



SIEMENS

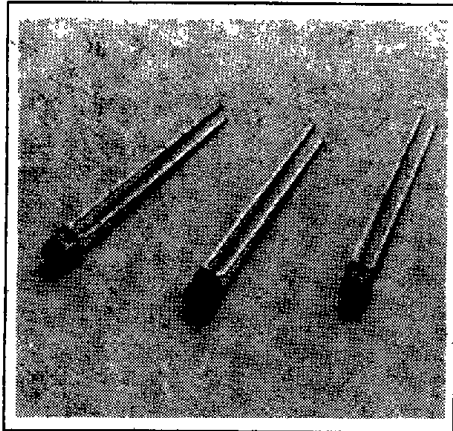
F41-21

SUPER-RED LS 3180

YELLOW LY 3180

GREEN LG 3180

T1 (3 mm) WIDE ANGLE LED LAMP



FEATURES

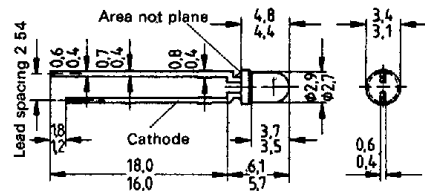
- **Colors:** Super-Red, Yellow, Green
- **Lens:** Red Diffused, Yellow Diffused, Green Diffused
- **Low Power Dissipation**
- **Low Self-Heating**
- **Rigid Construction**
- **Suitable for Multiplex Operation**
- **Wide Angle 100°**
- **Cathode: Shorter Solder Tab**

DESCRIPTION

The LS/LY/LG 3180 are T1 (3 mm) wide angle LED lamps. The 3 mm plastic package has colored diffused lenses to match the emission color, 2.54 mm lead spacing, and solder tabs (17 mm).

Applications include switching and ON/OFF displays, and back lighting.

Package Dimensions mm



Maximum Ratings

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

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

| Parameter | Symbol | LS 3180 Super-Red | LY 3180 Yellow | LG 3180 Green | Unit |
|---|------------------|----------------------|--------------------|--------------------|---------|
| Wavelength at Peak | | | | | |
| Emission ($I_F=20$ mA) | λ_{PEAK} | 635 | 586 | 565 | nm |
| Dominant Wavelength | λ_{DOM} | 628 | 590 | 567 | nm |
| Viewing Angle at 50% I_V | ϕ | 100 | 100 | 100 | Deg. |
| Forward Voltage ($I_F=10$ mA) | V_F | 2.0 (≤ 6) | 2.0 (≤ 6) | 2.0 (≤ 6) | V |
| Reverse Current ($V_R=5$ V) | I_R | 0.01 (≤ 10) | 0.01 (≤ 10) | 0.01 (≤ 10) | μA |
| Capacitance ($V_R=0$ V, $f=1$ MHz) | C_D | 12 | 10 | 45 | pF |
| Switching Times ($I_F=100$ mA, $t=10 \mu s$) | | | | | |
| Rise Time of I_V I_V from 10% to 90% | t_r | 300 | 300 | 1000 | ns |
| Fall Time of I_V I_V from 90% to 10% | t_f | 150 | 150 | 450 | ns |

Luminous Intensity I_V (mcd)*

| Part Number | Min. | Max. | Test Condition | Part Number | Min. | Max. | Test Condition |
|-------------|------|------|----------------|-------------|------|------|----------------|
| LS 3180-GK | 1.6 | 12.5 | 10 mA | LY 3180-HL | 2.5 | 20 | 10 mA |
| LS 3180-H | 2.5 | 5 | 10 mA | LY 3180-J | 4 | 8 | 10 mA |
| LS 3180-J | 4 | 8 | 10 mA | LG 3180-EH | 0.63 | 5 | 10 mA |
| LS 3180-JM | 4 | 32 | 10 mA | LG 3180-G | 1.6 | 3.2 | 10 mA |
| LS 3180-K | 6.3 | 12.5 | 10 mA | LG 3180-GK | 1.6 | 12.5 | 10 mA |
| LY 3180-FJ | 1 | 8 | 10 mA | LG 3180-H | 2.5 | 5 | 10 mA |
| LY 3180-G | 1.6 | 3.2 | 10 mA | | | | |
| LY 3180-H | 2.5 | 5 | 10 mA | | | | |

* Luminous intensity factor of I_V of one packaging unit $\frac{I_{V MAX}}{I_{V MIN}} \leq 2$

See graph numbers 1, 2D, 3E, 4A, 5D, 6A, 7A, 8, 9, 10 on pages XX.