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LED ARRAY



Lead-Free Parts

LA79B-1/YG.Y.YG.Y-S14-PF

DATA SHEET

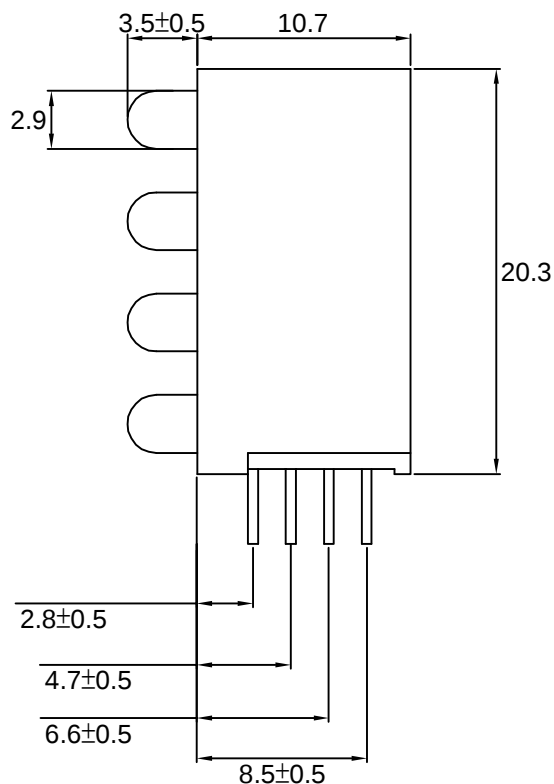
DOC. NO : QW0905-LA79B-1/YG.Y.YG.Y-S14-PF

REV. : A

DATE : 11 - Apr. - 2006



Technical drawing of a 1/2 inch diameter, 10 inch long, 1/4 inch thick plate with four 1/2 inch diameter holes. The holes are spaced 5.08 inches apart, with 2.5 inches from the top and bottom edges. The center-to-center distance between the two middle holes is 4.4 inches. The distance from the center of the bottom hole to the bottom edge is 2.5 ± 0.5 inches. The distance from the center of the top hole to the top edge is 2.54 TYP inches. The drawing also shows two types of gate symbols: a standard gate symbol and a gate symbol with a 'Y' label.



Technical drawing of a mechanical part showing two views: a top view and a front view.

Top View: A rectangle with a circular feature on the left. Dimensions include 2.9, 3.1, and 3.3.

Front View: A vertical profile with a rounded top. Dimensions include 4.3, 28.5±0.5, 1.0MIN, and 2.54TYP. A note indicates a 0.5 TYP dimension for the vertical slots.

Note : 1.All dimension are in millimeter tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.
2.Specifications are subject to change without notice.
3.Holder UL : 94-V0



Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Ratings		UNIT
		Y	G	
Forward Current	IF	20	30	mA
Peak Forward Current Duty 1/10@10KHz	IFP	80	120	mA
Power Dissipation	PD	60	100	mW
Reverse Current @5V	Ir	10		μA
Operating Temperature	Topr	-40 ~ +85		°C
Storage Temperature	Tstg	-40 ~ +100		°C

Typical Electrical & Optical Characteristics (Ta=25 °C)

PART NO	MATERIAL	COLOR		Peak wave length λ Pnm	Spectral halfwidth Δ λ nm	Forward voltage @ 20mA(V)		Luminous intensity @10mA(mcd)		Viewing angle 2θ 1/2 (deg)
		Emitted	Lens			Min.	Max.	Min.	Typ.	
LA79B-1/YG.Y.YG.Y-S14-PF	GaAsP/GaP	Yellow	White Diffused	585	35	1.7	2.6	4.5	12	50
	GaP	Green		565	30	1.7	2.6	8.0	15	50
	GaAsP/GaP	Yellow	Yellow Diffused	585	35	1.7	2.6	8.0	12	50

