

Plane 3 mm (T1) LED, Non Diffused

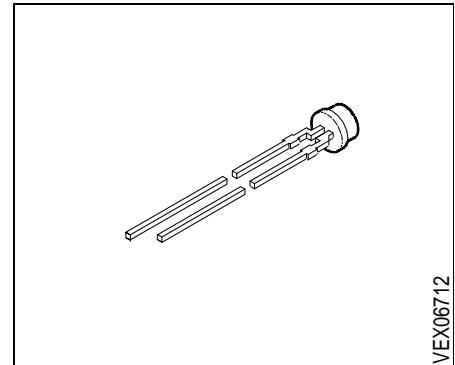
LS P380, LO P380, LY P380
LG P380, LP P380

Besondere Merkmale

- farbloses, klares Gehäuse
- zur Einkopplung in Lichtleiter
- als optischer Indikator einsetzbar
- Lötspieße mit Aufsetzebene
- gegurtet lieferbar
- Störimpulsfest nach DIN 40839

Features

- colorless, clear package
- for optical coupling into light pipes
- for use as optical indicator
- solder leads with stand-off
- available taped on reel
- load dump resistant acc. to DIN 40839



| Typ Type | Emissionsfarbe Color of Emission | Gehäusefarbe Color of Package | Lichtstrom Luminous Flux $I_F = 15 \text{ mA}$ $\Phi_V (\text{mlm})$ | Bestellnummer Ordering Code |
|--|--|-------------------------------------|---|--|
| LS P380-MP LS P380-N LS P380-P LS P380-NQ | super-red | red clear | 16 ... 80 25 ... 50 40 ... 80 25 ... 125 | Q62703-Q2466 Q62703-Q3227 Q62703-Q3228 Q62703-Q3229 |
| LO P380-MP LO P380-N LO P380-P LO P380-NQ | orange | orange clear | 16 ... 80 25 ... 50 40 ... 80 25 ... 125 | Q62703-Q2465 Q62703-Q3205 Q62703-Q3206 Q62703-Q3207 |
| LY P380-MP LY P380-N LY P380-P LY P380-NQ | yellow | yellow clear | 16 ... 80 25 ... 50 40 ... 80 25 ... 125 | Q62703-Q3237 Q62703-Q3238 Q62703-Q3239 Q62703-Q3240 |
| LG P380-MP LG P380-N LG P380-P LG P380-NQ | green | green clear | 16 ... 80 25 ... 50 40 ... 80 25 ... 125 | Q62703-Q2463 Q62703-Q3194 Q62703-Q3195 Q62703-Q3196 |
| LP P380-LN LP P380-M LP P380-N LP P380-MP | pure green | green clear | 10 ... 50 16 ... 32 25 ... 50 16 ... 80 | Q62703-Q2464 Q62703-Q2519 Q62703-Q2520 Q62703-Q3218 |

Streuung des Lichtstromes in einer Verpackungseinheit $\Phi_{V \max} / \Phi_{V \min} \leq 2.0$.
Luminous flux ratio in one packaging unit $\Phi_{V \max} / \Phi_{V \min} \leq 2.0$.

Grenzwerte
Maximum Ratings

| Bezeichnung Parameter | Symbol Symbol | Werte Values | | Einheit Unit |
|--|------------------|-----------------|----------------|-----------------|
| | | LS, LO, LY, LG | LP | |
| Betriebstemperatur Operating temperature range | T_{op} | - 55 ... + 100 | - 55 ... + 100 | °C |
| Lagertemperatur Storage temperature range | T_{stg} | - 55 ... + 100 | - 55 ... + 100 | °C |
| Sperrschichttemperatur Junction temperature | T_j | + 100 | + 100 | °C |
| Durchlaßstrom Forward current | I_F | 40 | 30 | mA |
| Stoßstrom Surge current $t \leq 10 \mu s, D = 0.005$ | I_{FM} | 0.5 | 0.5 | A |
| Sperrspannung Reverse voltage | V_R | 5 | 5 | V |
| Verlustleistung Power dissipation $T_A \leq 25 \text{ °C}$ | P_{tot} | 140 | 100 | mW |
| Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air | R_{thJA} | 400 | 400 | K/W |

