
LED ARRAY

Lead-Free Parts

LA140B-1/G-PF**DATA SHEET**DOC. NO : QW0905-LA140B-1/G-PFREV. : ADATE : 19 - Oct.- 2005



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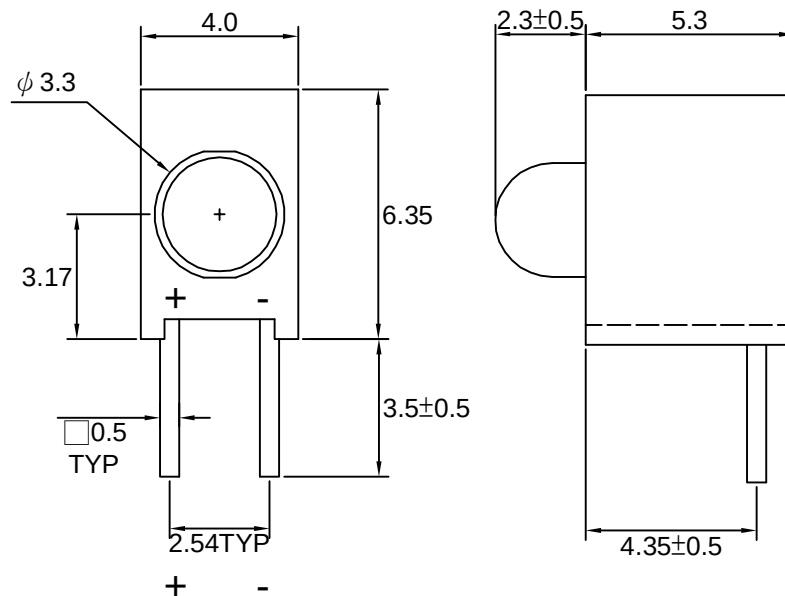
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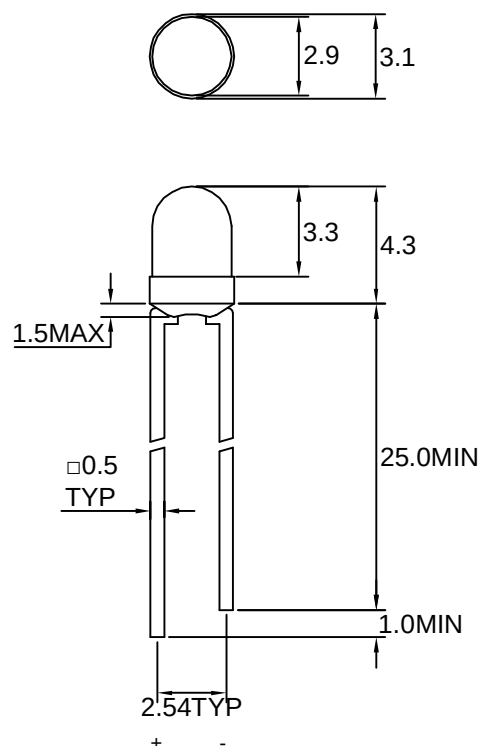
PART NO. LA140B-1/G-PF

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Package Dimensions



LG2640-1-PF



Note : 1.All dimension are in millimeter tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.

2.Specifications are subject to change without not

icc

**Absolute Maximum Ratings at Ta=25 °C**

Parameter	Symbol	Ratings	UNIT
		G	
Forward Current	IF	30	mA
Peak Forward Current Duty 1/10@10KHz	IFP	120	mA
Power Dissipation	PD	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 $\Delta \lambda$ nm	Forward voltage @20mA(V)		Luminous intensity @10mA(mcd)		Viewing angle 2 θ 1/2 (deg)
		Emitted	Lens			Min.	Max.	Min.	Typ.	
LA140B-1/G-PF	GaP	Green	Green Diffused	565	30	1.7	2.6	12	20	50