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

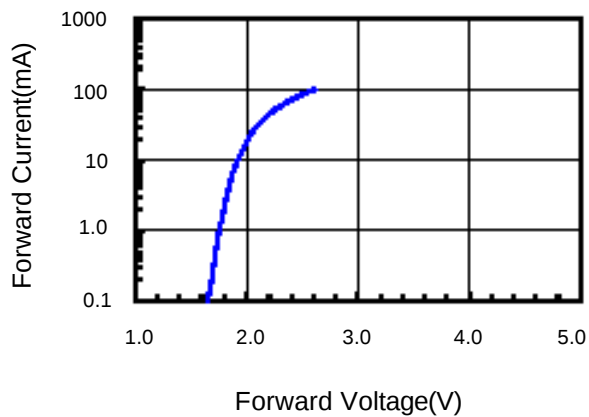


Fig.2 Relative Intensity vs. Forward Current

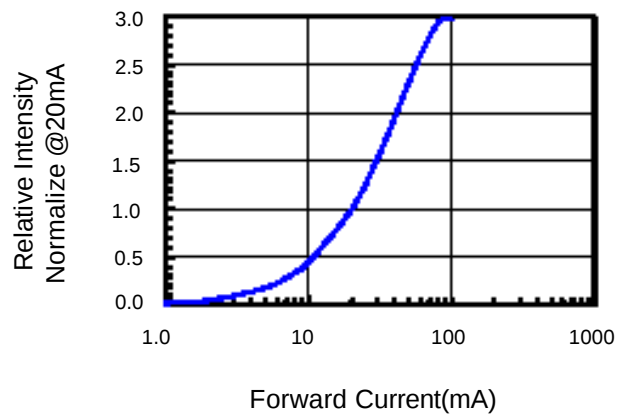


Fig.3 Forward Voltage vs. Temperature

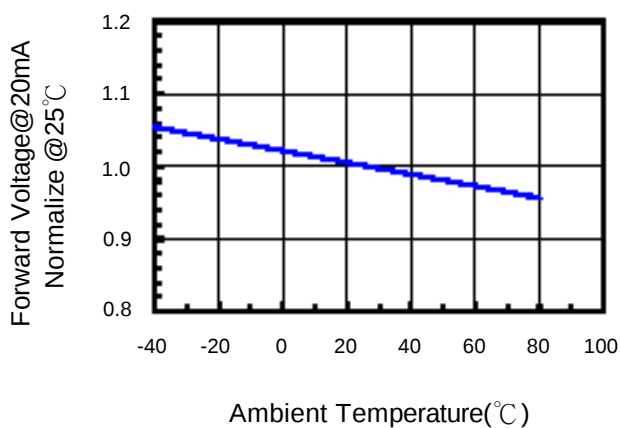


Fig.4 Relative Intensity vs. Temperature

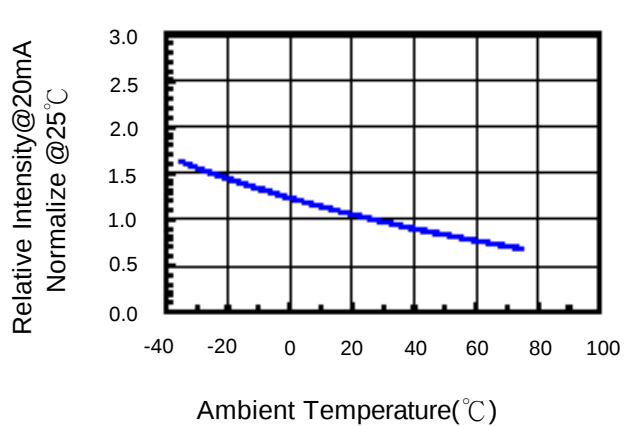
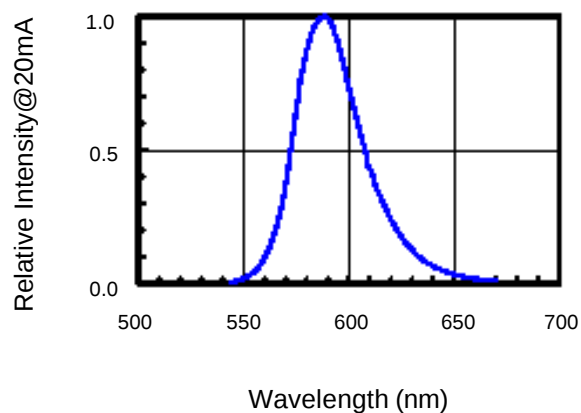


