

## 5 mm (T1 3/4) LED, Diffused Wide-Angle LED

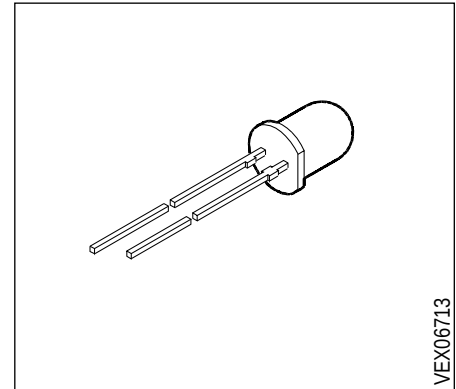
LR 5480, LS 5480, LY 5480  
LG 5480

### Besondere Merkmale

- eingefärbtes, diffuses Gehäuse
- als optischer Indikator einsetzbar
- Lötspieße ohne Aufsetzebene
- gegurtet lieferbar
- Störimpulsfest nach DIN 40839

### Features

- colored, diffused package
- for use as optical indicator
- solder leads without stand-off
- available taped on reel
- load dump resistance 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>$I_F = 10 \text{ mA}$<br>$I_V \text{ (mcd)}$   | Bestellnummer<br>Ordering Code                                               |
|-----------------------------------------------------------------|----------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| LR 5480-CF<br>LR 5480-E<br>LR 5480-F<br>LR 5480-DG              | red                                    | red diffused                        | 0.25 ... 2.00<br>0.63 ... 1.25<br>1.00 ... 2.00<br>0.40 ... 3.20                       | Q62703-Q1986<br>Q62703-Q1734<br>Q62703-Q1987<br>Q62703-Q1408                 |
| LS 5480-GL<br>LS 5480-J<br>LS 5480-K<br>LS 5480-L<br>LS 5480-JM | super-red                              | red diffused                        | 1.60 ... 20.00<br>4.00 ... 8.00<br>6.30 ... 12.50<br>10.00 ... 20.00<br>4.00 ... 32.00 | Q62703-Q1989<br>Q62703-Q1414<br>Q62703-Q1990<br>Q62703-Q1991<br>Q62703-Q1992 |
| LY 5480-HL<br>LY 5480-J<br>LY 5480-K<br>LY 5480-L<br>LY 5480-JM | yellow                                 | yellow diffused                     | 2.50 ... 20.00<br>4.00 ... 8.00<br>6.30 ... 12.50<br>10.00 ... 20.00<br>4.00 ... 32.00 | Q62703-Q1416<br>Q62703-Q3236<br>Q62703-Q1418<br>Q62703-Q2402<br>Q62703-Q1419 |
| LG 5480-GK<br>LG 5480-H<br>LG 5480-J<br>LG 5480-K<br>LG 5480-HL | green                                  | green diffused                      | 1.60 ... 12.50<br>2.50 ... 5.00<br>4.00 ... 8.00<br>6.30 ... 12.50<br>2.50 ... 20.00   | Q62703-Q1423<br>Q62703-Q1422<br>Q62703-Q1869<br>Q62703-Q2018<br>Q62703-Q3191 |

Streuung der Lichtstärke 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 |
|--------------------------------------------------------------------------------|------------------|-----------------|------------|-----------------|
|                                                                                |                  | LR              | LS, LY, LG |                 |
| 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                                               | $I_F$            | 45              | 40         | mA              |
| Stoßstrom<br>Surge current<br>$t \leq 10 \mu s, D = 0.005$                     | $I_{FM}$         | 0.5             |            | A               |
| Sperrspannung<br>Reverse voltage                                               | $V_R$            | 5               |            | V               |
| Verlustleistung<br>Power dissipation<br>$T_A \leq 25 \text{ °C}$               | $P_{tot}$        | 100             | 140        | mW              |
| Wärmewiderstand<br>Thermal resistance<br>Sperrschicht / Luft<br>Junction / air | $R_{th JA}$      | 400             |            | K/W             |

