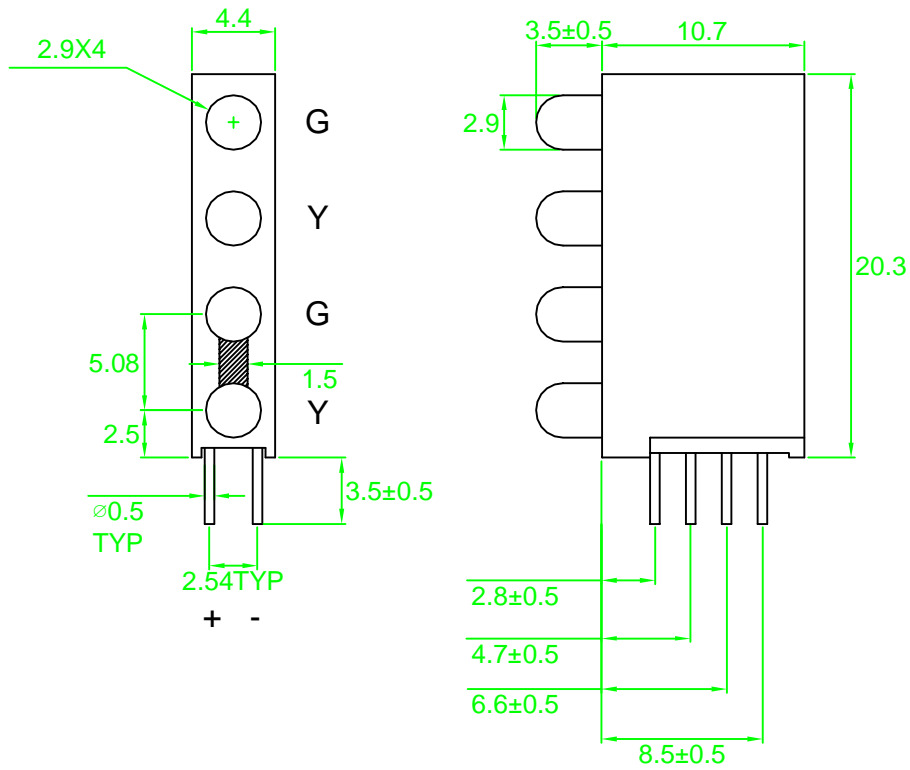

LED ARRAY

Lead-Free Parts

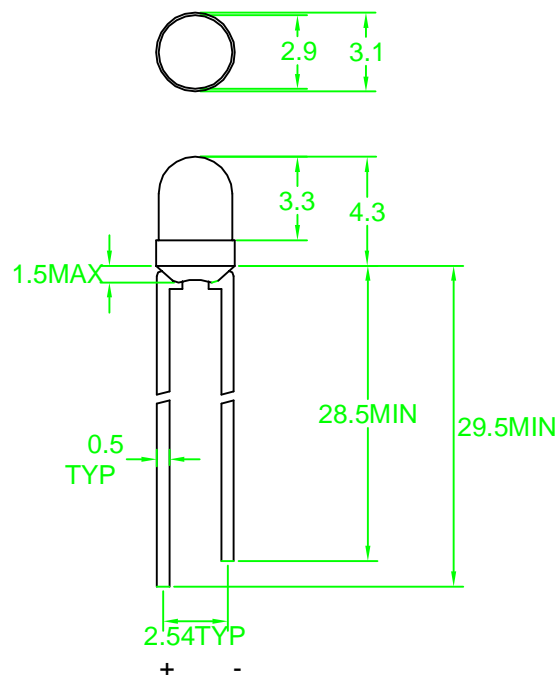
LA79B-1/GYGY-S23-PF**DATA SHEET**DOC. NO : QW0905-LA79B-1/GYGY-S23-PFREV. : BDATE : 08 - Sep. - 2009



Package Dimensions



LG2640/S84/H-PF
LY2640/S36/H-PF



Note : 1.All dimension are in millimeter tolerance is ± 0.25 mm unless otherwise noted.
2.Specifications are subject to change without notice.



