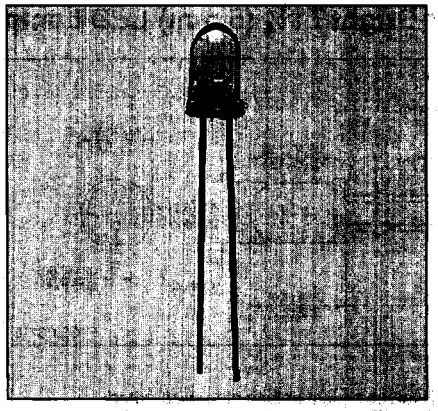
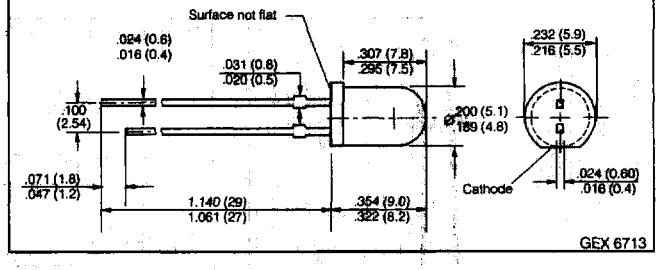
# SIEMENS

## SUPER-RED LS 5420
## YELLOW LY 5420
## GREEN LG 5410
### T1¾ (5 mm) LED Lamp



Dimensions in inches (mm)




**FEATURES**

- **Colored, clear lens**
  - **LS: red**
  - **LY: yellow**
  - **LG: green**
- **Optical coupling into light pipes**
- **Use as optical indicator**
- **Solder leads without stand-off**
- **Available taped on reel**
- **Load dump resistant per DIN 40839**

**DESCRIPTION**

The LS 5420 super-red and LY 5420 yellow lamps are fabricated with TSN (transparent substrate nitrogen) technology. The LG 5410 is a gallium phosphide LED lamp. All three have a narrow viewing angle for the concentration of intense brightness in a head-on position. This is particularly desirable for legend back lighting applications.

**Maximum Ratings**

Operating/Storage Temperature Range ($T_{OP}$; $T_{STG}$) ..... –55°C to +100°C
Junction Temperature ($T_J$) ..... 100°C
Forward Current ($I_F$) ..... 40 mA
Surge Current ($I_{FS}$) t=10 µs, D=0.005 ..... 0.5 A
Reverse Voltage ($V_R$) ..... 5 V
Power Dissipation ($P_{TOT}$) $T_A \leq 25°C$ ..... 140 mW
Thermal Resistance, Junction/Air ($R_{THJA}$) ..... 400 K/W

**Characteristics** $T_A$=25°C, all values typical unless otherwise noted

| Parameter | Symbol | LS | LY | LG | Unit | Condition |
|---|---|---|---|---|---|---|
| Peak Wavelength | $\lambda_{PEAK}$ | 635 | 586 | 565 | nm | |
| Dominant Wavelength | $\lambda_{DOM}$ | 628 | 590 | 570 | | |
| Spectral Bandwidth 50% $I_{RELMAX}$ | $\Delta\lambda$ | 45 | 45 | 25 | | $I_F$=20 mA |
| Viewing Angle, 50% $I_V$ | $2\varphi$ | 24 | | | Deg. | |
| Forward Voltage | $V_F$ | 2.0 (≤2.6) | 2.0 (≤2.0) | 2.0 (≤2.6) | V | $I_F$=10 mA |
| Reverse Current | $I_R$ | 0.01 (≤10) | | | µA | $V_R$=5 V |
| Capacitance | $C_0$ | 12 | 10 | 15 | pF | $V_R$=0 V f=1 MHz |
| Switching Times, $I_V$ 10% to 90% | $t_R$ | 300 | | 450 | ns | $I_F$=100 mA tp=10 µs $R_L$=50 Ω |
| 90% to 10% | $t_F$ | 150 | | 200 | | |

| Part Number | Luminous Intensity*, Iv, mcd | | Part Number | Luminous Intensity*, Iv, mcd | | Condition |
|---|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. | |
| LS 5420-MQ | 16 | 125 | LY 5420-R | 100 | 200 | $I_F$=10 mA |
| LS 5420-P | 40 | 80 | LY 5420-PS | 40 | 320 | |
| LS 5420-Q | 63 | 125 | LG 5410-MQ | 16 | 125 | |
| LS 5420-R | 100 | 200 | LG 5410-P | 40 | 80 | |
| LS 5420-PT | 40 | 500 | LG 5410-Q | 63 | 125 | |
| LY 5420-MQ | 16 | 125 | LG 5410-R | 100 | 200 | |
| LY 5420-P | 40 | 80 | LG 5410-PS | 40 | 320 | |
| LY 5420-Q | 63 | 125 | | | | |

* Luminous intensity ratio of one packaging unit $I_{VMAX}/I_{VMIN} \leq 2$.

See graph numbers OHL01210, OHL01667, OHL01263, OHL01632, OHL01162, OHL02252, OHL01672, OHL01673, OHL01674, OHL01675 beginning on page 4–92