

## LC 3 mm (T1) LED, Diffused Low Current LED

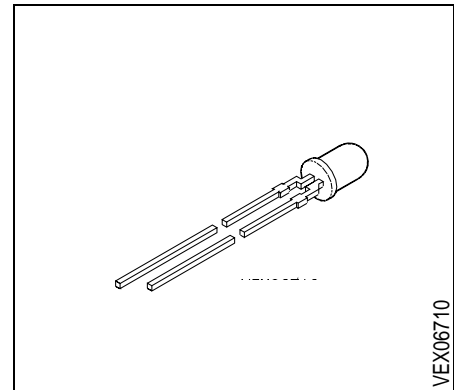
## LS 3369, LY 3369, LG 3369

### Besondere Merkmale

- eingefärbtes, diffuses Gehäuse
- als optischer Indikator einsetzbar
- hohe Lichtstärke bei kleinen Strömen (typ. 2 mA)
- Lötspieße mit Aufsetzebene
- gegurtet lieferbar
- Störimpulsfest nach DIN 40839

### Features

- colored, diffused package
- for use as optical indicator
- high luminous intensity at low currents (typ. 2 mA)
- solder leads with stand-off
- available taped on reel
- load dump resistant acc. to DIN 40839



| Typ<br>Type | Emissionsfarbe<br>Color of<br>Emission | Gehäusefarbe<br>Color of<br>Package | Lichtstärke<br>Luminous<br>Intensity<br>$I_F = 2 \text{ mA}$<br>$I_V \text{ (mcd)}$ | Bestellnummer<br>Ordering Code |
|-------------|--|-------------------------------------|---|--------------------------------|
| LS 3369-EH  | super-red                              | red diffused                        | 0.63 ... 5.0  | Q62703-Q1748                   |
| LS 3369-G   |  |                                     | 1.60 ... 3.2  | Q62703-Q2068                   |
| LS 3369-H   |  |                                     | 2.50 ... 5.0  | Q62703-Q3820                   |
| LS 3369-GK  |  |                                     | 1.60 ... 12.5   | Q62703-Q3821                   |
| LY 3369-EH  | yellow                                 | yellow diffused                     | 0.63 ... 5.0  | Q62703-Q1749                   |
| LY 3369-F   |  |                                     | 1.00 ... 2.0  | Q62703-Q2030                   |
| LY 3369-G   |  |                                     | 1.60 ... 3.2  | Q62703-Q2029                   |
| LY 3369-H   |  |                                     | 2.50 ... 5.0  | Q62703-Q1906                   |
| LY 3369-FJ  |  |                                     | 1.00 ... 8.0  | Q62703-Q3822                   |
| LG 3369-EH  | green                                  | green diffused                      | 0.63 ... 5.0  | Q62703-Q1750                   |
| LG 3369-F   |  |                                     | 1.00 ... 2.0  | Q62703-Q2069                   |
| LG 3369-G   |  |                                     | 1.60 ... 3.2  | Q62703-Q2070                   |
| LG 3369-FJ  |  |                                     | 1.00 ... 8.0  | Q62703-Q3823                   |

Streuung der Lichterstärke in einer Verpackungseinheit  $I_{V \max} / I_{V \min} \leq 2.0$ .

Luminous intensity ratio in one packaging unit  $I_{V \max} / I_{V \min} \leq 2.0$ .

**Grenzwerte**  
**Maximum Ratings**

| Bezeichnung<br>Parameter   | Symbol<br>Symbol | Werte<br>Values | Einheit<br>Unit |
|--|------------------|-----------------|-----------------|
| Betriebstemperatur<br>Operating temperature range                              | $T_{op}$         | - 55 ... + 100  | °C              |
| Lagertemperatur<br>Storage temperature range                                   | $T_{stg}$        | - 55 ... + 100  | °C              |
| Sperrschichttemperatur<br>Junction temperature                                 | $T_j$            | + 100           | °C              |
| Durchlaßstrom<br>Forward current   | $I_F$            | 7.5             | mA              |
| Stoßstrom<br>Surge current<br>$t \leq 10 \mu s, D = 0.005$                     | $I_{FM}$         | 0.15            | A               |
| Sperrspannung<br>Reverse voltage   | $V_R$            | 5               | V               |
| Verlustleistung<br>Power dissipation<br>$T_A \leq 25 \text{ °C}$               | $P_{tot}$        | 20              | mW              |
| Wärmewiderstand<br>Thermal resistance<br>Sperrschicht / Luft<br>Junction / air | $R_{th JA}$      | 500             | K/W             |