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



Typical Electro-Optical Characteristics Curve

G CHIP

Fig.1 Forward current vs. Forward Voltage

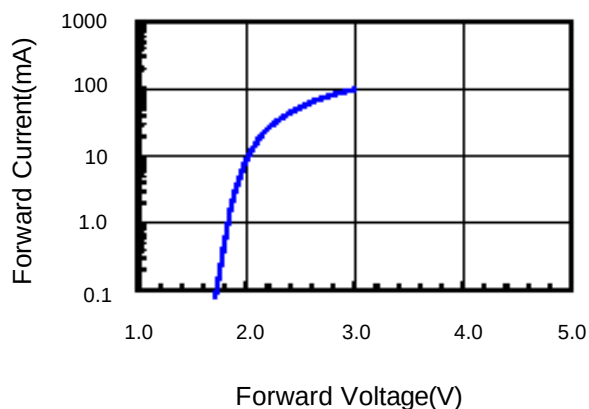


Fig.2 Relative Intensity vs. Forward Current

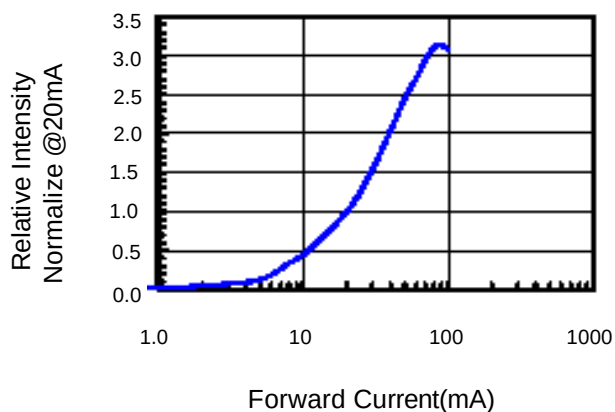


Fig.3 Forward Voltage vs. Temperature

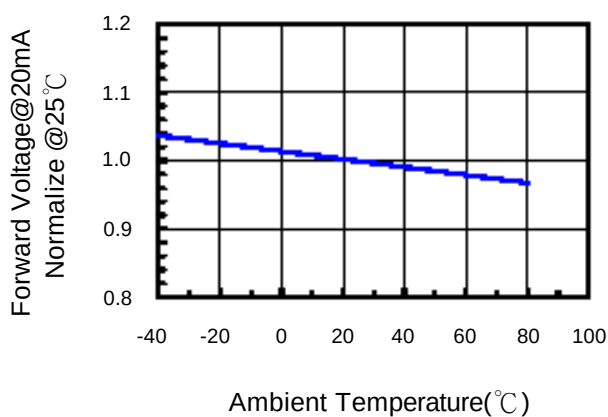


Fig.4 Relative Intensity vs. Temperature

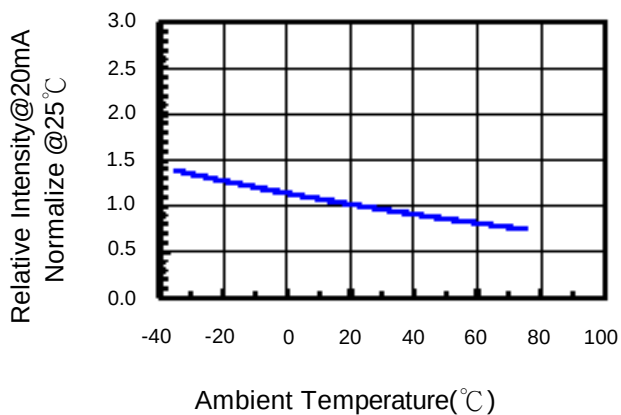
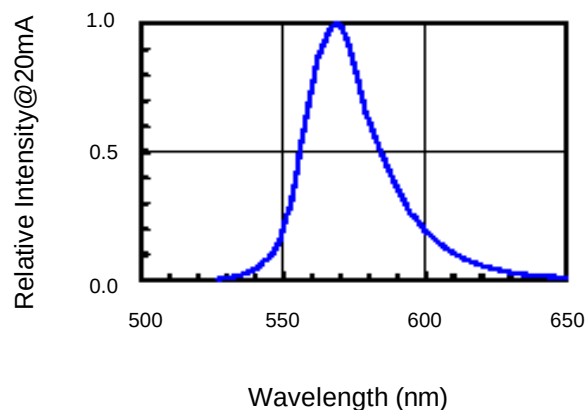


Fig.5 Relative Intensity vs. Wavelength

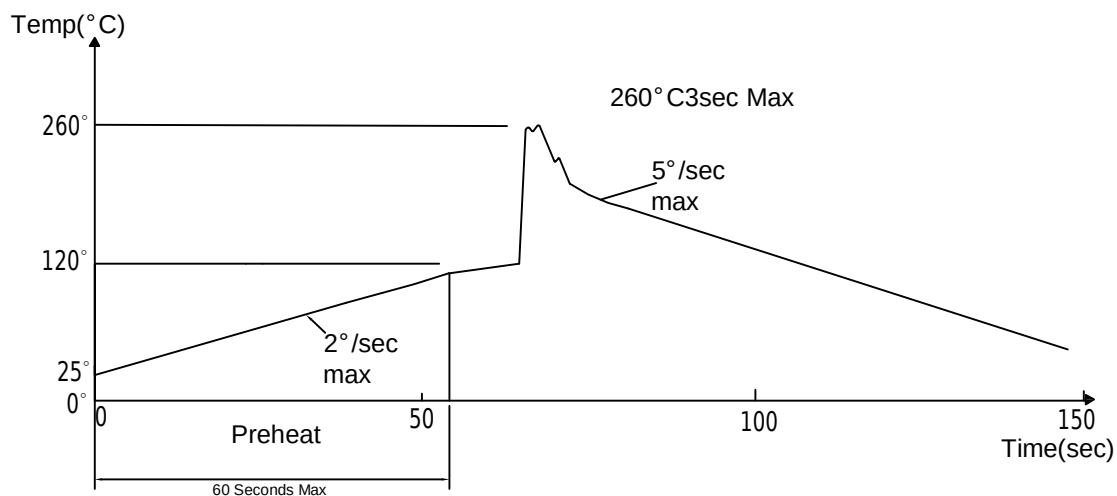


**Soldering Condition(Pb-Free)****1.Iron:**

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