

# Directly mountable, two-color LEDs ( $\phi 5.0$ mm) SPR-325 Seires

The SPR-325 series are  $\phi 3.2$  mm, two-color LEDs which can be directly mounted on a printed circuit board. Red and green elements are built into a single package, and these LEDs are suitable for a wide range of uses.

## ●Features

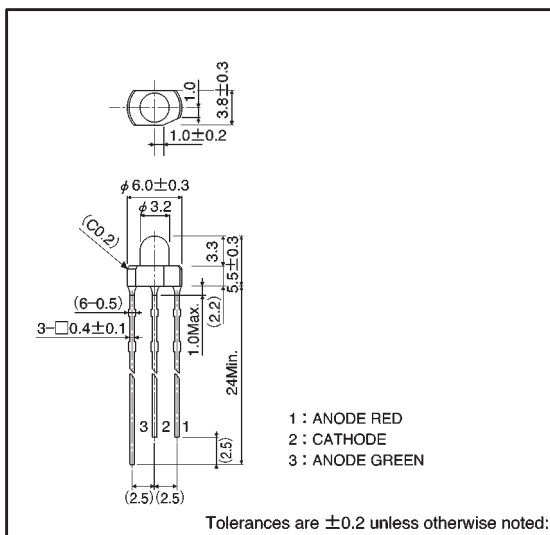
- 1) Two-color emission : red and green.
- 2) Epoxy resin package with a diameter of 3.2 mm.
- 3) Milky white lens.
- 4) High reliability.
- 5) Lead pitch of 2.5 mm.

## ●Selection guide

| Emitting color | Red / Green |
|----------------|-------------|
| Lens           |             |
| Milky white    | SPR-325MVW  |

Note: This product is only available on tape.

## ●External dimensions (Units: mm)



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

| Parameter             | Symbol           | Red                     | Green | Unit |
|-----------------------|------------------|-------------------------|-------|------|
| Power dissipation     | P <sub>D</sub>   | 60                      | 75    | mW   |
| Forward current       | I <sub>F</sub>   | 20                      | 25    | mA   |
| Peak forward current  | I <sub>FP</sub>  | 60*                     | 60*   | mA   |
| Reverse voltage       | V <sub>R</sub>   | 3                       | 3     | V    |
| Operating temperature | T <sub>opr</sub> | -25~+85                 |       | °C   |
| Storage temperature   | T <sub>stg</sub> | -30~+100                |       | °C   |
| Soldering temperature | —                | 260°C 5 seconds maximum |       | —    |

\* Pulse width 1ms Duty 1 / 5

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

| Parameter                | Symbol          | Conditions        | Red  |      |      | Green |      |      | Unit          |
|--------------------------|-----------------|-------------------|------|------|------|-------|------|------|---------------|
|                          |                 |                   | Min. | Typ. | Max. | Min.  | Typ. | Max. |               |
| Forward voltage          | $V_F$           | $I_F=10\text{mA}$ | —    | 2.0  | 3.0  | —     | 2.1  | 3.0  | V             |
| Reverse current          | $I_R$           | $V_R=3\text{V}$   | —    | —    | 10   | —     | —    | 10   | $\mu\text{A}$ |
| Peak wavelength          | $\lambda_P$     | $I_F=10\text{mA}$ | —    | 650  | —    | —     | 563  | —    | nm            |
| Spectral line half width | $\Delta\lambda$ | $I_F=10\text{mA}$ | —    | 40   | —    | —     | 40   | —    | nm            |
| Viewing angle            | $2\theta_{1/2}$ | Diffused          | —    | 40   | —    | —     | 40   | —    | deg           |
| Luminous intensity       | $I_v$           | $I_F=10\text{mA}$ | 2.2  | 6.3  | —    | 3.6   | 10   | —    | mcd           |