### Kennwerte ( $T_A = 25\text{ °C}$ )

### Characteristics

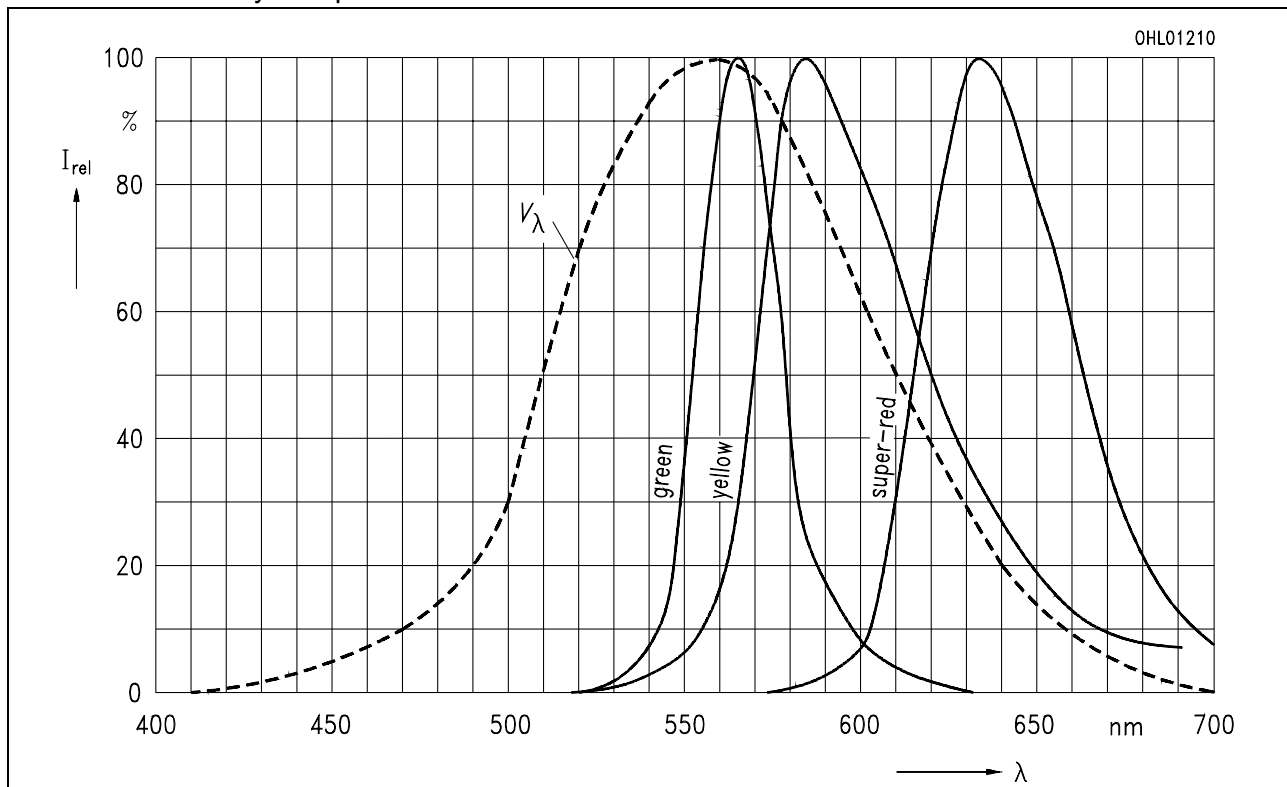
| Bezeichnung<br>Parameter  | Symbol<br>Symbol        | Werte<br>Values |            |            | Einheit<br>Unit                |
|---|-------------------------|-----------------|------------|------------|--------------------------------|
|   |                         | LS              | LY         | LG         |                                |
| Wellenlänge des emittierten Lichtes(typ.)<br>Wavelength at peak emission(typ.)<br>$I_F = 7.5\text{ mA}$   | $\lambda_{\text{peak}}$ | 635             | 586        | 565        | nm                             |
| Dominantwellenlänge(typ.)<br>Dominant wavelength(typ.)<br>$I_F = 7.5\text{ mA}$   | $\lambda_{\text{dom}}$  | 628             | 590        | 570        | nm                             |
| Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.)<br>Spectral bandwidth at 50 % $I_{\text{rel max}}$ (typ.)<br>$I_F = 7.5\text{ mA}$  | $\Delta\lambda$         | 45              | 45         | 25         | nm                             |
| Abstrahlwinkel bei 50 % $I_V$ (Vollwinkel)<br>Viewing angle at 50 % $I_V$   | $2\phi$                 | 60              | 60         | 60         | Grad<br>deg.                   |
| Durchlaßspannung(typ.)<br>Forward voltage(max.)<br>$I_F = 2\text{ mA}$  | $V_F$<br>$V_F$          | 1.8<br>2.6      | 2.0<br>2.7 | 1.9<br>2.6 | V<br>V                         |
| Sperrstrom(typ.)<br>Reverse current(max.)<br>$V_R = 5\text{ V}$   | $I_R$<br>$I_R$          | 0.01<br>10      | 0.01<br>10 | 0.01<br>10 | $\mu\text{A}$<br>$\mu\text{A}$ |
| Kapazität(typ.)<br>Capacitance<br>$V_R = 0\text{ V}, f = 1\text{ MHz}$  | $C_0$                   | 3               | 3          | 15         | pF                             |
| Schaltzeiten:<br>Switching times:<br>$I_V$ from 10 % to 90 % (typ.)<br>$I_V$ from 90 % to 10 % (typ.)<br>$I_F = 100\text{ mA}, t_P = 10\text{ }\mu\text{s}, R_L = 50\text{ }\Omega$ | $t_r$<br>$t_f$          | 200<br>150      | 200<br>150 | 450<br>200 | ns<br>ns                       |

