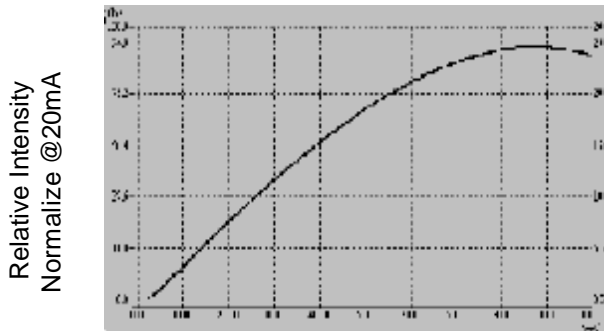
G CHIP

Fig.1 Forward current vs. Forward Voltage



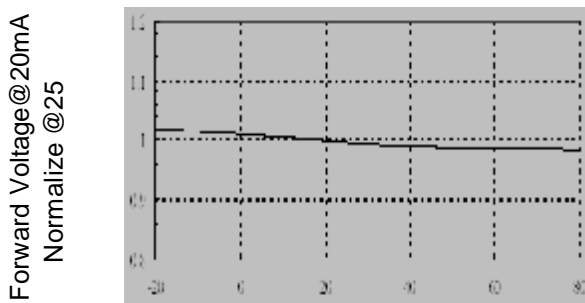
Forward Voltage(V)

Fig.2 Relative Intensity vs. Forward Current



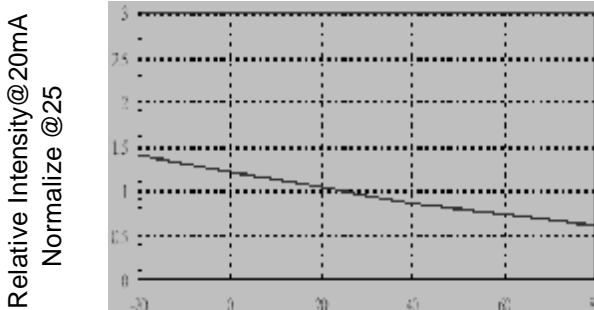
Forward Current(mA)

Fig.3 Forward Voltage vs. Temperature



Ambient Temperature()

Fig.4 Relative Intensity vs. Temperature



Ambient Temperature()

Fig.5 Relative Intensity vs. Wavelength

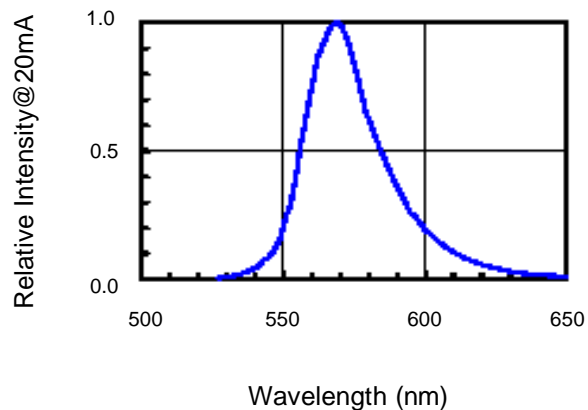


Fig.6 Directive Radiation



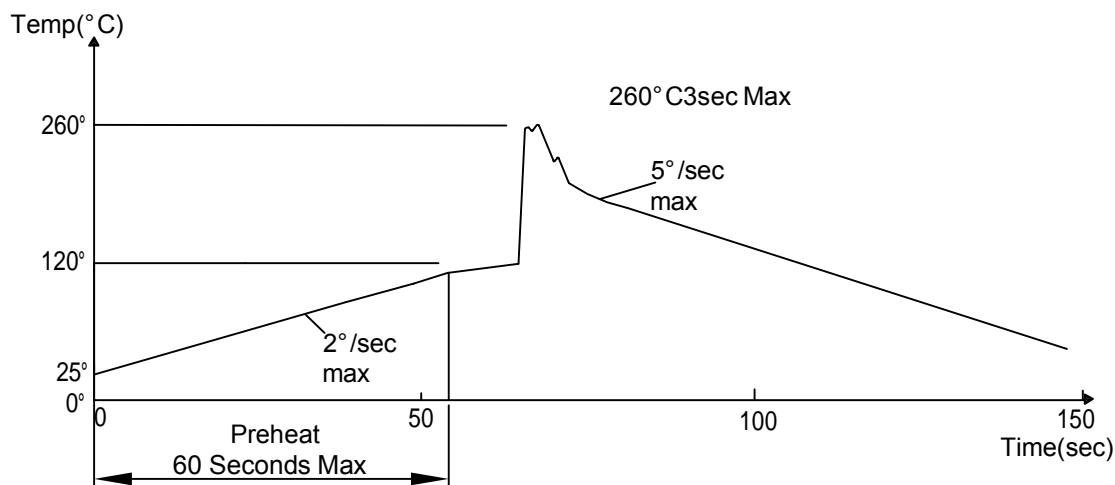
Soldering Condition(Pb-Free)

1.Iron:

Soldering Iron:30W Max
Temperature 350° C Max
Soldering Time:3 Seconds Max(One time only)
Distance:2mm Min(From solder joint to case)

2.Wave Soldering Profile

Dip Soldering
Preheat: 120° C Max
Preheat time: 60seconds Max
Ramp-up
2° C/sec(max)
Ramp-Down:-5° C/sec(max)
Solder Bath:260° C Max
Dipping Time:3 seconds Max
Distance:2mm Min(From solder joint to case)



Note: 1.Wave solder should not be made more than one time.
2.You can just only select one of the soldering conditions as above.

**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 determining the resistance of a part in electrical and thermal 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 condition 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 hours.	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