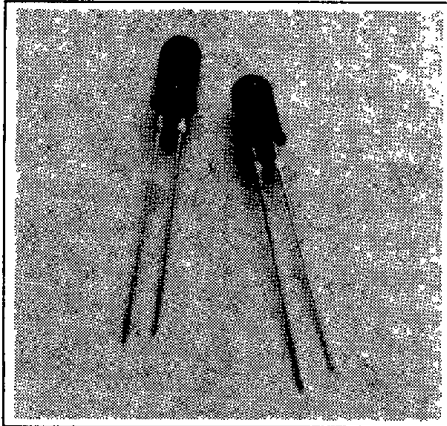
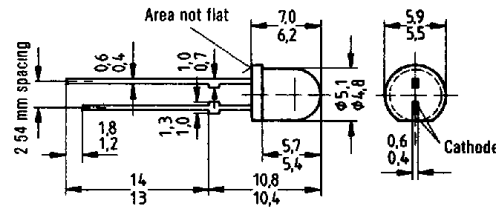


**SIEMENS**

**SUPER-RED LS 5180** T-41-21  
**YELLOW LY 5180**  
**GREEN LG 5180**  
**T1<sup>3</sup>/<sub>4</sub> (5 mm) LED LAMP**



Package Dimensions mm



Approx. weight 0.25 g

**FEATURES**

- Diffused Lens
- Wide Viewing Angle 140°
- With Standoffs
- T1<sup>3</sup>/<sub>4</sub> (5 mm) Package Size
- 1" Lead Length
- I/C Compatible

**DESCRIPTION**

The LS 5180 super-red and LY 5180 yellow are premium high efficiency light emitting diode lamps fabricated with TSN (transparent substrate nitrogen) technology. The LG 5180 green is a gallium phosphide (GaP) lamp. All have a diffused plastic lens which emits a full flooded intense light.

**Maximum Ratings**

|                                                          |                 |
|----------------------------------------------------------|-----------------|
| Reverse Voltage ( $V_R$ )                                | 5 V             |
| Forward Current ( $I_F$ )                                | 45 mA           |
| Surge Current ( $t = 10 \mu s$ ) ( $I_{FS}$ )            | 1 A             |
| Storage Temperature Range ( $T_{STG}$ )                  | -55°C to +100°C |
| Junction Temperature ( $T_J$ )                           | 100°C           |
| Total Power Dissipation ( $P_{TOT}$ ) $T_A = 25^\circ C$ | 150 mW          |
| Thermal Resistance Junction to Air ( $R_{THA}$ )         | 500 K/W         |

**Characteristics ( $T_A = 25^\circ C$ )**

| Parameter                                                         | Symbol           | LS 5180<br>Super-Red | LY 5180<br>Yellow  | LG 5180<br>Green   | Unit    |
|-------------------------------------------------------------------|------------------|----------------------|--------------------|--------------------|---------|
| Wavelength at Peak                                                |                  |                      |                    |                    |         |
| Emission                                                          | $\lambda_{PEAK}$ | 635                  | 586                | 565                | nm      |
| Dominant Wavelength                                               | $\lambda_{DOM}$  | 628                  | 590                | 567                | nm      |
| Viewing Angle<br>(Limits for 50% of<br>Luminous Intensity $I_V$ ) | $\Phi$           | 140                  | 140                | 140                | Deg     |
| Forward Voltage ( $I_F = 10 \text{ mA}$ )                         | $V_F$            | 2.0 ( $\leq 2.6$ )   | 2.0 ( $\leq 2.6$ ) | 2.0 ( $\leq 2.6$ ) | V       |
| Reverse Current ( $V_R = 5 \text{ V}$ )                           | $I_R$            | 0.01 ( $\leq 10$ )   | 0.01 ( $\leq 10$ ) | 0.01 ( $\leq 10$ ) | $\mu A$ |
| Capacitance<br>( $V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$ )      | $C_0$            | 12                   | 10                 | 15                 | pF      |
| Rise Time                                                         | $t_r$            | 300                  | 300                | 450                | ns      |
| Fall Time                                                         | $t_f$            | 150                  | 150                | 200                | ns      |

**Luminous Intensity (mcd)**

| Part Number | Min. | Max. | Test Condition | Part Number | Min. | Max. | Test Condition |
|-------------|------|------|----------------|-------------|------|------|----------------|
| LS 5180-FJ  | 1    | 8    | 10 mA          | LY 5180-GK  | 1.6  | 12.5 | 10 mA          |
| LS 5180-G   | 1.6  | 3.2  | 10 mA          | LY 5180-H   | 2.5  | 5    | 10 mA          |
| LS 5180-H   | 2.5  | 5    | 10 mA          | LG 5180-FJ  | 1    | 8    | 10 mA          |
| LS 5180-HL  | 2.5  | 20   | 10 mA          | LG 5180-G   | 1.6  | 3.2  | 10 mA          |
| LS 5180-J   | 4    | 8    | 10 mA          | LG 5180-H   | 2.5  | 5    | 10 mA          |
| LY 5180-EH  | 0.63 | 5    | 10 mA          | LG 5180-HL  | 2.5  | 20   | 10 mA          |
| LY 5180-F   | 1    | 2    | 10 mA          | LG 5180-J   | 4    | 8    | 10 mA          |
| LY 5180-G   | 1.6  | 3.2  | 10 mA          |             |      |      |                |

See graph numbers 1, 2E, 3A, 5A, 6A, 7A, 8, 9, 10 on pages 42-48