Relative spektrale Emission  $I_{rel} = f(\lambda)$ ,  $T_A = 25\text{ °C}$ ,  $I_F = 7.5\text{ mA}$

### Relative spectral emission

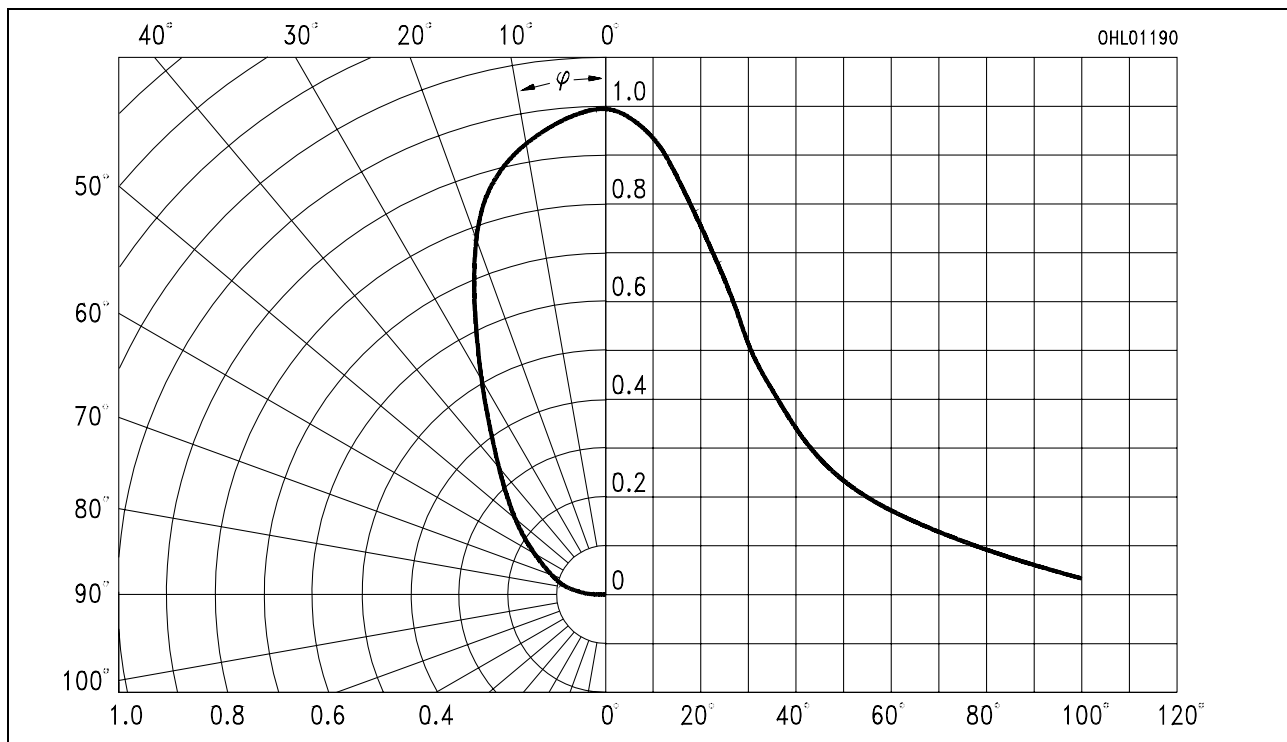
$V(\lambda)$  = spektrale Augenempfindlichkeit