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

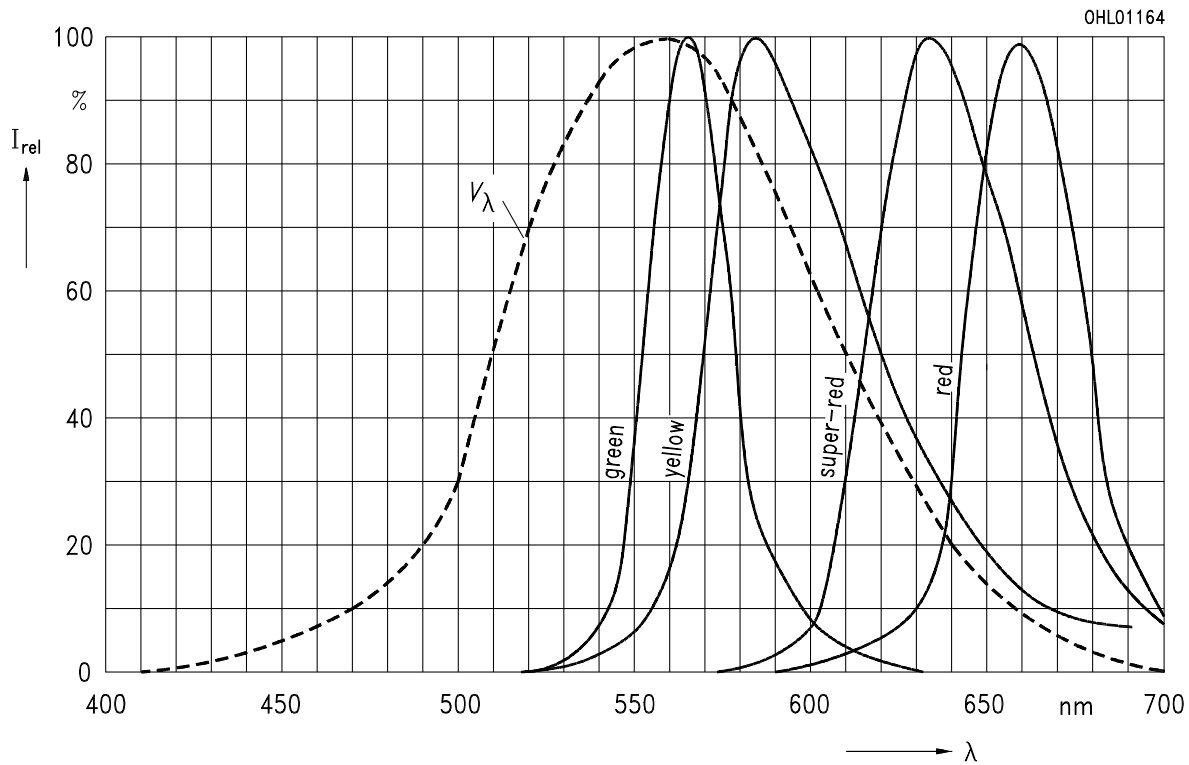
| Bezeichnung<br>Parameter                                                                                                                                                                  | Symbol<br>Symbol        | Werte<br>Values |            |            |            | Einheit<br>Unit                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|------------|------------|------------|--------------------------------|
|                                                                                                                                                                                           |                         | LR              | LS         | LY         | LG         |                                |
| Wellenlänge des emittierten Lichtes (typ.)<br>Wavelength at peak emission (typ.)<br>$I_F = 20\text{ mA}$                                                                                  | $\lambda_{\text{peak}}$ | 660             | 635        | 586        | 565        | nm                             |
| Dominantwellenlänge (typ.)<br>Dominant wavelength (typ.)<br>$I_F = 20\text{ mA}$                                                                                                          | $\lambda_{\text{dom}}$  | 645             | 628        | 590        | 570        | nm                             |
| Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.)<br>Spectral bandwidth at 50 % $I_{\text{rel max}}$ (typ.)<br>$I_F = 20\text{ mA}$                                               | $\Delta\lambda$         | 35              | 45         | 45         | 25         | nm                             |
| Abstrahlwinkel bei 50 % $I_V$ (Vollwinkel)<br>Viewing angle at 50 % $I_V$                                                                                                                 | $2\phi$                 | 80              | 80         | 80         | 80         | Grad<br>deg.                   |
| Durchlaßspannung (typ.)<br>Forward voltage (max.)<br>$I_F = 10\text{ mA}$                                                                                                                 | $V_F$<br>$V_F$          | 1.6<br>2.0      | 2.0<br>2.6 | 2.0<br>2.6 | 2.0<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 | 0.01<br>10 | $\mu\text{A}$<br>$\mu\text{A}$ |
| Kapazität (typ.)<br>Capacitance<br>$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$                                                                                                                | $C_0$                   | 25              | 12         | 10         | 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>$t_f$          | 120<br>50       | 300<br>150 | 300<br>150 | 450<br>200 | ns<br>ns                       |

