LIGITEK

LIGITEK ELECTRONICS CO.,LTD.
Property of Ligitek Only

LED ARRAY

Lead-Free Parts

LA44B/YG-S13-PF

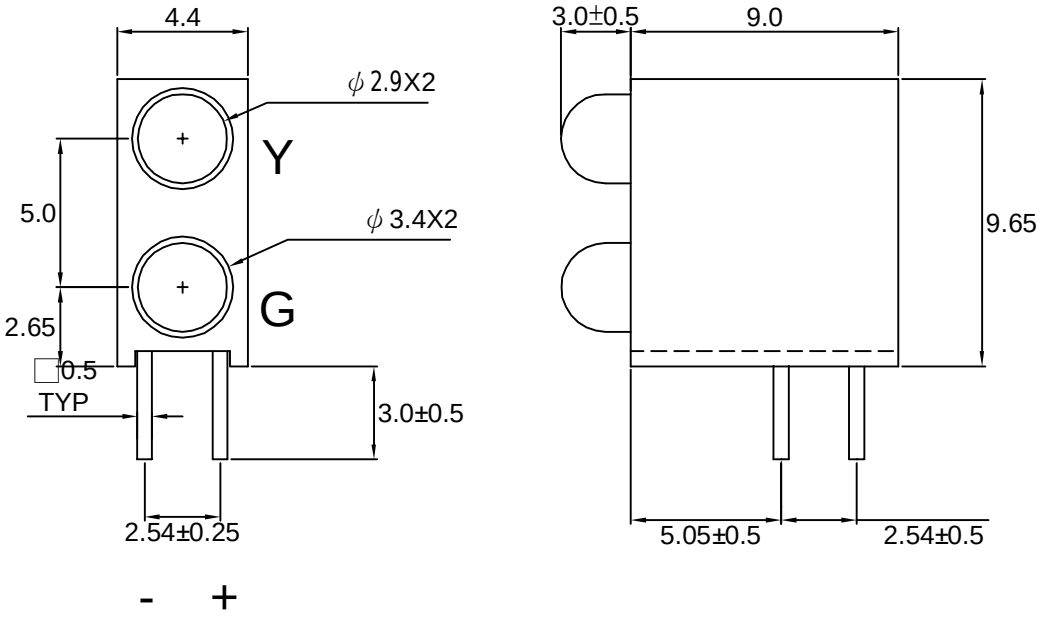
DATA SHEET

DOC. NO : QW0905-LA44B/YG-S13-PF

REV. : A

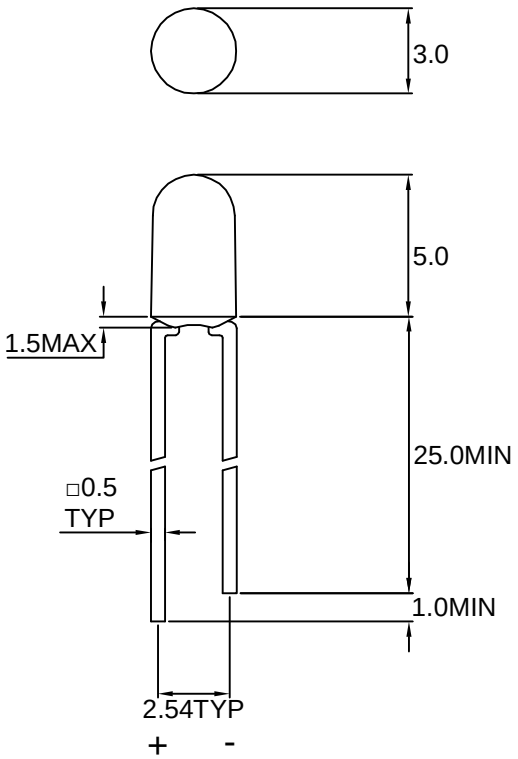
DATE : 28 - Sep.- 2005

Package Dimensions



LY2340-1-PF

LG2340-1-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	I_F	20	30	mA
Peak Forward Current Duty 1/10@10KHz	I_{FP}	80	120	mA
Power Dissipation	PD	60	100	mW
Reverse Current @5V	Ir	10		μA
Operating Temperature	Topr	-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 λ Pnm	Spectral halfwidth △λ nm	Forward voltage @20mA(V)		Luminous intensity @10mA(mcd)		Viewing angle 2θ 1/2 (deg)
		Emitted	Lens			Min.	Max.	Min.	Typ.	
LA44B/YG-S13-PF	GaAsP/GaP	Yellow	Yellow Diffused	585	35	1.7	2.6	8.0	20	80
	GaP	Green	Green Diffused	565	30	1.7	2.6	8.0	20	80

