

CHIPLED

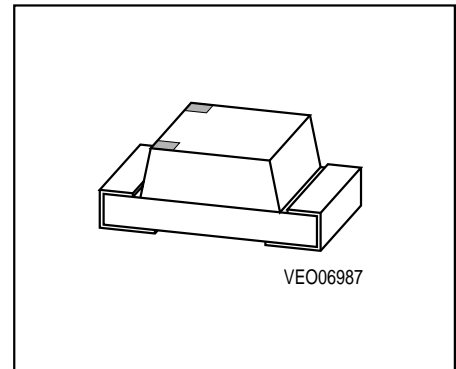
LY R976, LO R976, LS R976

Besondere Merkmale

- Gehäusebauform: 0805
- Industriestandard bzgl. Lötpadraster
- geringe Bauteilhöhe
- für IR-Lötung geeignet
- für Hinterleuchtungen und als opt. Indikator einsetzbar
- gegurtet (8-mm-Filmgurt)

Features

- 0805 package
- Industry standard footprint
- low profile
- suitable for IR reflow soldering process
- for use as optical indicator and backlighting
- available taped on reel (8 mm tape)



| Typ | Emissions- farbe | Farbe der Lichtaustritts- fläche | Lichtstärke | Lichtstrom | Bestellnummer |
|------------|----------------------|--|---|---|---------------|
| Type | Color of Emission | Color of the Light Emitting Area | Luminous Intensity $I_F = 20 \text{ mA}$ $I_V \text{ (mcd)}$ | Luminous Flux $I_F = 20 \text{ mA}$ $\Phi_V \text{ (mlm)}$ | Ordering Code |
| LY R976-MO | yellow | colorless clear | ≥ 16 (30 typ.) | 250 (typ.) | Q62702-P5105 |
| LO R976-NO | orange | | ≥ 25 (55 typ.) | 450 (typ.) | Q62702-P5101 |
| LS R976-NO | super-red | | ≥ 25 (55 typ.) | 450 (typ.) | Q62702-P5103 |

Grenzwerte
Maximum Ratings

| Bezeichnung Parameter | Symbol Symbol | Werte Values | Einheit Unit |
|--|------------------|-----------------|-----------------|
| Betriebstemperatur Operating temperature range | T_{op} | - 30 ... + 85 | °C |
| Lagertemperatur Storage temperature range | T_{stg} | - 40 ... + 85 | °C |
| Sperrschichttemperatur Junction temperature | T_j | + 95 | °C |
| Durchlaßstrom Forward current | I_F | 25 | mA |
| Stoßstrom Surge current $t \leq 10 \mu s, D = 0.005$ | I_{FM} | 0.1 | A |
| Sperrspannung Reverse voltage | V_R | 3 | V |
| Verlustleistung, $T_A = 25 \text{ °C}$ Power dissipation, $T_A = 25 \text{ °C}$ | P_{tot} | 70 | mW |
| Wärmewiderstand Sperrschicht / Umgebung Thermal resistance Junction / air | $R_{th JA}$ | 700 | K/W |

Kennwerte ($T_A = 25\text{ °C}$)