Relative spektrale Emission  $I_{\text{rel}} = f(\lambda)$ ,  $T_A = 25^\circ\text{C}$ ,  $I_F = 20\text{ mA}$

Relative spectral emission

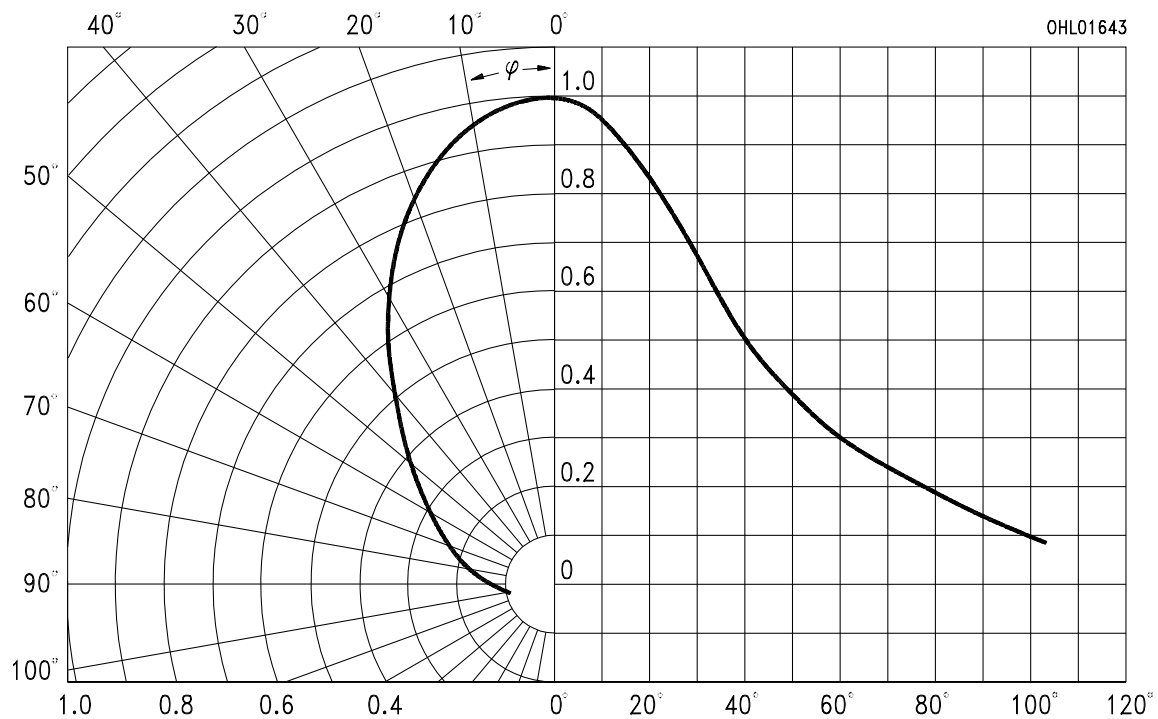
$V(\lambda)$  = spektrale Augenempfindlichkeit