Standard eye response curve



Abstrahlcharakteristik  $I_{rel} = f(\varphi)$

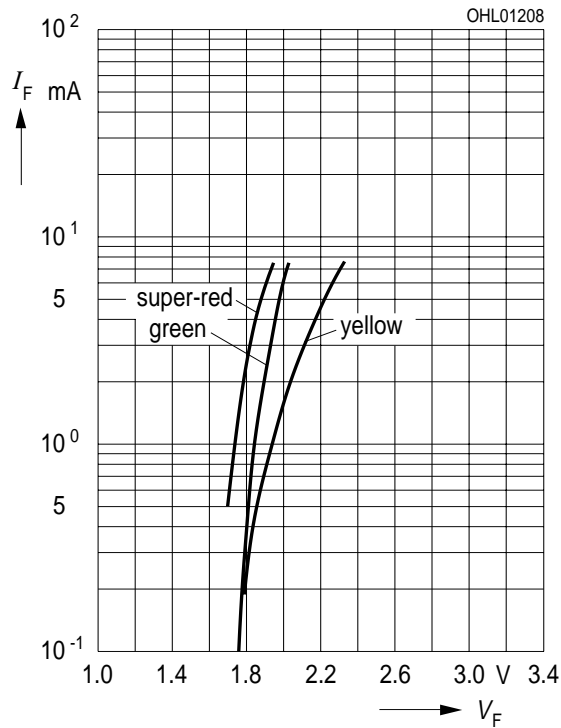
### Radiation characteristic



### Durchlaßstrom $I_F = f(V_F)$

#### Forward current

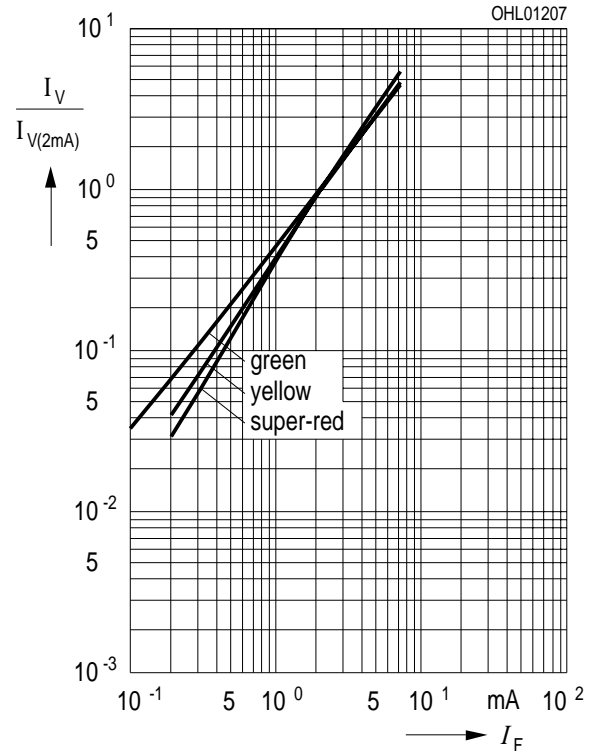
$T_A = 25^\circ\text{C}$



