

Infrared LED

**SANYO****SLP-9118B-51****ø3.1mm red contact type LED lamp****Features**

- GaAsP red LED
- 3.1mmø, round top type lamp
- Diffused red resin package type
- The insertion which made it stick to PCB is possible
- High luminous intensity, high reliability and long life
- Application : for the general public welfare

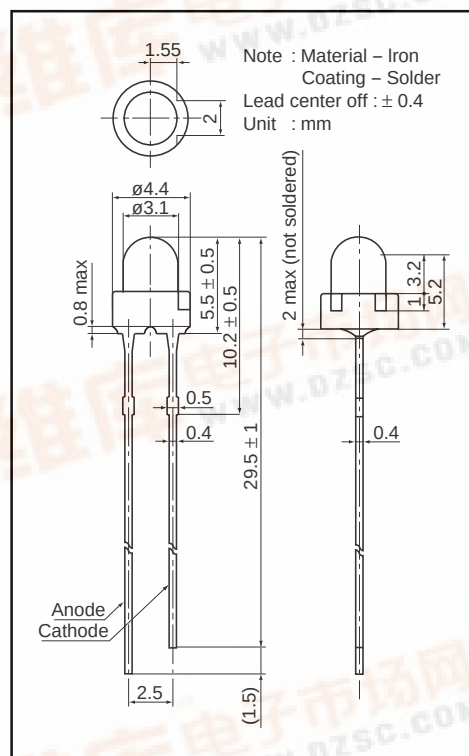
**Absolute Maximum Ratings at Ta=25°C (as per JIS C 7032)**

| Parameter                | Symbol           | Rating     | Unit |
|--------------------------|------------------|------------|------|
| Forward Current *1       | I <sub>F</sub>   | 25         | mA   |
| Pulse Forward Current *2 | I <sub>FP</sub>  | 100        | mA   |
| Reverse Voltage          | V <sub>R</sub>   | 3          | V    |
| Power Dissipation        | P <sub>D</sub>   | 70         | mW   |
| Operating Temperature    | T <sub>opr</sub> | -25 to +80 | °C   |
| Storage Temperature      | T <sub>stg</sub> | -30 to +85 | °C   |
| Soldering Temperature *3 | T <sub>sol</sub> | 260        | °C   |

\*1 See forward current derating

\*2 Pulse width = Max. 10ms Duty ratio = Max. 1 / 10

\*3 Max. 5sec., Lead soldering condition : Min. 1.6mm from case (used 1.6mm't PCB)

**Electrical / Optical Characteristics at Ta=25°C**

| Parameter             | Symbol         | Conditions                    | Min. | Typ. | Max. | Unit |
|-----------------------|----------------|-------------------------------|------|------|------|------|
| Forward Voltage       | V <sub>F</sub> | I <sub>F</sub> = 20mA         | 1.7  | 2.1  | 2.8  | V    |
| Reverse Current       | I <sub>R</sub> | V <sub>R</sub> = 3V           | -    | -    | 10   | μA   |
| Luminous Intensity *4 | I <sub>V</sub> | I <sub>F</sub> = 20mA         | 8    | 20   | -    | mcd  |
| Peak Wave length      | λ <sub>P</sub> | I <sub>F</sub> = 20mA         | -    | 630  | -    | nm   |
| Line Half Width       | Δλ             | I <sub>F</sub> = 20mA         | -    | 40   | -    | nm   |
| Capacitance           | C <sub>O</sub> | V <sub>O</sub> = 0 • F = 1MHz | -    | 40   | -    | pF   |
| Response Time         | t              | -                             | -    | 90   | -    | ns   |

\*4 Luminous Intensity is measured by J-16 (SONY TEKTRONIX) of which our office possess.

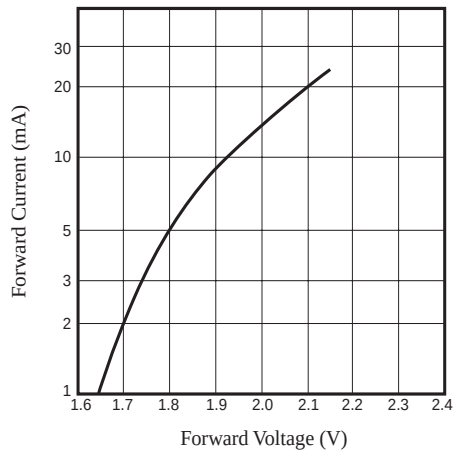
## SLP-9118B-51

### Typical Characteristics

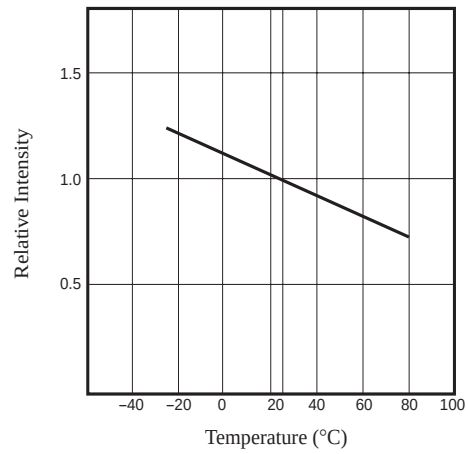


These shows the electrical and optical characteristics of this products, and not assure this dispersive contents.

