

# Flat displays

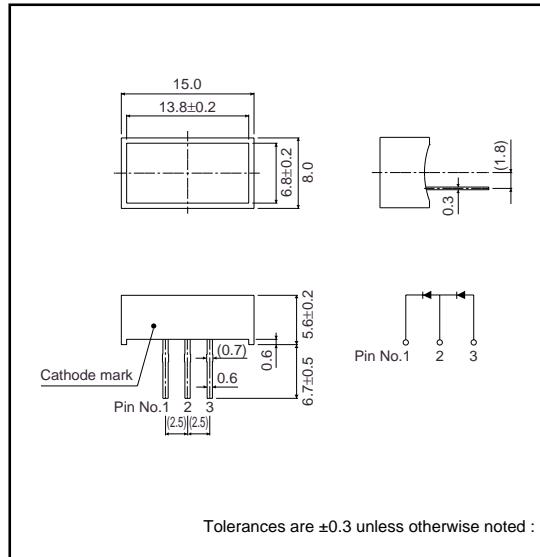
## LD-603 Series

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) 6.8×13.8mm 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 are available : red, orange, yellow and green.

### ●External Dimensions (Units : mm)



Tolerances are  $\pm 0.3$  unless otherwise noted :

### ●Selection guide

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

\* Order-based production.

### ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Red	LD-603VR	Orange	LD-603DU	Yellow	LD-603YY	Green	LD-603MG	Unit
Power dissipation	P <sub>D</sub>	120		120		120		150		mW
Forward current	I <sub>F</sub>	20		20		20		25		mA
Peak forward current	I <sub>FP</sub>	60*		60*		60*		60*		mA
Reverse voltage	V <sub>R</sub>	3		3		3		3		V
Operating temperature	T <sub>opr</sub>					-25~+75				°C
Storage temperature	T <sub>stg</sub>					-30~+85				°C

\* Pulse width 1ms duty 1 / 5

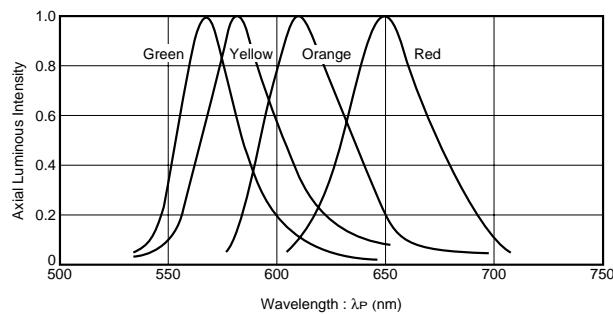
## LED displays

## ●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 <sub>F</sub>	I <sub>F</sub> =10mA	—	4.0	5.6	—	4.0	5.6	—	4.2	5.6	—	4.2	5.6	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =3V	—	—	10	—	—	10	—	—	10	—	—	10	μA
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> =10mA	—	650	—	—	610	—	—	585	—	—	563	—	nm
Spectral line half width	Δλ	I <sub>F</sub> =10mA	—	40	—	—	40	—	—	40	—	—	40	—	nm

Electrical and optical are guaranteed values per element.

## ●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<sub>F</sub> = 10mA

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.