### Relative Lichtstärke $I_V/I_{V(2\text{mA})} = f(I_F)$

#### Relative luminous intensity

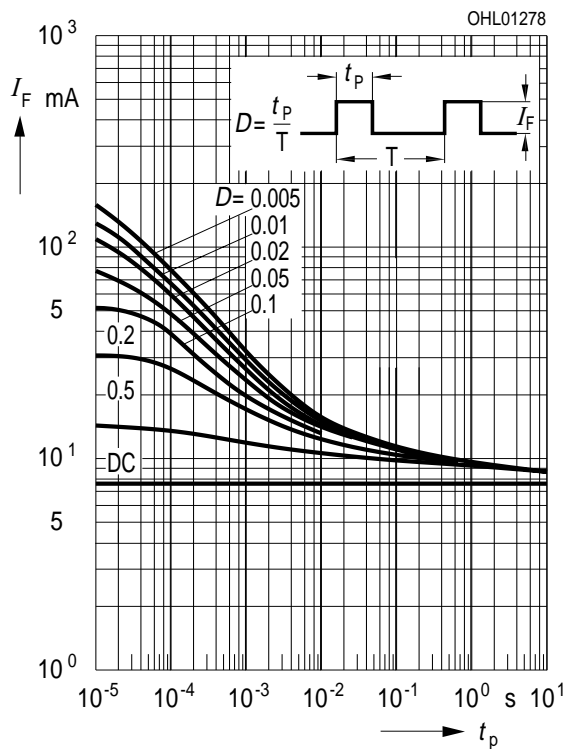
$T_A = 25^\circ\text{C}$



### Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

#### Permissible pulse handling capability

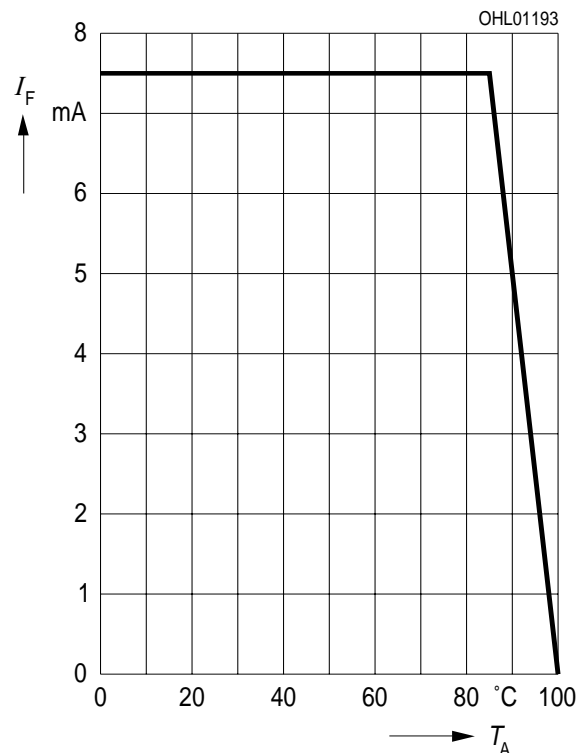
Duty cycle  $D = \text{parameter}$ ,  $T_A = 25^\circ\text{C}$