Absolute Maximum Ratings at Ta=25

| Parameter | Symbol | Ratings | | UNIT |
|---|--------|------------|----|------|
| | | G | Y | |
| Forward Current | IF | 30 | 20 | mA |
| Peak Forward Current Duty 1/10@10KHz | IFP | 120 | 80 | mA |
| Power Dissipation | PD | 100 | 60 | 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 | Dominant wave length Dnm | | Spectral halfwidth nm | Forward voltage @20mA(V) | | Luminous intensity @10mA(mcd) | | | Viewing angle 2 1/2 (deg) |
|---------------------|-----------|---------|-----------------|----------------------|--------------------------|------|-----------------------|--------------------------|------|-------------------------------|------|------|---------------------------|
| | | Emitted | Lens | | Min. | Max. | | Min. | Max. | Min. | Typ. | Max. | |
| LA79B-1/GYGY-S23-PF | GaP | Green | Green Diffused | --- | 566 | 572 | 30 | 1.7 | 2.6 | 12 | --- | 45 | 86 |
| | 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

G CHIP

Fig.1 Forward current vs. Forward Voltage

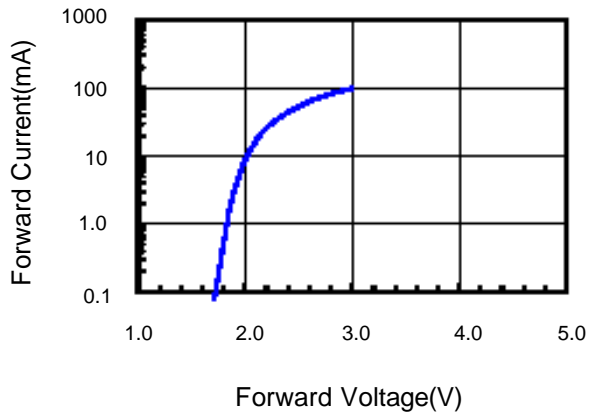


Fig.2 Relative Intensity vs. Forward Current

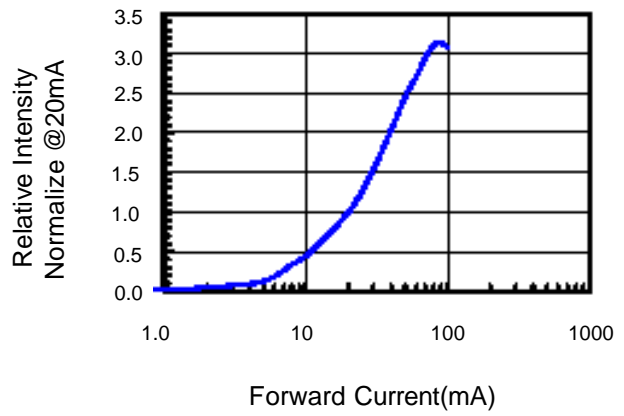


Fig.3 Forward Voltage vs. Temperature

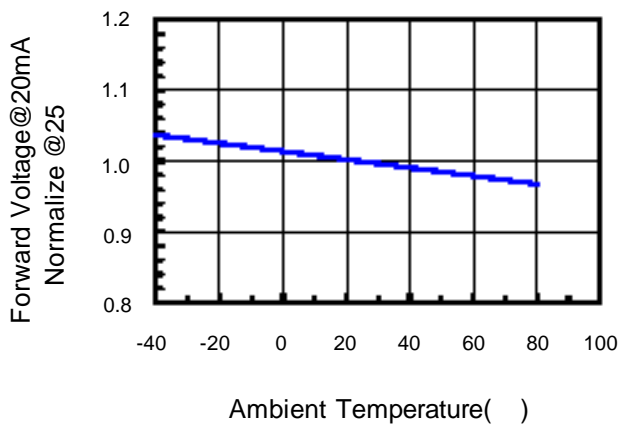


Fig.4 Relative Intensity vs. Temperature

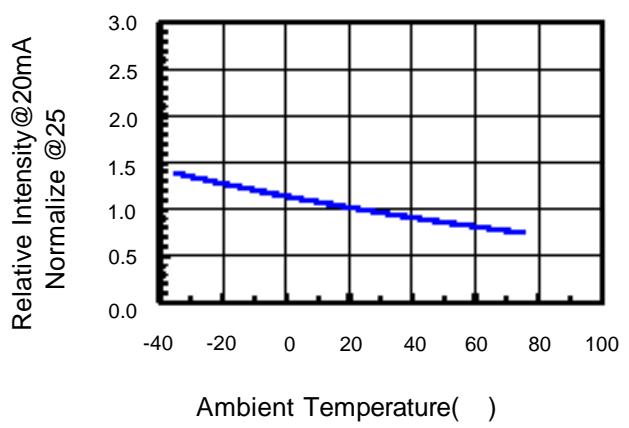
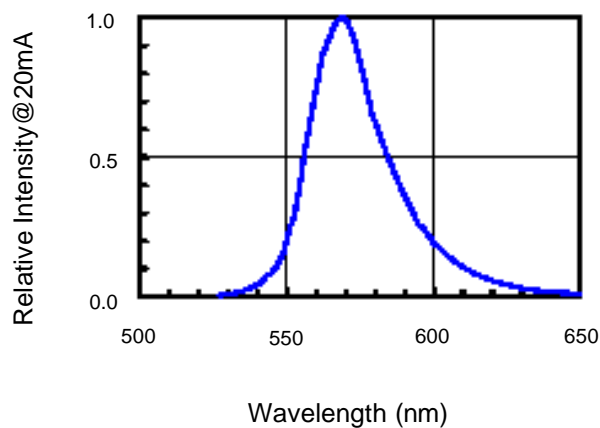