Standard eye response curve



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

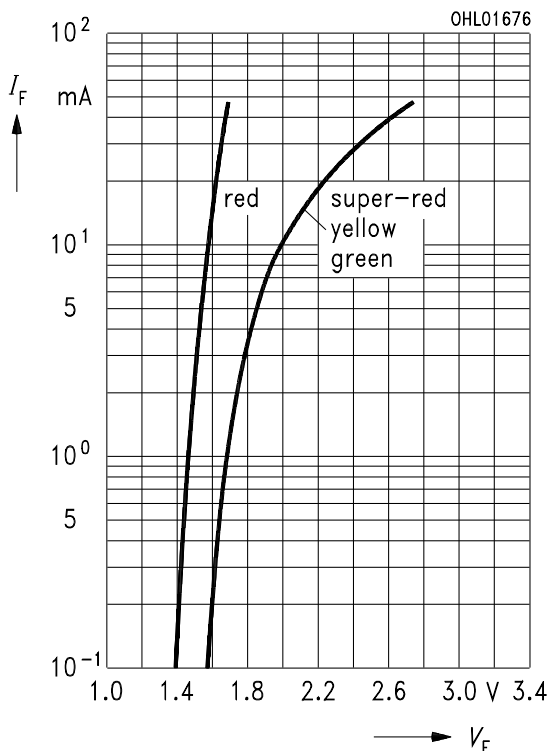
Radiation characteristic



**Durchlaßstrom  $I_F = f(V_F)$**

**Forward current**

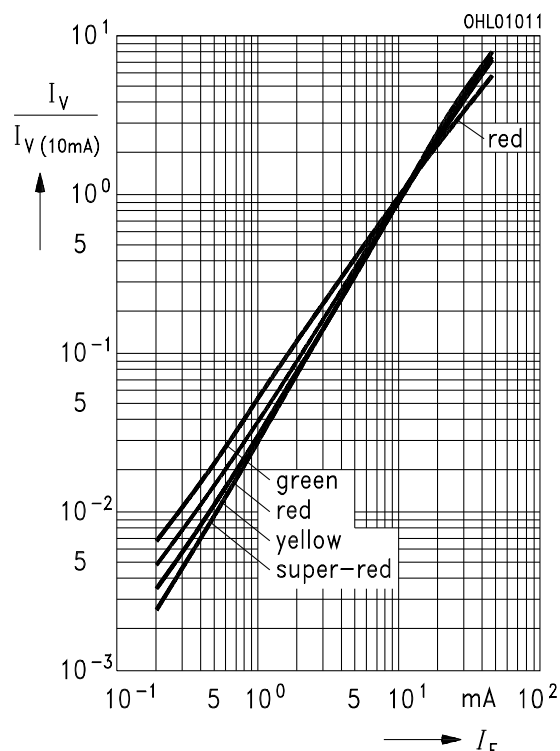
$T_A = 25^\circ\text{C}$



**Relative Lichtstärke  $I_V/I_{V(10\text{ mA})} = f(I_F)$**

**Relative luminous intensity**

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

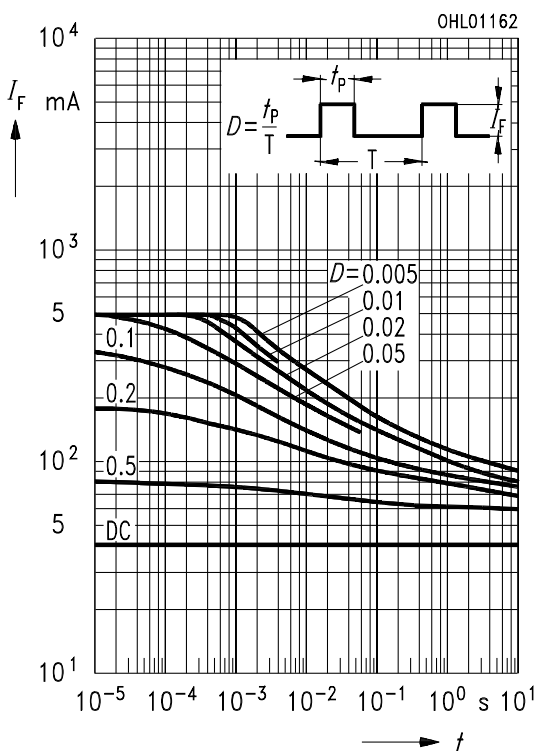


**Zulässige Impulsbelastbarkeit  $I_F = f(t_p)$**

**Permissible pulse handling capability**

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