### Maximal zulässiger Durchlaßstrom

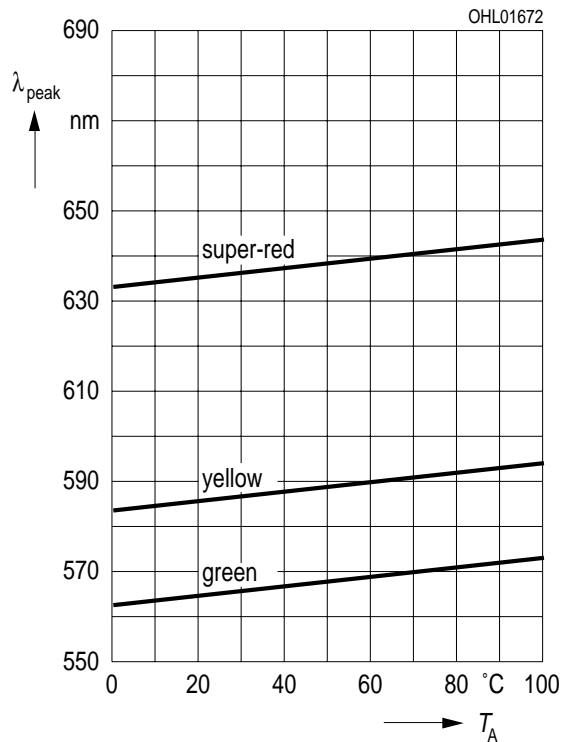
#### Max. permissible forward current

$I_F = f(T_A)$



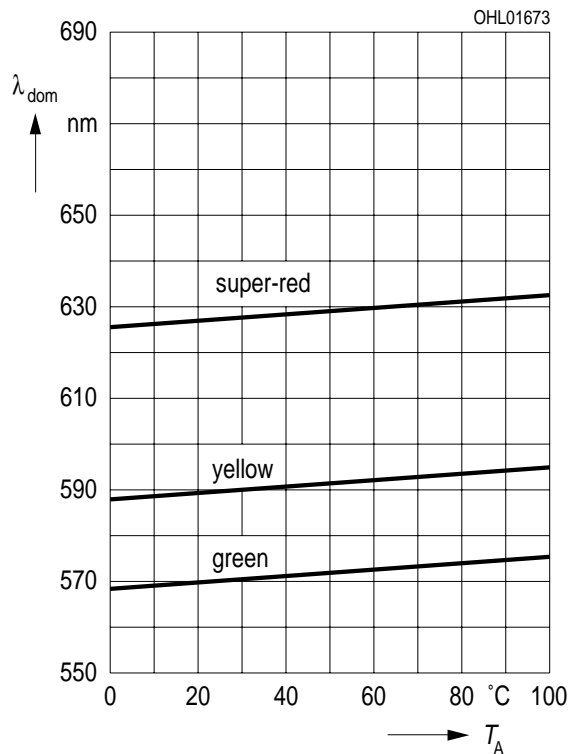
**Wellenlänge der Strahlung  $\lambda_{\text{peak}} = f(T_A)$**   
**Wavelength at peak emission**

$I_F = 7.5 \text{ mA}$



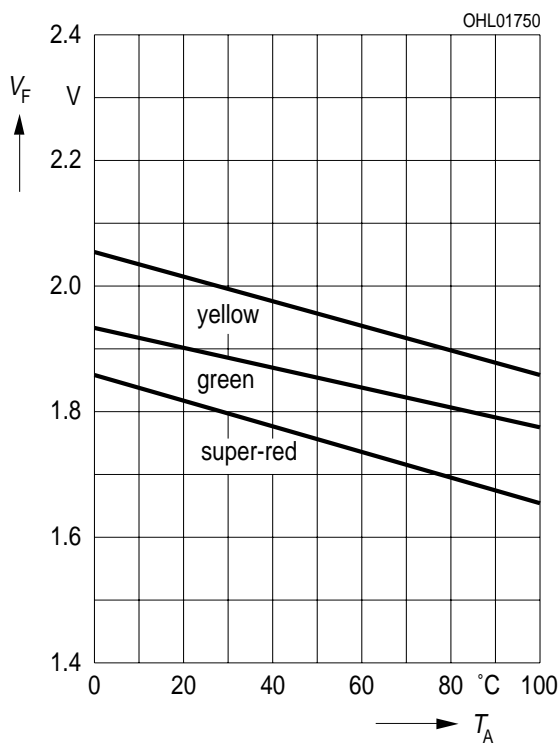
**Dominantwellenlänge  $\lambda_{\text{dom}} = f(T_A)$**   
**Dominant wavelength**

