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**LED ARRAY**

**LG2040-W59R14**

**DATA SHEET**

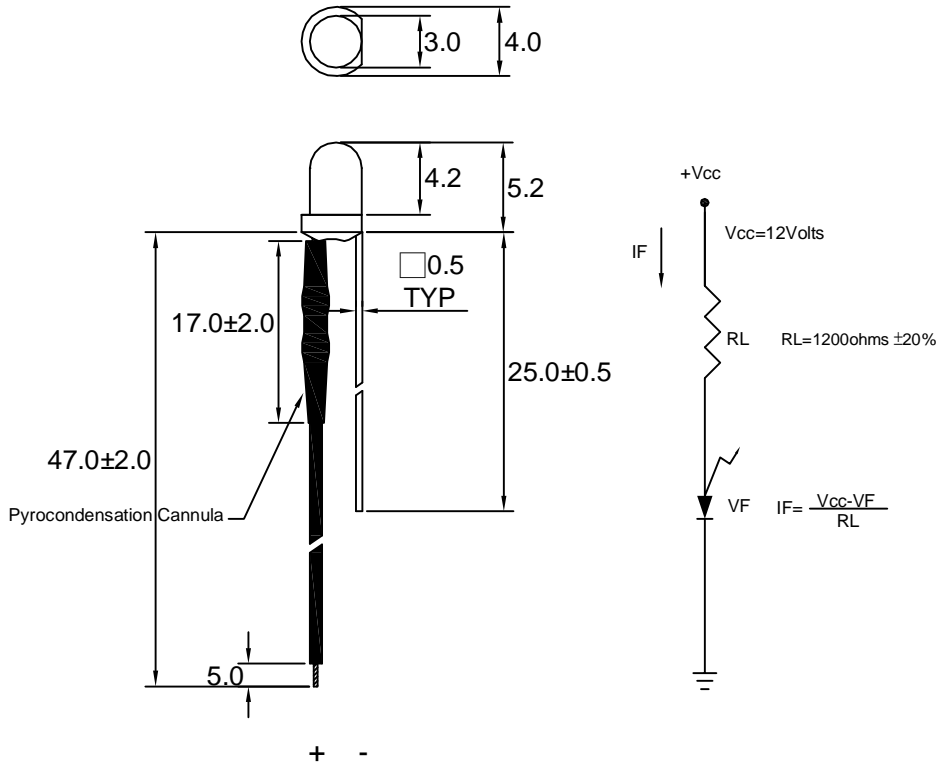
DOC. NO : QW0905-LG2040-W59R14

REV. : B

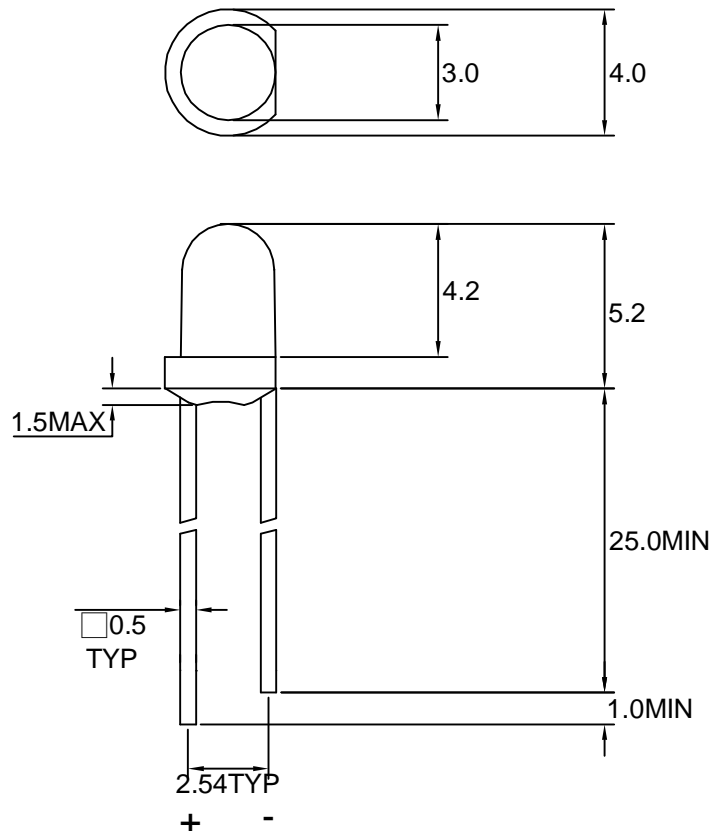
DATE : 04 - Jul. - 2007



### Package Dimensions



### LG2040-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°C**

Parameter	Symbol	Ratings	UNIT
		G	
Forward voltage	V <sub>F</sub>	12	V
Reverse voltage	V <sub>r</sub>	15	V
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-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 current (mA) @ 12V		Luminous intensity (mcd) @12V		Reverse current (uA) VR=15V	Viewing angle 2θ 1/2 (deg)
		Emitted	Lens			Min.	Max.	Min.	Typ.		
LG2040-W59R14	GaP	Green	Green Diffused	565	30	6.0	12	8.0	20	100	36