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

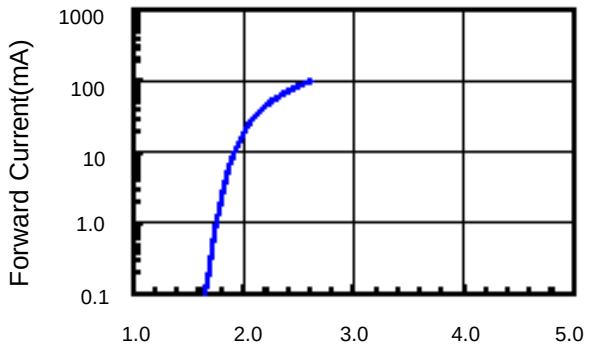


Fig.2 Relative Intensity vs. Forward Current

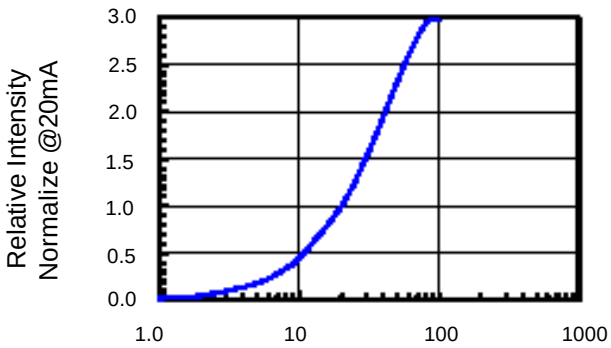


Fig.3 Forward Voltage vs. Temperature

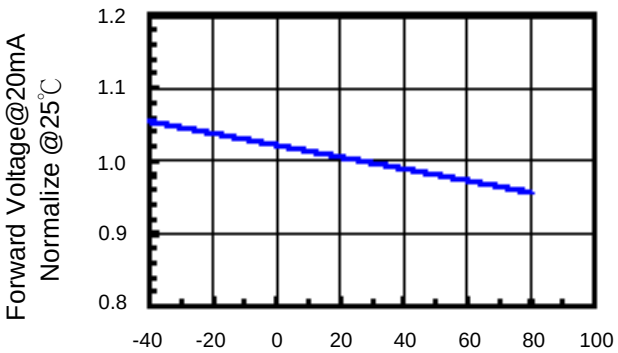


Fig.4 Relative Intensity vs. Temperature

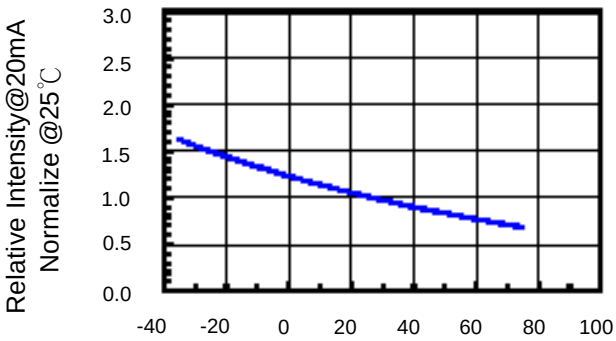
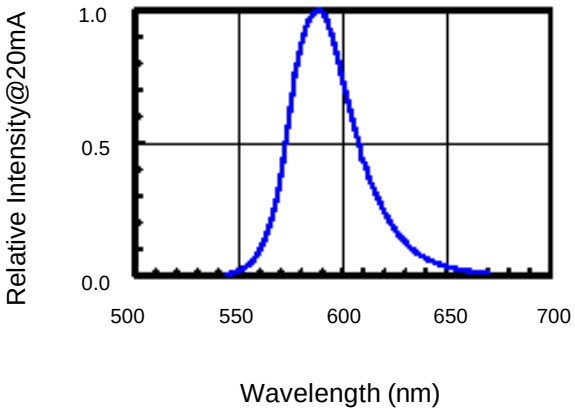