$I_F = 7.5 \text{ mA}$



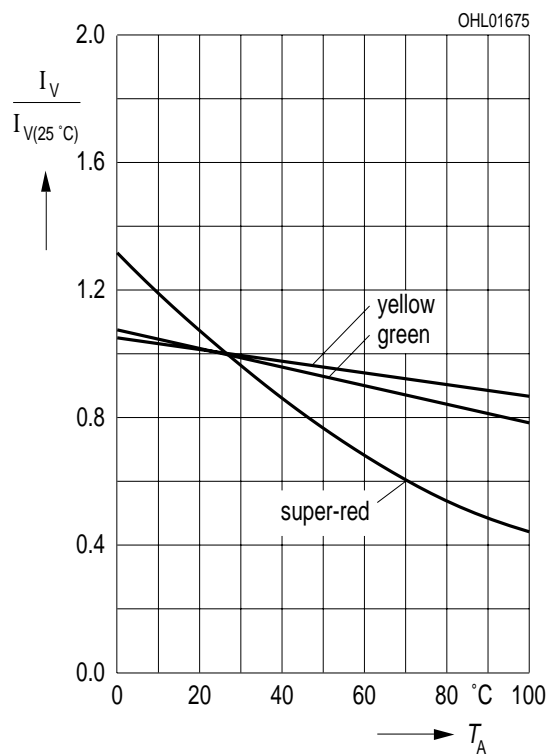
**Durchlaßspannung  $V_F = f(T_A)$**   
**Forward voltage**

$I_F = 2 \text{ mA}$

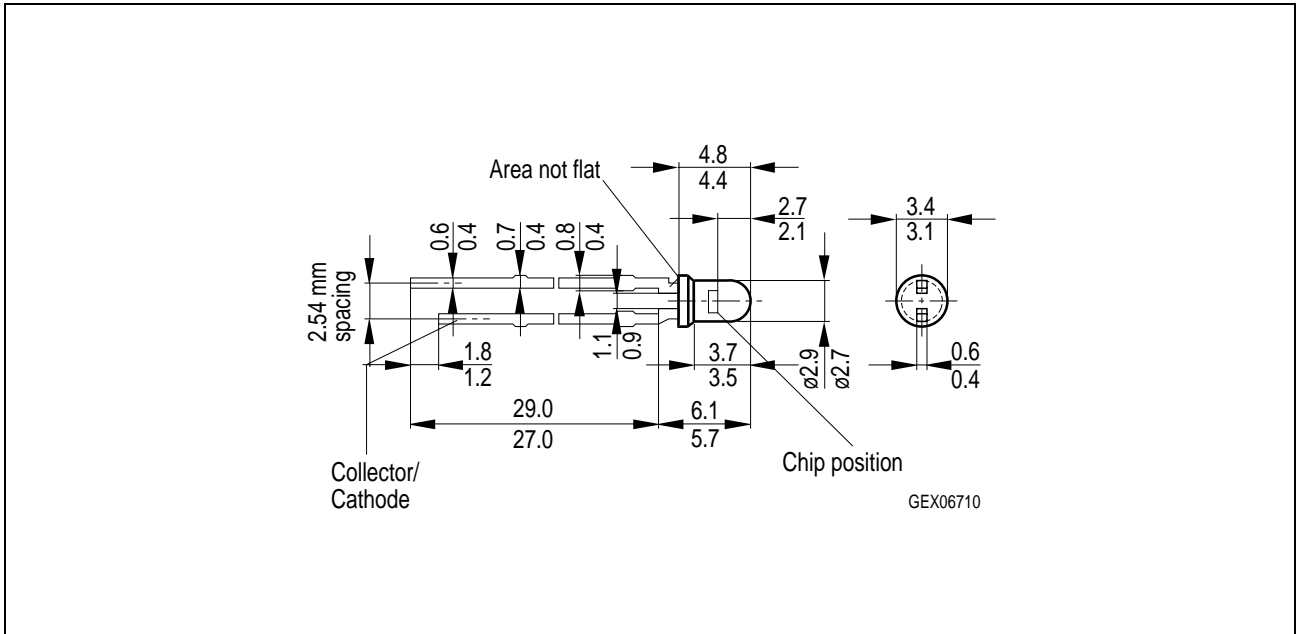


**Relative Lichtstärke  $I_V/I_{V(25^\circ\text{C})} = f(T_A)$**   
**Relative luminous intensity**

$I_F = 2 \text{ mA}$



**Maßzeichnung** (Maße in mm, wenn nicht anders angegeben)  
**Package Outlines** (Dimensions in mm, unless otherwise specified)



**Kathodenkennzeichnung:** Kürzerer Lötspieß  
**Cathode mark:** Short solder lead