**LS, LY, LG**

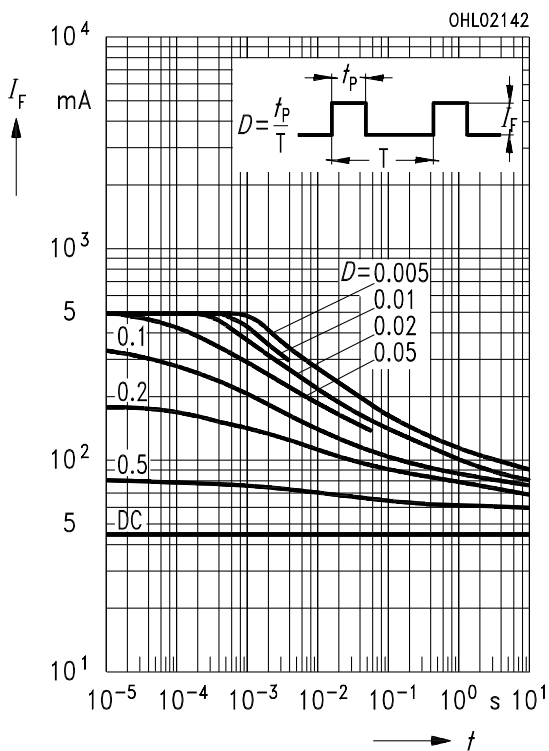


**Zulässige Impulsbelastbarkeit  $I_F = f(t_p)$**

**Permissible pulse handling capability**

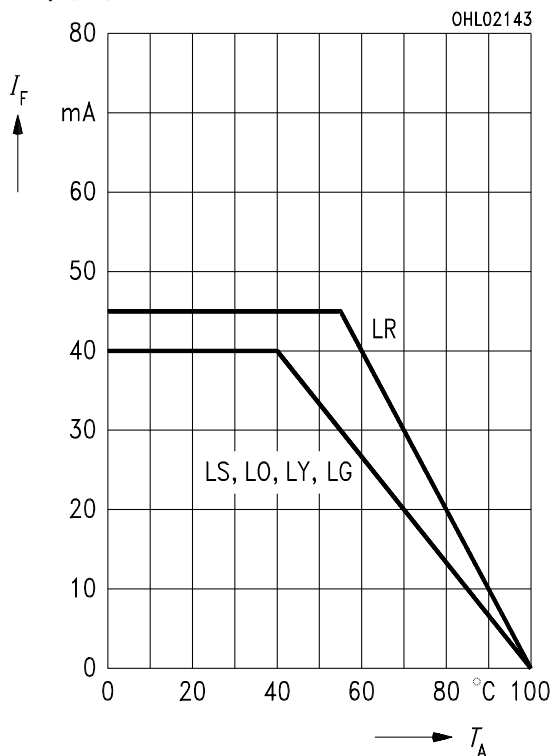
Duty cycle  $D = \text{parameter}$ ,  $T_A = 25^\circ\text{C}$

**LR**



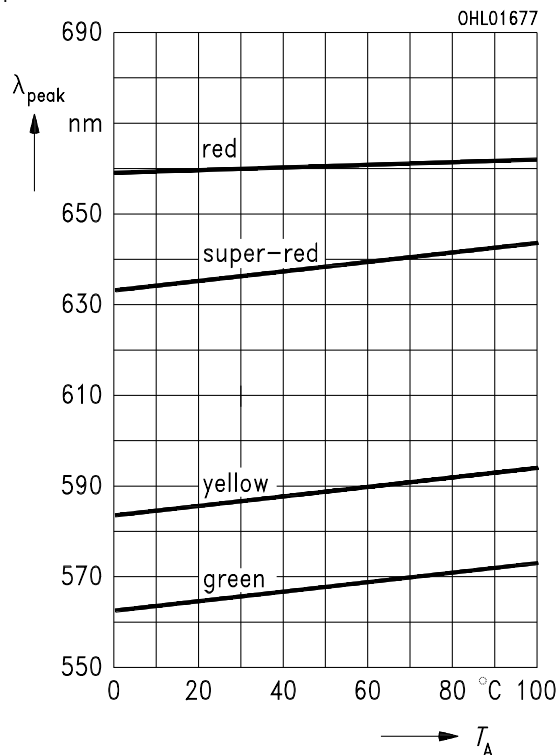
## Maximal zulässiger Durchlaßstrom Max. permissible forward current

$$I_F = f(T_A)$$



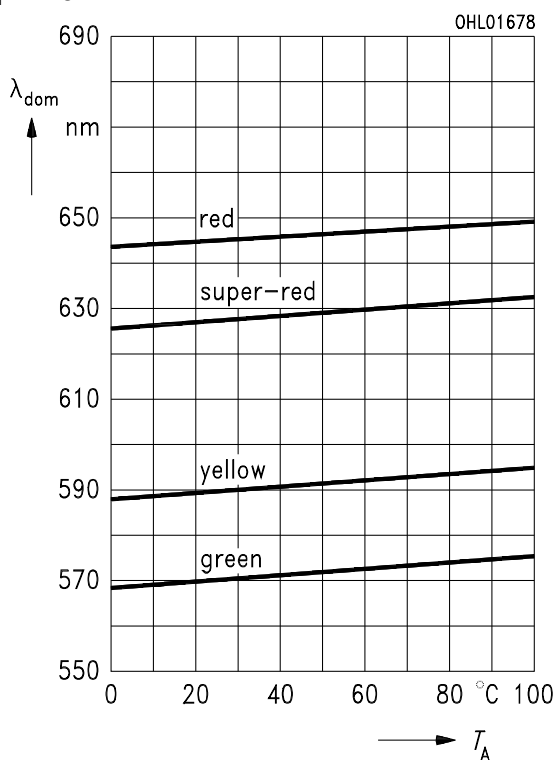
## Wellenlänge der Strahlung $\lambda_{\text{peak}} = f(T_A)$ Wavelength at peak emission