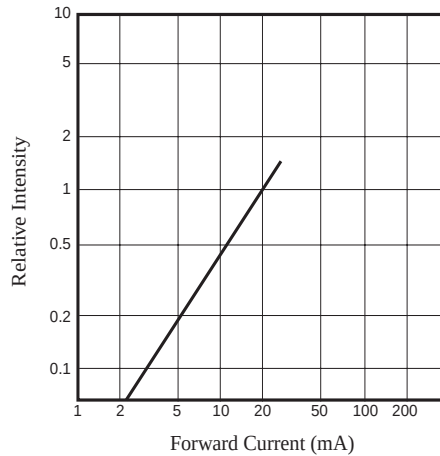
Forward Current vs. Forward Voltage



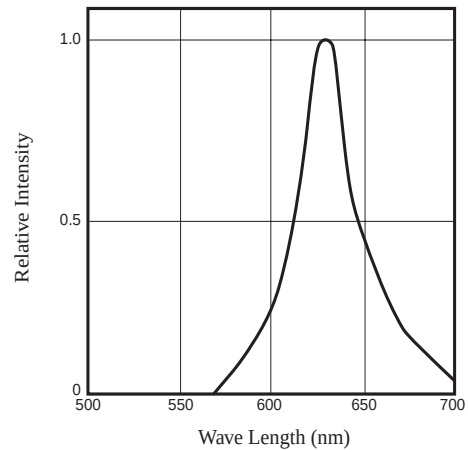
Intensity vs. Temperature ( $I_F$  : constant)



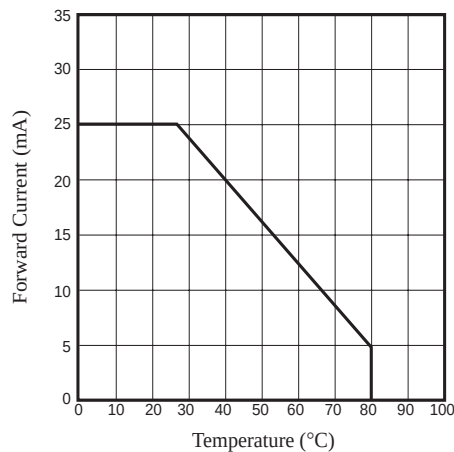
Intensity vs. Current



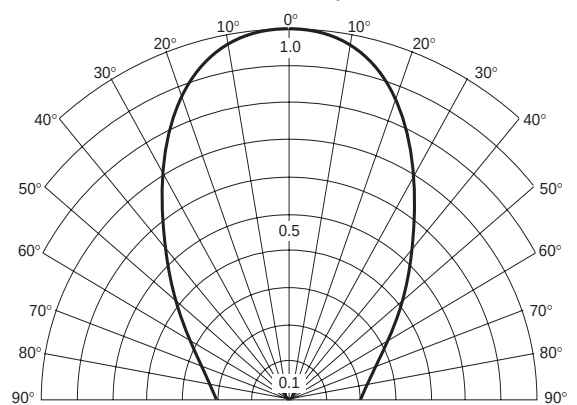
Spectrum



Forward Current Derating (Abusolute Maximum Rating)



Directivity



**⚠ PRECAUTIONS**

- (1) Bending a lead should avoid not to cause chip deterioration or so. When bending is necessary, care must be taken considering the following points :
  - ① Bending a lead must be done before soldering.
  - ② Bending a lead must be done in the states of fixing a lead tight and applying no stress on the resin part; otherwise it may cause troubles such as gold wire breaking.
  - ③ A lead must be bent at intervals of 1.6mm from the edge of the resin part.
  - ④ Do not bend the same portion of lead more than twice.
- (2) Setting a product by a tool such as holder should avoid. When necessary, no stress should be applied to the resin part and lead by sufficient considerations on dimension tolerance, thermal expansion, thermal contraction of holder, product and circuit board.
- (3) The hole pitch of a circuit board must fit to its lead pitch.
- (4) When soldering, care must be taken considering the following points :
  - ① Do not heat a product under any stress (ex. : twist) to leads.
  - ② Do not heat (by soldering, for example) a product in the states of being forced to the resin part.
- (5) Do not use the flux containing chlorine which may cause corrosion of lead and washing is preferable. When washing is necessary, avoid washing the whole product and wash only the needed part under the following conditions.
  - Chemicals : Methyl alcohol
  - Temperature : 45°C max.
  - Time : 30sec. max.



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## Precautionary instructions in handling gallium arsenic products

Special precautions must be taken in handling this product because it contains, gallium arsenic, which is designated as a toxic substance by law. Be sure to adhere strictly to all applicable laws and regulations enacted for this substance, particularly when it comes to disposal.