●Luminous intensity vs. wavelength

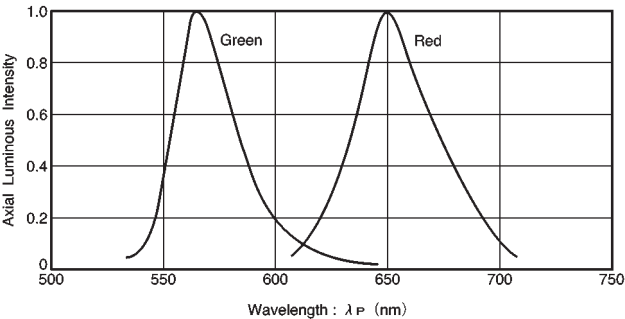


Fig. 1

●Directional pattern

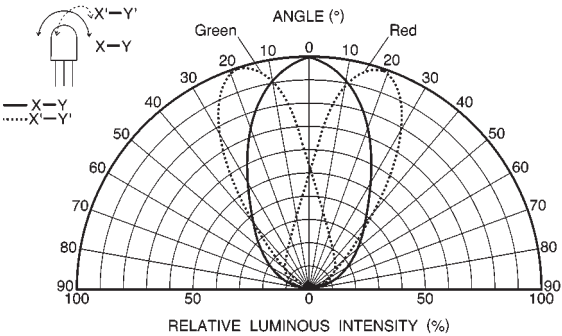


Fig. 2

●Electrical characteristic curves (red, green)

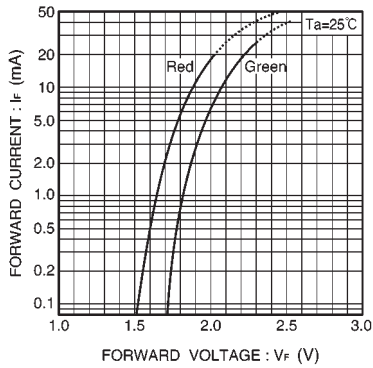


Fig. 3 Forward current vs. forward voltage

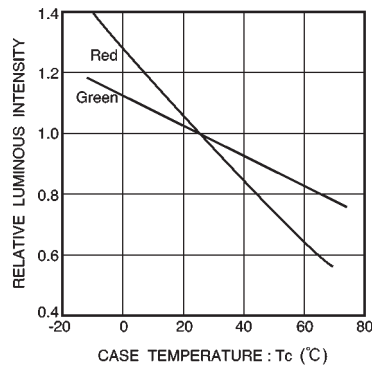


Fig. 4 Luminous intensity vs. case temperature

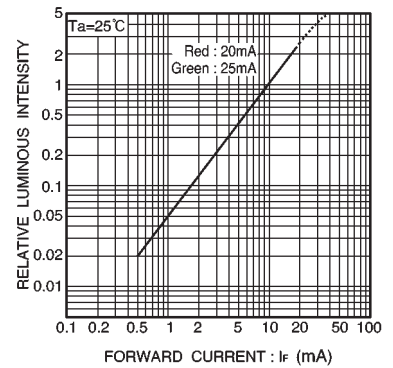


Fig. 5 Luminous intensity vs. forward current

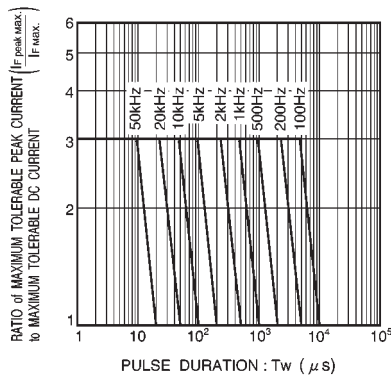


Fig. 6 Maximum tolerable peak current vs. pulse duration (red)

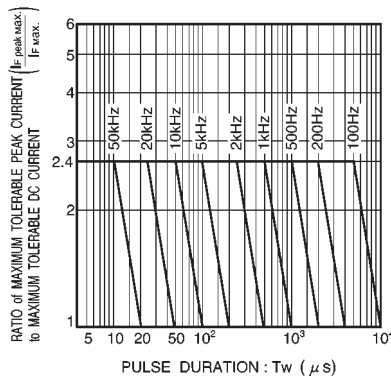


Fig. 7 Maximum tolerable peak current vs. pulse duration (green)

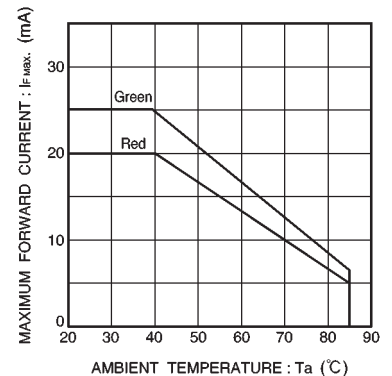


Fig. 8 Maximum forward current vs. ambient temperature