$$I_F = 20 \text{ mA}$$



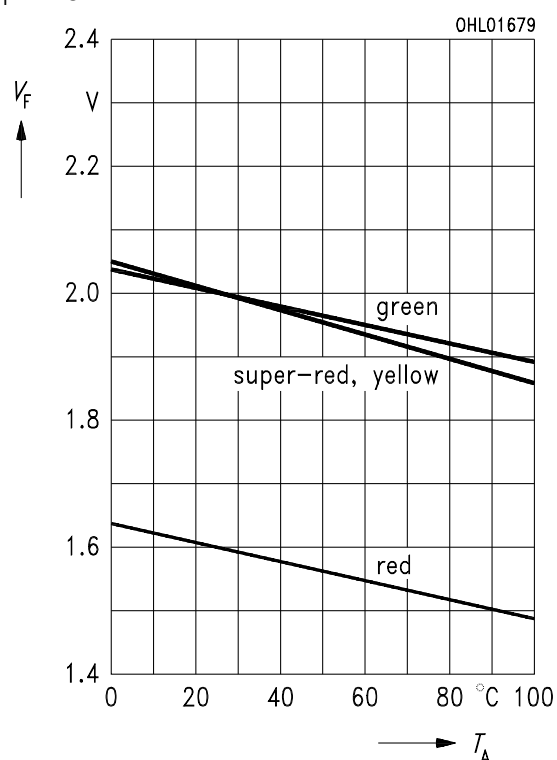
## Dominantwellenlänge $\lambda_{\text{dom}} = f(T_A)$ Dominant wavelength

$$I_F = 20 \text{ mA}$$



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

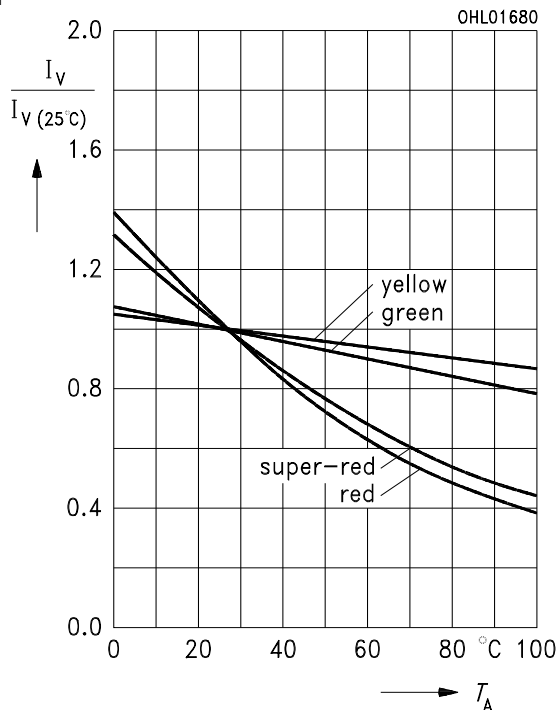
$$I_F = 10 \text{ mA}$$



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

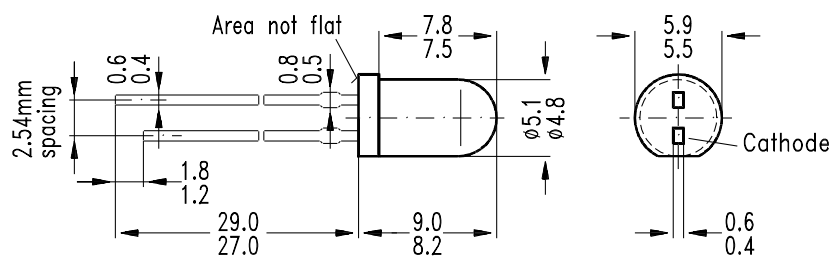
Relative luminous intensity

$I_F = 10 \text{ mA}$



**Maßzeichnung**  
**Package Outlines**

(Maße in mm, wenn nicht anders angegeben)  
(Dimensions in mm, unless otherwise specified)



Approx. weight 0.35 g

GEX06713

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



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