Kennwerte ($T_A = 25\text{ °C}$)

Characteristics

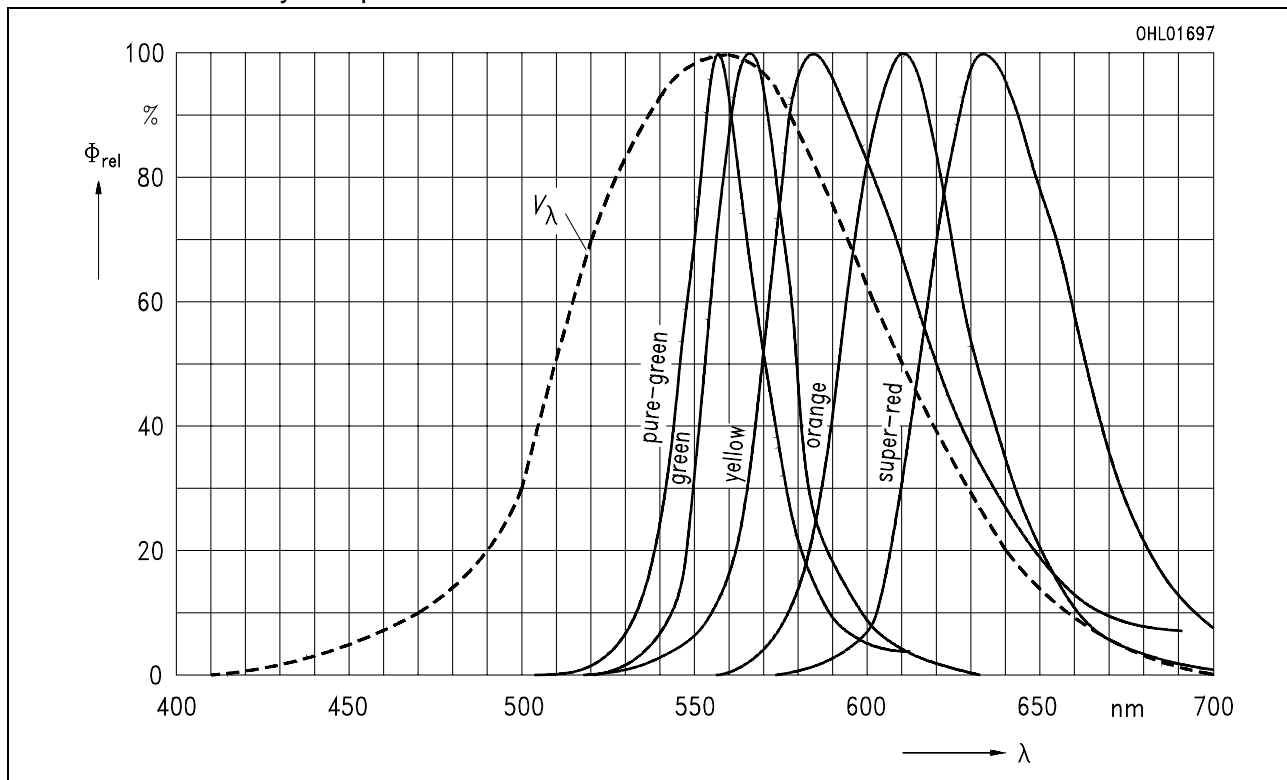
| Bezeichnung Parameter | Symbol Symbol | Werte Values | | | | | Einheit Unit |
|---|-------------------------|-----------------|------|------|------|------|-----------------|
| | | LS | LO | LY | LG | LP | |
| Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) $I_F = 20\text{ mA}$ | λ_{peak} | 635 | 610 | 586 | 565 | 557 | nm |
| Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 20\text{ mA}$ | λ_{dom} | 628 | 605 | 590 | 570 | 560 | nm |
| Spektrale Bandbreite bei 50 % $\Phi_{\text{rel max}}$ (typ.) spectral bandwidth at 50 % $\Phi_{\text{rel max}}$ (typ.) $I_F = 20\text{ mA}$ | $\Delta\lambda$ | 45 | 40 | 45 | 25 | 22 | nm |
| Durchlaßspannung (typ.) Forward voltage (max.) $I_F = 15\text{ mA}$ | V_F | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | V |
| Sperrstrom (typ.) Reverse current (max.) $V_R = 5\text{ V}$ | I_R | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | μA |
| Kapazität (typ.) Capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$ | C_0 | 12 | 8 | 10 | 15 | 32 | pF |
| Schaltzeiten: Switching times: I_V from 10 % to 90 % (typ.) I_V from 90 % to 10 % (typ.) $I_F = 100\text{ mA}, t_p = 10\text{ }\mu\text{s}, R_L = 50\text{ }\Omega$ | t_r | 300 | 300 | 300 | 450 | 450 | ns |
| | t_f | 150 | 150 | 150 | 200 | 200 | ns |