Fig.5 Relative Intensity vs. Wavelength





Typical Electro-Optical Characteristics Curve

G CHIP

Fig.1 Forward current vs. Forward Voltage

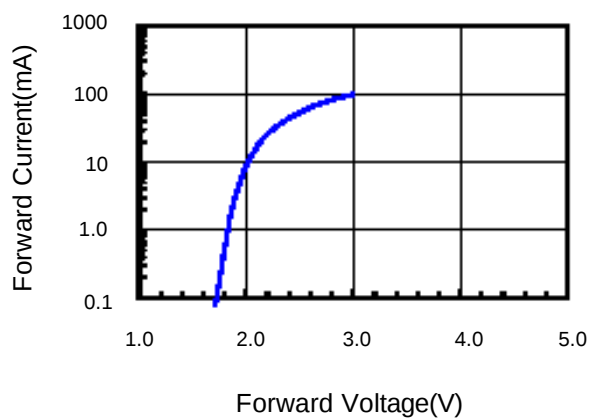


Fig.2 Relative Intensity vs. Forward Current

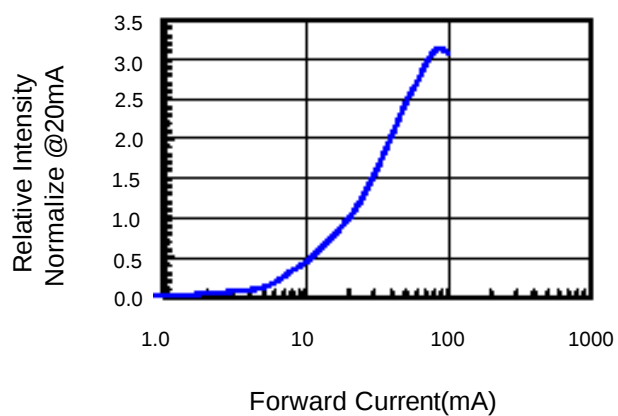


Fig.3 Forward Voltage vs. Temperature

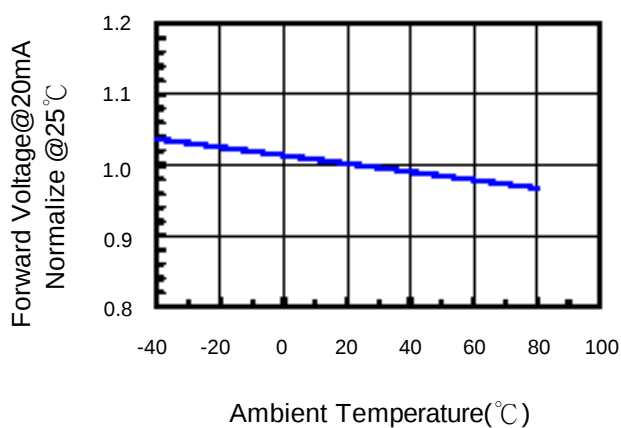


Fig.4 Relative Intensity vs. Temperature

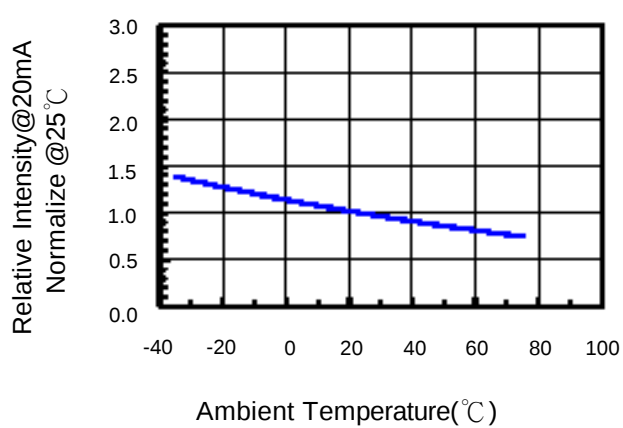
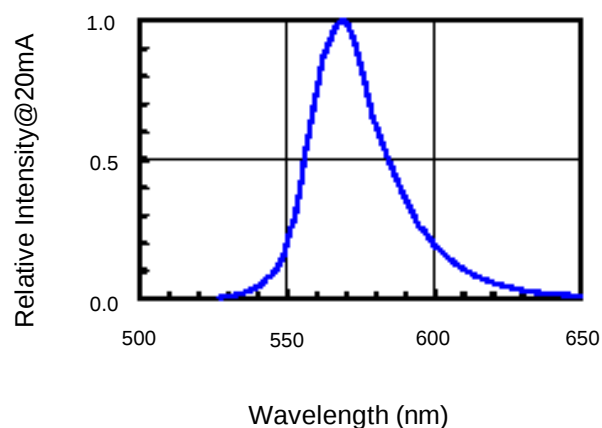


Fig.5 Relative Intensity vs. Wavelength



**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

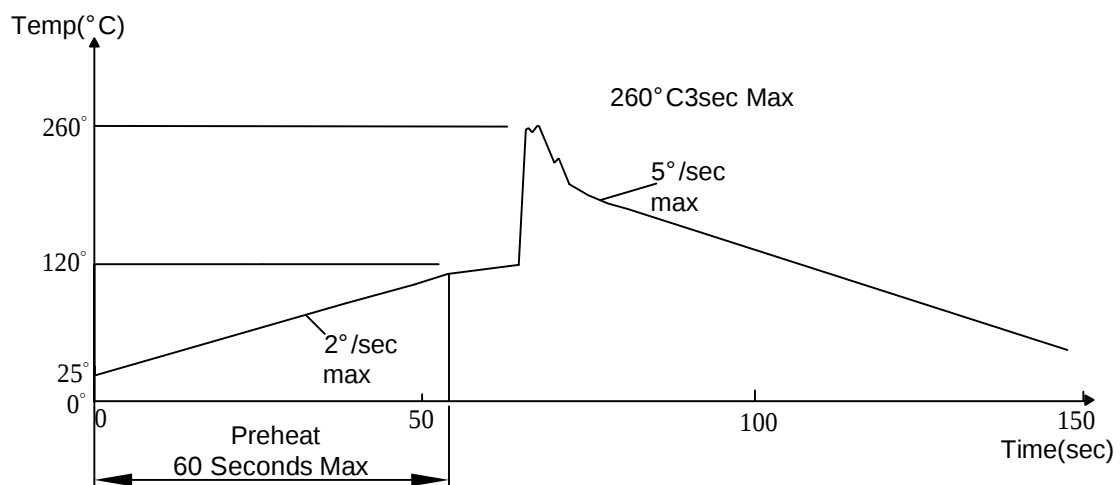
2° C/sec(max)

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 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 °C±5°C 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 °C±5°C 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 °C±5°C 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 °C±5°C & -40 °C±5°C (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 °C±5°C 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 °C±5°C 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