Characteristics

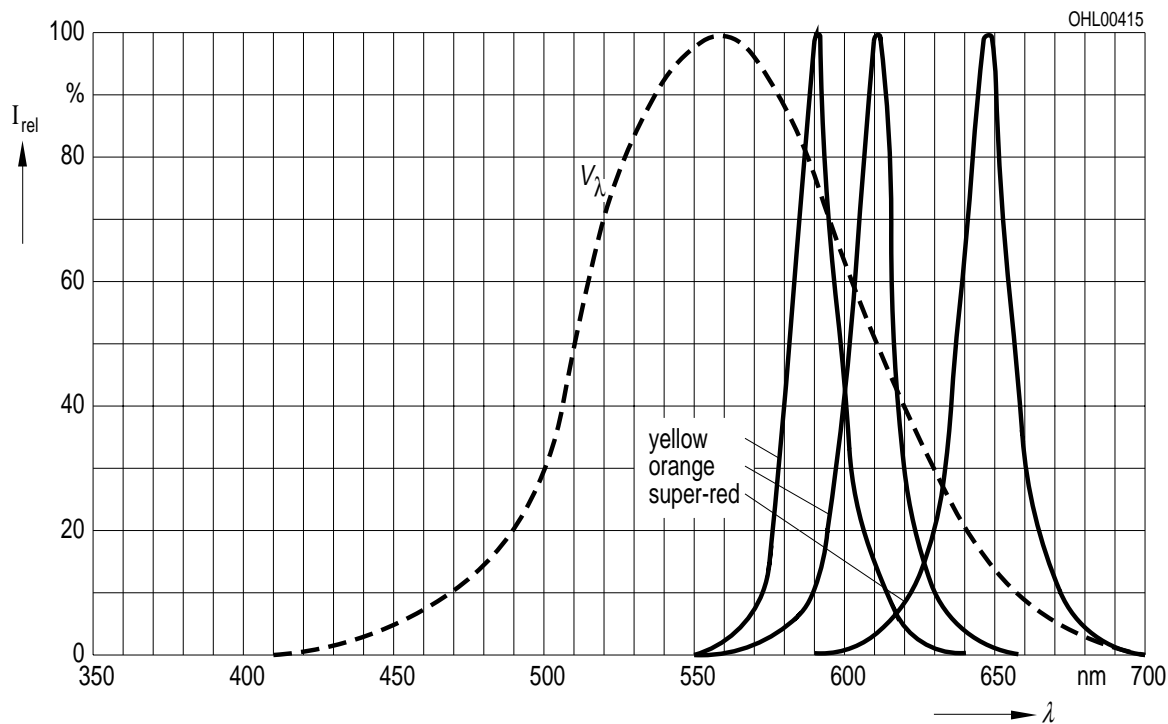
| Bezeichnung Parameter | Symbol Symbol | Werte Values | | | Einheit Unit |
|--|------------------------------|-----------------|------------|------------|--------------------------------|
| | | LY | LO | LS | |
| Wellenlänge des emittierten Lichtes Wavelength at peak emission $I_F = 20\text{ mA}$ (typ.) | λ_{peak} | 591 | 610 | 645 | nm |
| Dominantwellenlänge Dominant wavelength $I_F = 20\text{ mA}$ (typ.) | λ_{dom} | 587 | 605 | 632 | nm |
| Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ Spectral bandwidth at 50 % $I_{\text{rel max}}$ $I_F = 20\text{ mA}$ (typ.) | $\Delta\lambda$ | 15 | 16 | 16 | nm |
| Abstrahlwinkel bei 50 % I_v (Vollwinkel) Viewing angle at 50 % I_v | 2φ | 160 | 160 | 160 | Grad deg. |
| Durchlaßspannung Forward voltage $I_F = 20\text{ mA}$ (typ.) $I_F = 20\text{ mA}$ (max.) | V_F V_F | 2.0 2.6 | 2.0 2.6 | 2.0 2.6 | V V |
| Sperrstrom Reverse current (typ.) $V_R = 3\text{ V}$ (max.) | I_R I_R | 0.01 10 | 0.01 10 | 0.01 10 | μA μA |
| Temperaturkoeffizient von λ_{peak} Temperature coefficient of λ_{peak} $I_F = 20\text{ mA}$ (typ.) | $TC_{\lambda_{\text{peak}}}$ | 0.13 | 0.13 | 0.14 | nm/K |
| Temperaturkoeffizient von λ_{dom} Temperature coefficient of λ_{dom} $I_F = 20\text{ mA}$ (typ.) | $TC_{\lambda_{\text{dom}}}$ | 0.10 | 0.07 | 0.01 | nm/K |
| Temperaturkoeffizient von V_F Temperature coefficient of V_F $I_F = 20\text{ mA}$ (typ.) | TC_{V_F} | -2.5 | -1.7 | -2.0 | mV/K |

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

Relative spectral emission

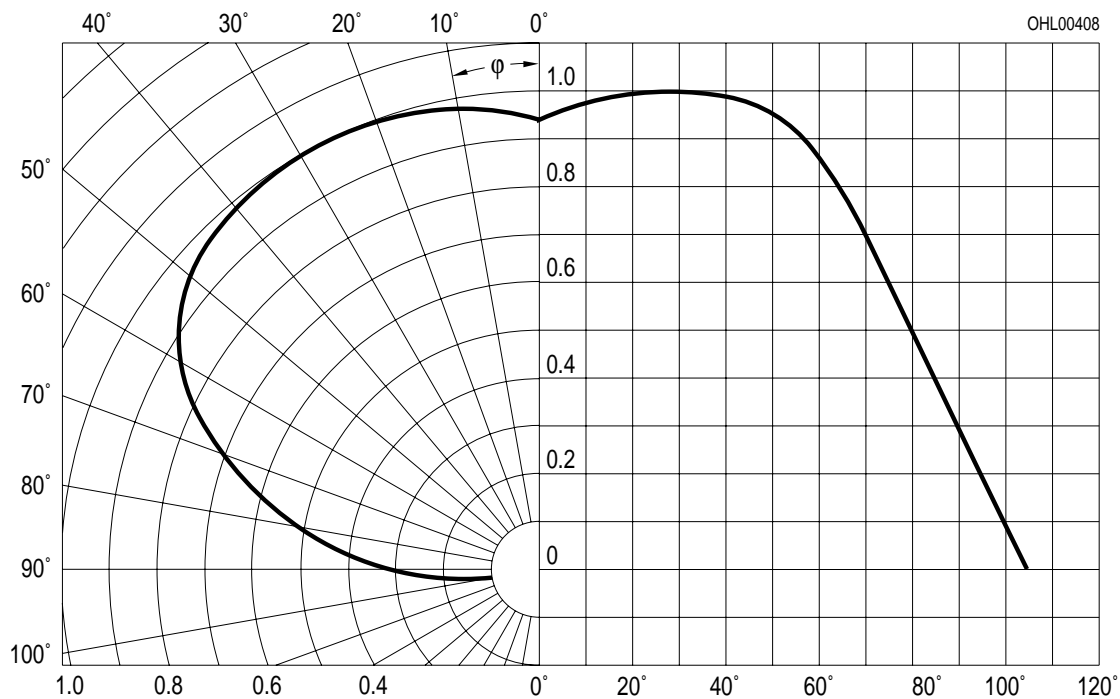
$V(\lambda)$ = spektrale Augenempfindlichkeit