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

Relative spectral emission

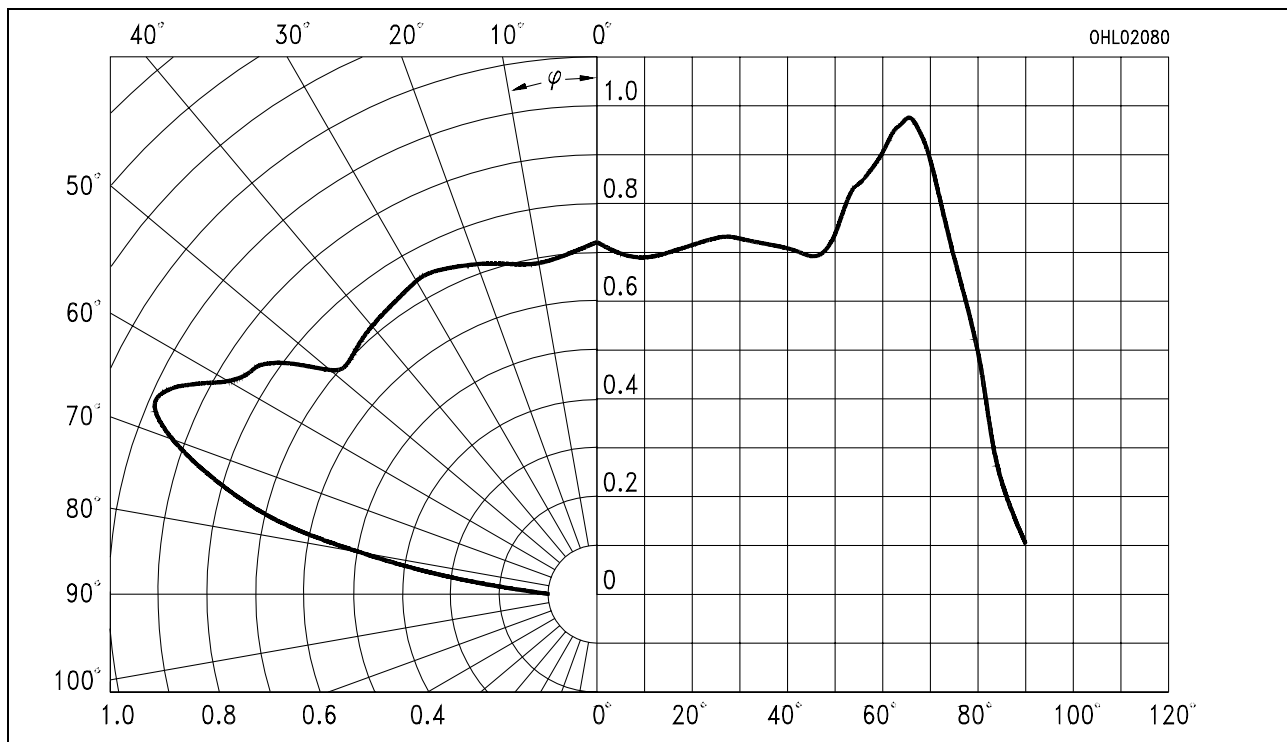
$V(\lambda)$ = spektrale Augenempfindlichkeit