Fig.5 Relative Intensity vs. Wavelength



Typical Electro-Optical Characteristics Curve

G CHIP

Fig.1 Forward current vs. Forward Voltage

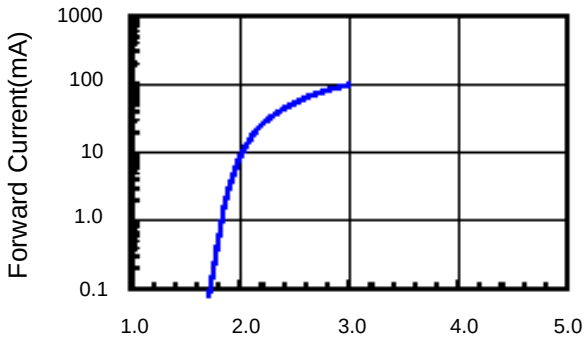


Fig.2 Relative Intensity vs. Forward Current

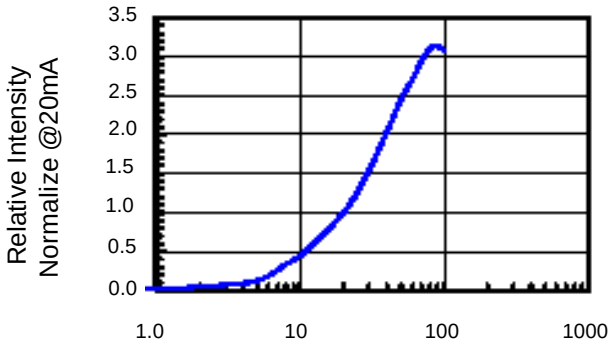


Fig.3 Forward Voltage vs. Temperature

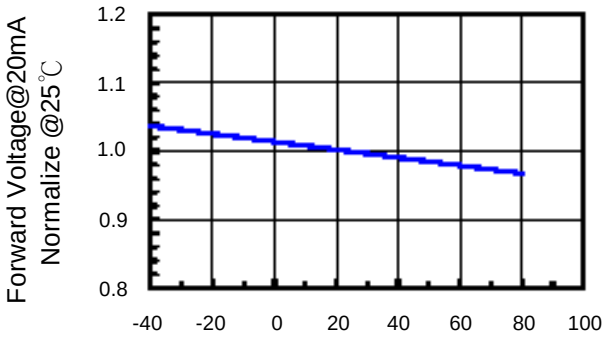


Fig.4 Relative Intensity vs. Temperature

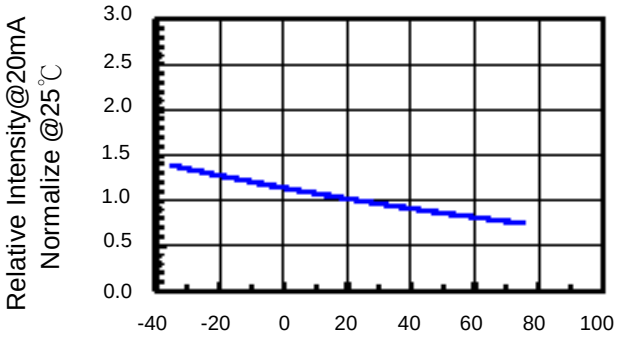
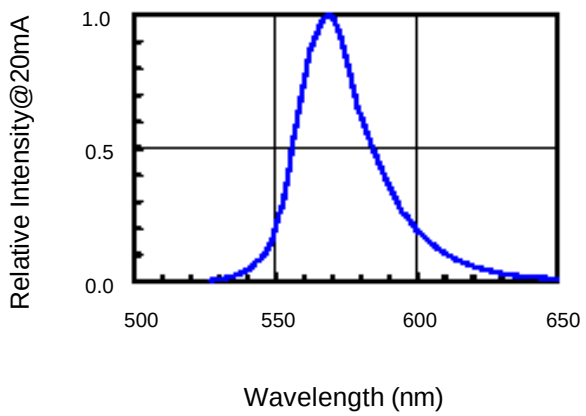


Fig.5 Relative Intensity vs. Wavelength



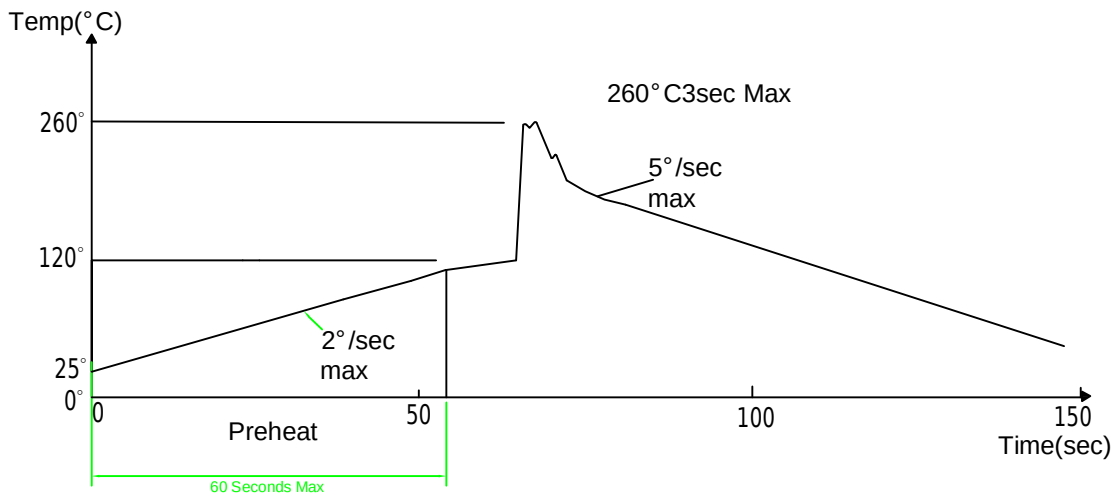
Soldering Condition(Pb-Free)

1.Iron:

Soldering Iron:30W Max
Temperature 350°C Max
Soldering Time:3 Seconds Max(One Time)
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)



Reliability Test:

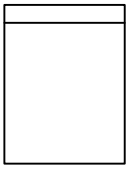
Test Item	Test Condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=20mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of detemining the resisance of a part in electrical and themal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: 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

LIGITEK

PACKING SPECIFICATION

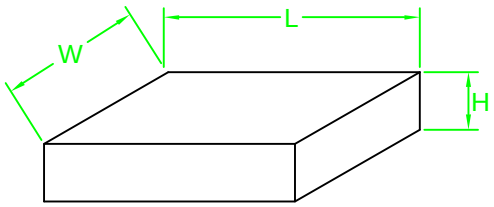
PART NO. LA44B/YG-S13-PF

1. 500PCS / BAG



2. 6 BAG / INNER BOX

SIZE : L X W X H 33.5cm X 19cm X 7.5cm



3. 12 INNER BOXES / CARTON

SIZE : L X W X H 58.5cm X 34cm X 34cm