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

G CHIP

Fig.1 Forward current vs. Forward Voltage

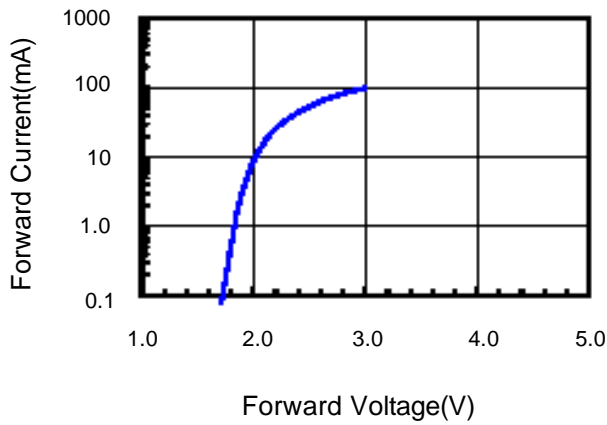


Fig.2 Relative Intensity vs. Forward Current

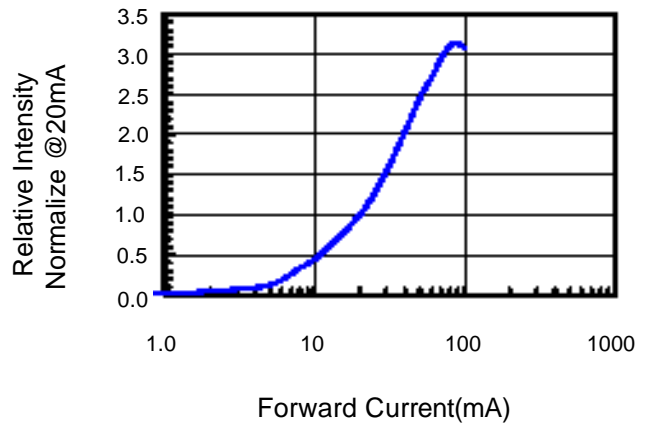


Fig.3 Forward Voltage vs. Temperature

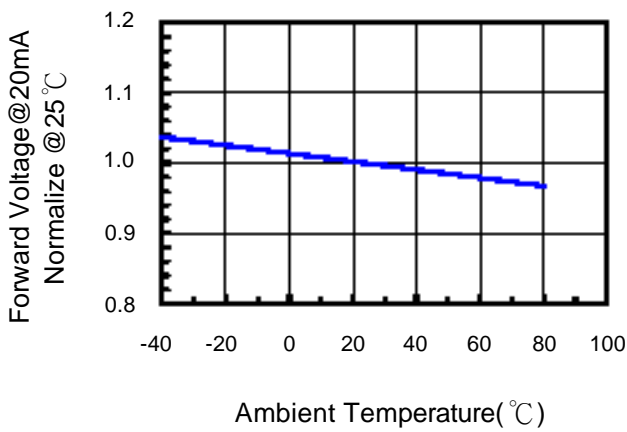


Fig.4 Relative Intensity vs. Temperature

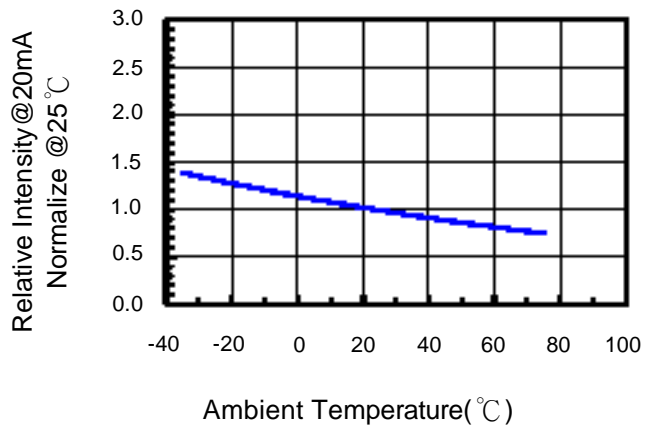
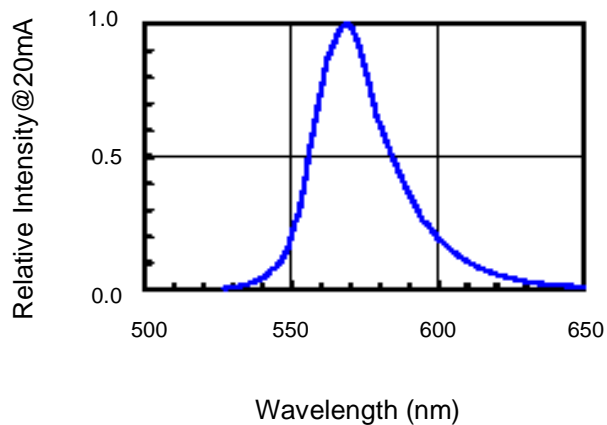


Fig.5 Relative Intensity vs. Wavelength





## 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