Standard eye response curve



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

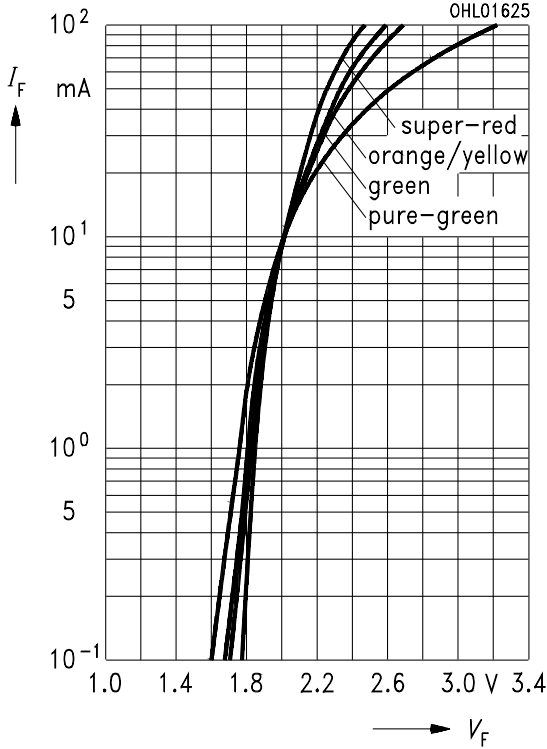
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