Standard eye response curve



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

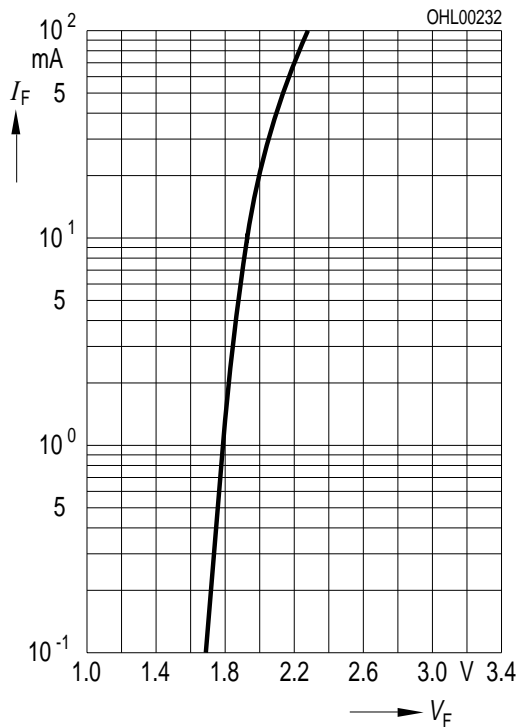
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

Forward current

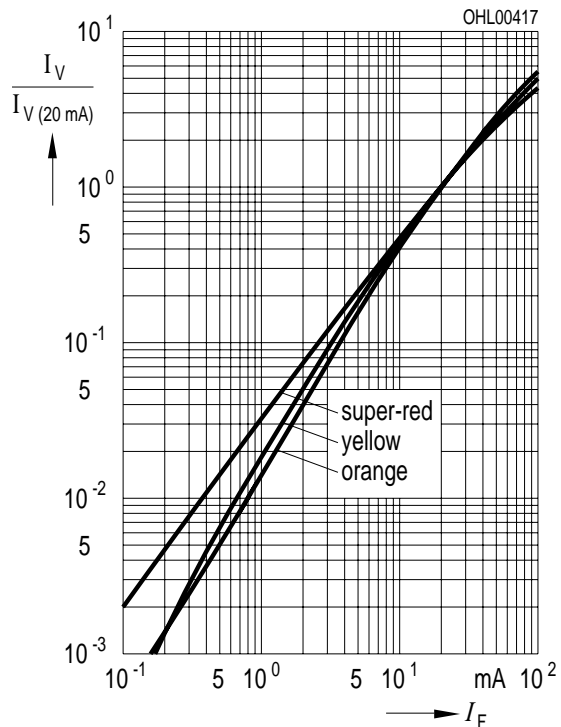
$T_A = 25\text{ °C}$



Relative Lichtstärke $I_V / I_{V(20\text{ mA})} = f(I_F)$

Relative luminous intensity

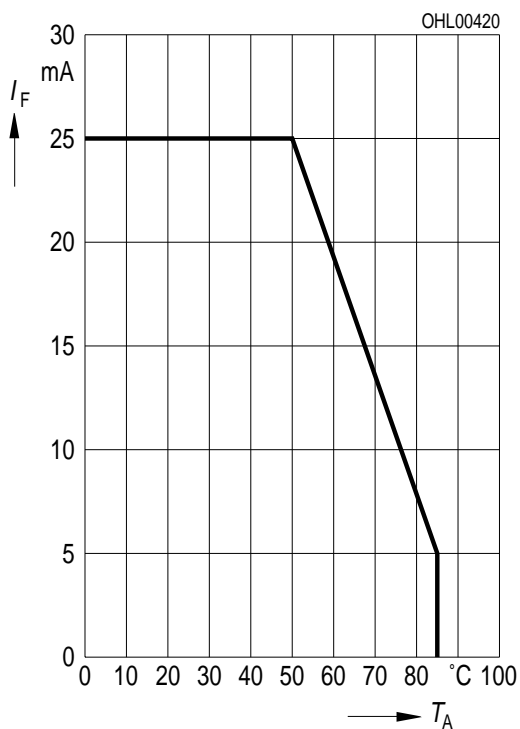
$T_A = 25\text{ °C}$



Maximal zulässiger Durchlaßstrom

Max. permissible forward current

$I_F = f(T_A)$



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

Relative luminous intensity

$I_F = 20\text{ mA}$

