

Flat displays

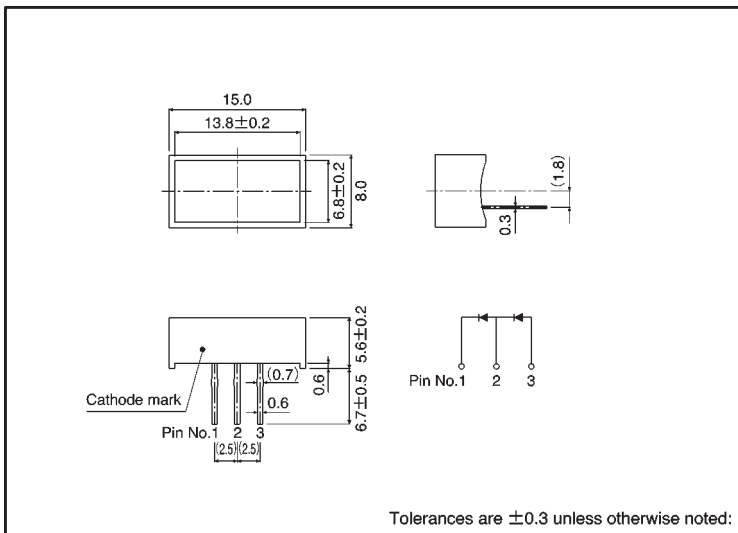
LD-603 Series

The LD-603 series were designed in response to the need for large, flat displays. These are two-chip, flat displays with high luminance.

●Features

- 1) 6.8 × 13.8 mm planar emission from two chips connected in series.
- 2) High luminance, uniform planar emission.
- 3) Thin outer casing, multiple units can be coupled together.
- 4) Four colors: red, orange, yellow and green.

●External dimensions (Units: mm)



●Selection guide

| Emitting color | Red | Orange | Yellow | Green |
|----------------|----------|----------|----------|----------|
| Type | LD-603VR | LD-603DU | LD-603YY | LD-603MG |

●Absolute maximum ratings (Ta = 25°C)

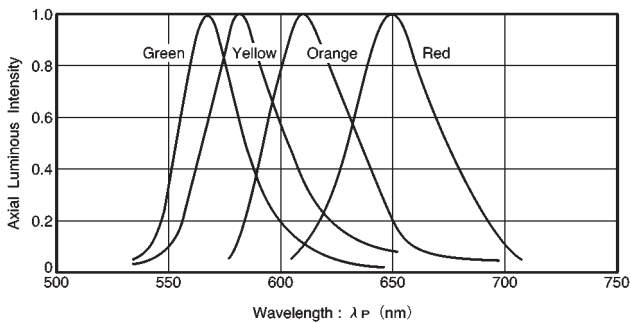
| Parameter | Symbol | Red | LD-603VR | Orange | LD-603DU | Yellow | LD-603YY | Green | LD-603MG | Unit |
|-----------------------|------------------|-----------|----------|--------|----------|--------|----------|-------|----------|------|
| Power dissipation | P _D | 120 | 120 | 120 | 120 | 120 | 120 | 150 | 150 | mW |
| Forward current | I _F | 20 | 20 | 20 | 20 | 20 | 20 | 25 | 25 | mA |
| Peak forward current | I _{FP} | 60* | 60* | 60* | 60* | 60* | 60* | 60* | 60* | mA |
| Reverse voltage | V _R | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | V |
| Operating temperature | T _{opr} | -25 ~ +75 | | | | | | | | °C |
| Storage temperature | T _{stg} | -30 ~ +85 | | | | | | | | °C |

* Pulse width 1ms duty 1 / 5

●Electrical and optical characteristics (Ta = 25°C)

| Parameter | Symbol | Conditions | Red | | | Orange | | | Yellow | | | Green | | | Unit |
|--------------------------|-----------------|-------------------|------|------|------|--------|------|------|--------|------|------|-------|------|------|---------------|
| | | | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Forward voltage | V_F | $I_F=10\text{mA}$ | — | 4.0 | 5.6 | — | 4.0 | 5.6 | — | 4.2 | 5.6 | — | 4.2 | 5.6 | V |
| Reverse current | I_R | $V_R=3\text{V}$ | — | — | 10 | — | — | 10 | — | — | 10 | — | — | 10 | μA |
| Peak wavelength | λ_P | $I_F=10\text{mA}$ | — | 650 | — | — | 610 | — | — | 585 | — | — | 563 | — | nm |
| Spectral line half width | $\Delta\lambda$ | $I_F=10\text{mA}$ | — | 40 | — | — | 40 | — | — | 40 | — | — | 40 | — | nm |

●Luminous intensity vs. wavelength



●Luminous intensity

| Color | Type | Min. | Typ. | Max. | Unit |
|--------|----------|------|------|------|------|
| Red | LD-603VR | 1.4 | 4.0 | — | mcd |
| Orange | LD-603DU | 2.2 | 6.3 | — | mcd |
| Yellow | LD-603YY | 2.2 | 6.3 | — | mcd |
| Green | LD-603MG | 2.2 | 6.3 | — | mcd |

Note 1: Measured at $I_F = 10\text{mA}$

Note 2: Current passes through 2 elements.

●Operation notes

When forming leads, the bend should be at least 2 mm from the base of the package. Solder after forming the leads, and ensure that the inside of the LED is not subjected to mechanical stress while it is hot.