Forward current

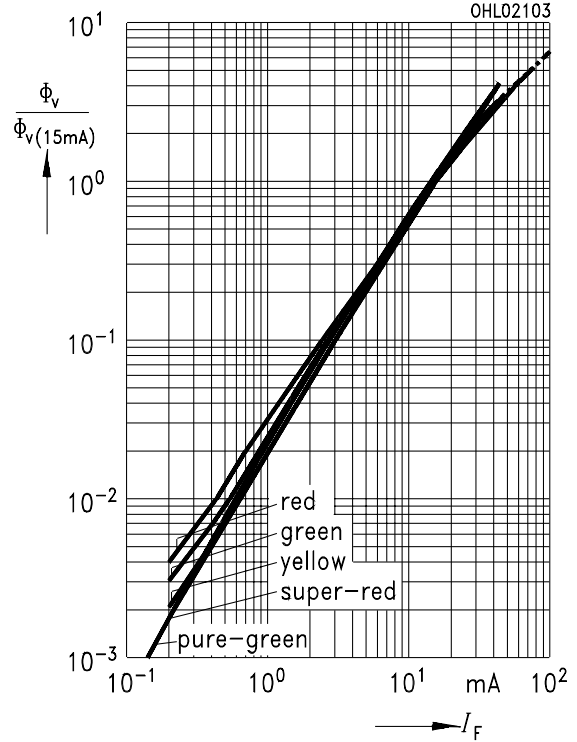
$T_A = 25^\circ\text{C}$



Relativer Lichtstrom $\Phi_V / \Phi_{V(15\text{mA})} = f(I_F)$

Relative luminous flux

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

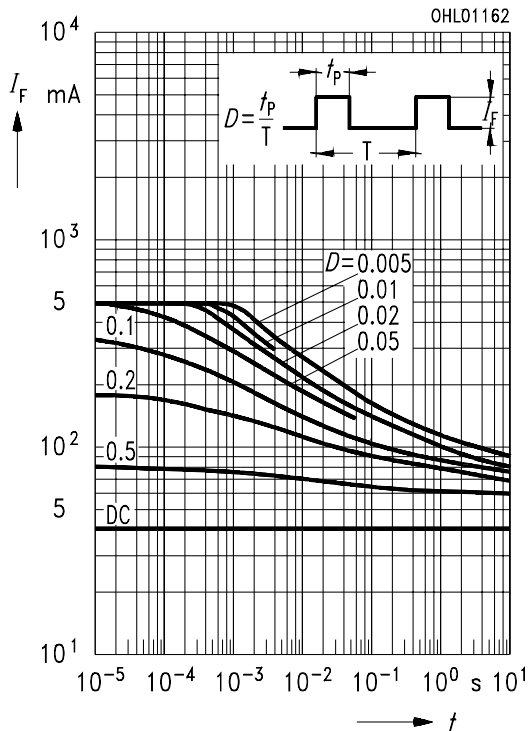


Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

Permissible pulse handling capability

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