Fig.5 Relative Intensity vs. Wavelength





Typical Electro-Optical Characteristics Curve

Y CHIP

Fig.1 Forward current vs. Forward Voltage

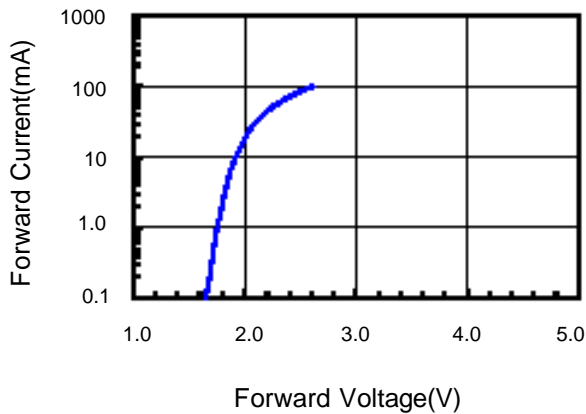


Fig.2 Relative Intensity vs. Forward Current

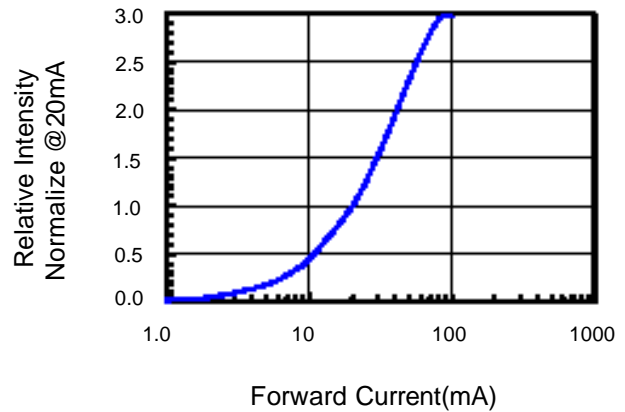


Fig.3 Forward Voltage vs. Temperature

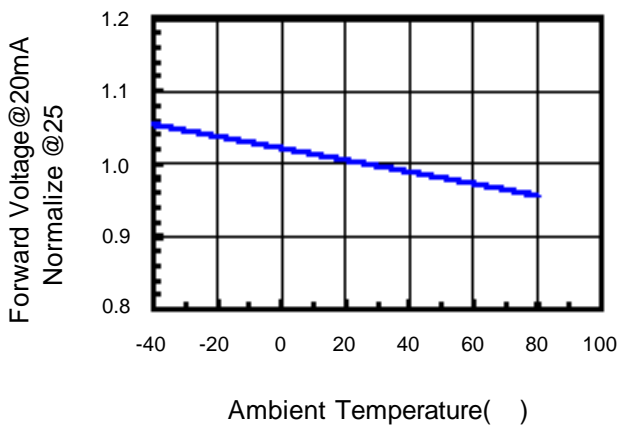