LS, LO, LY, LG

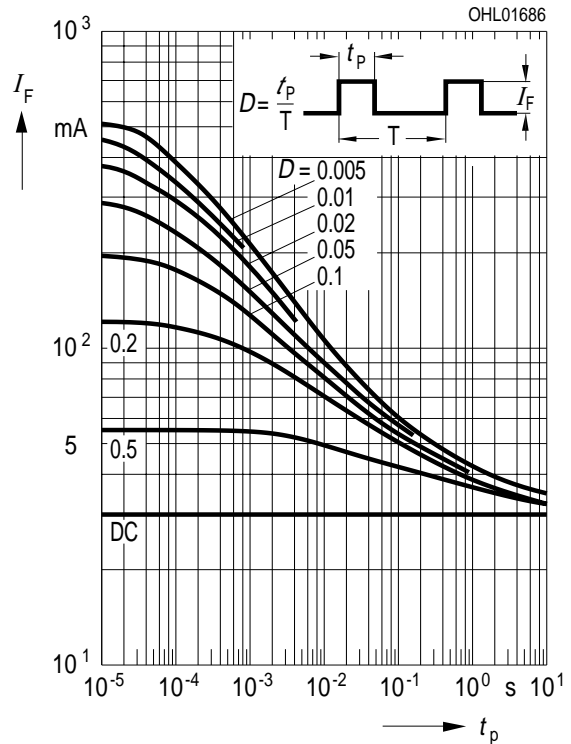


Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

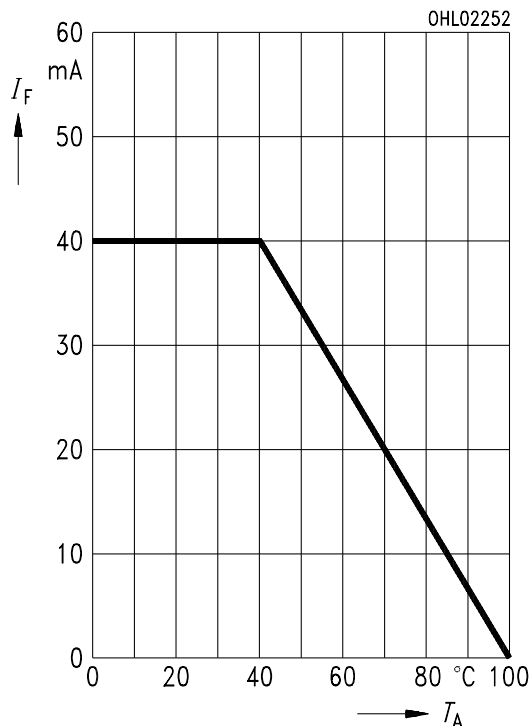
Permissible pulse handling capability

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

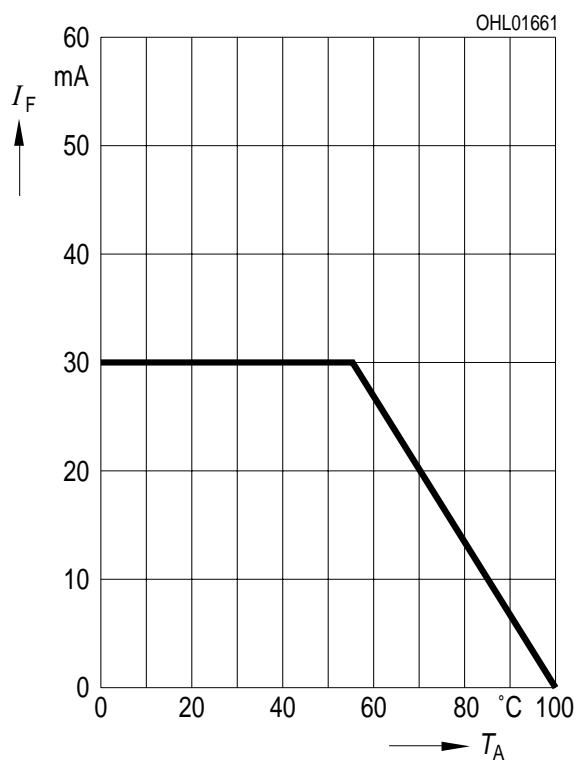
LP



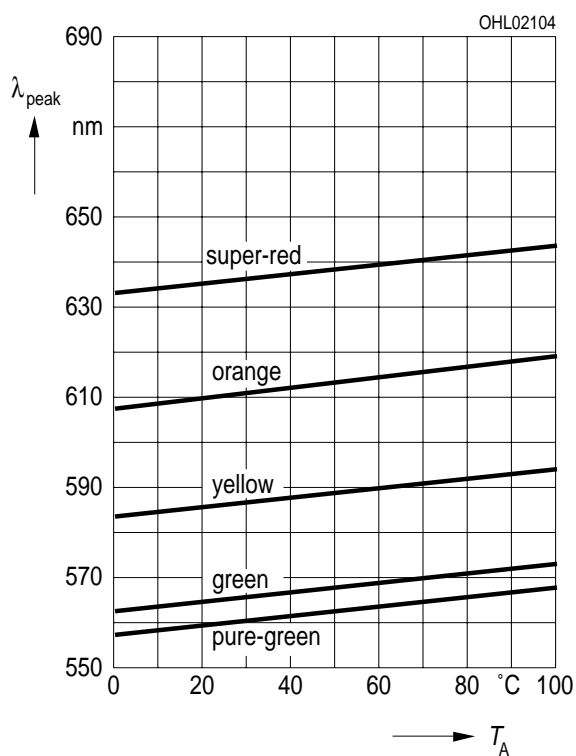
Maximal zulässiger Durchlaßstrom $I_F = f(T_A)$
Max. permissible forward current
LS, LO, LY, LG