Fig.4 Relative Intensity vs. Temperature

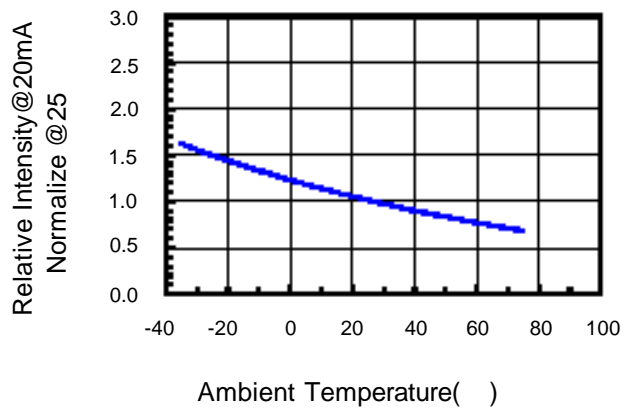
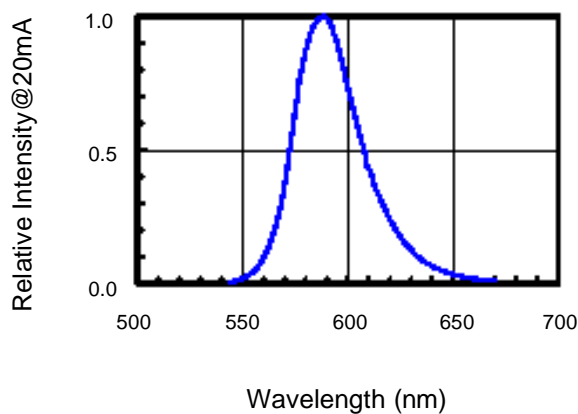


Fig.5 Relative Intensity vs. Wavelength





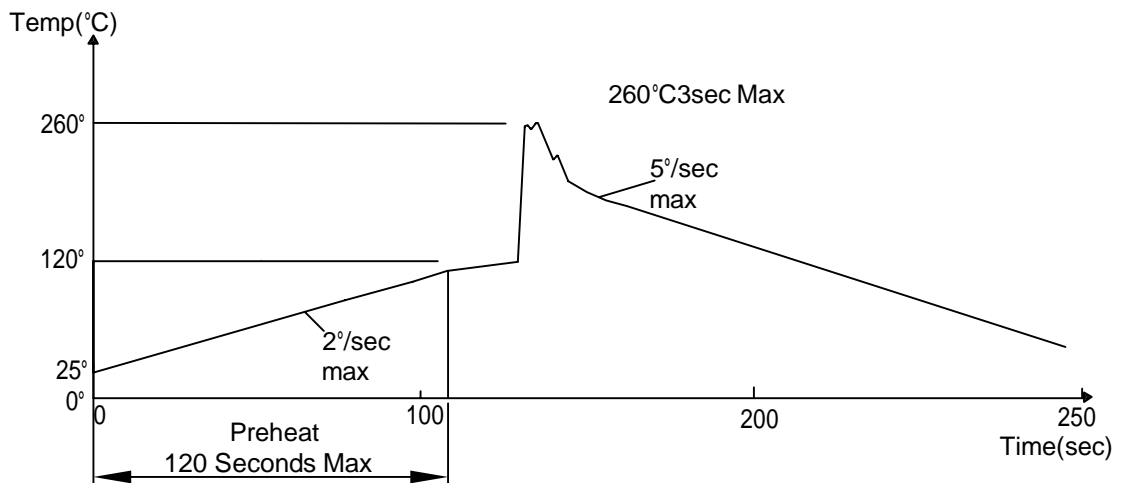
Soldering Condition(Pb-Free)

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: 120seconds 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 |