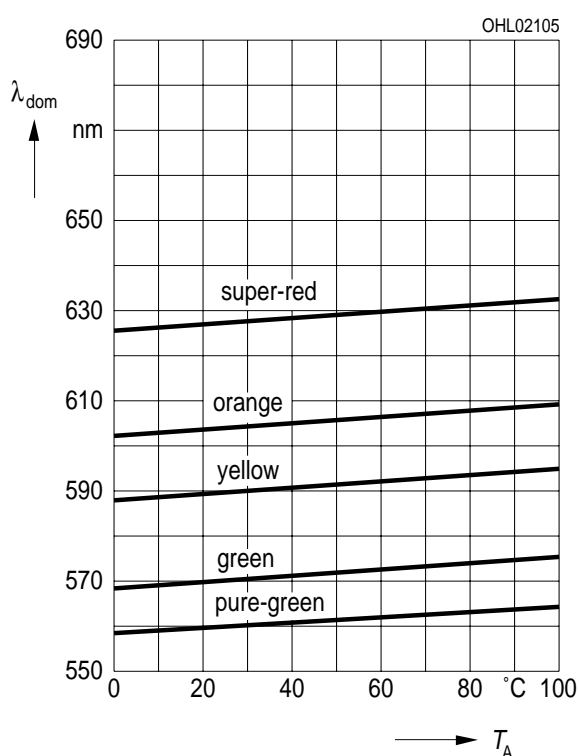
Maximal zulässiger Durchlaßstrom $I_F = f(T_A)$
Max. permissible forward current
LP



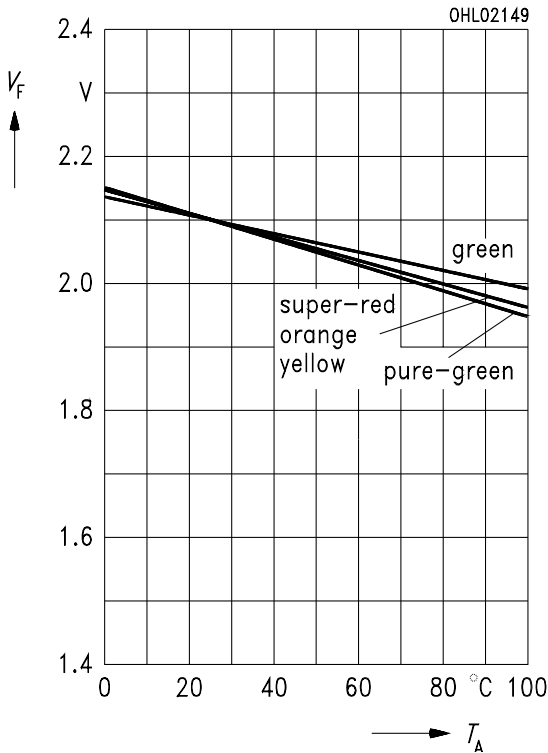
Wellenlänge der Stahlung $\lambda_{peak} = f(T_A)$
Wavelength at peak emission
 $I_F = 20$ mA



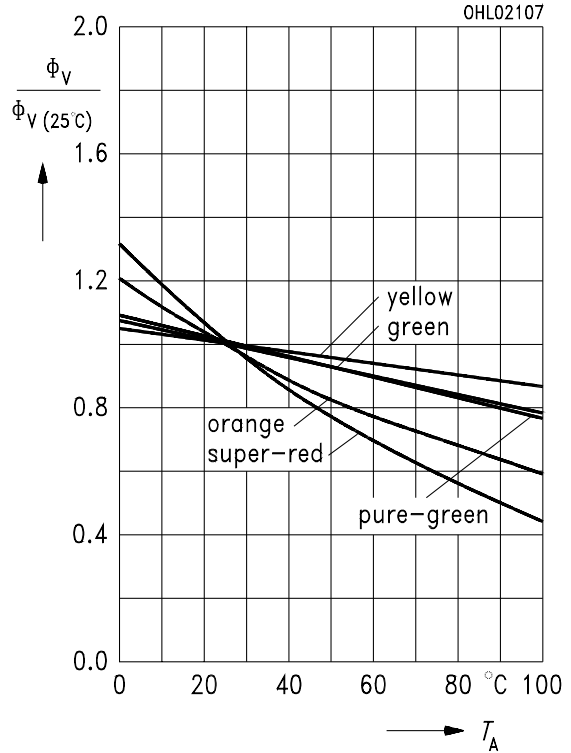
Dominantwellenlänge $\lambda_{dom} = f(T_A)$
Dominant wavelength
 $I_F = 20$ mA



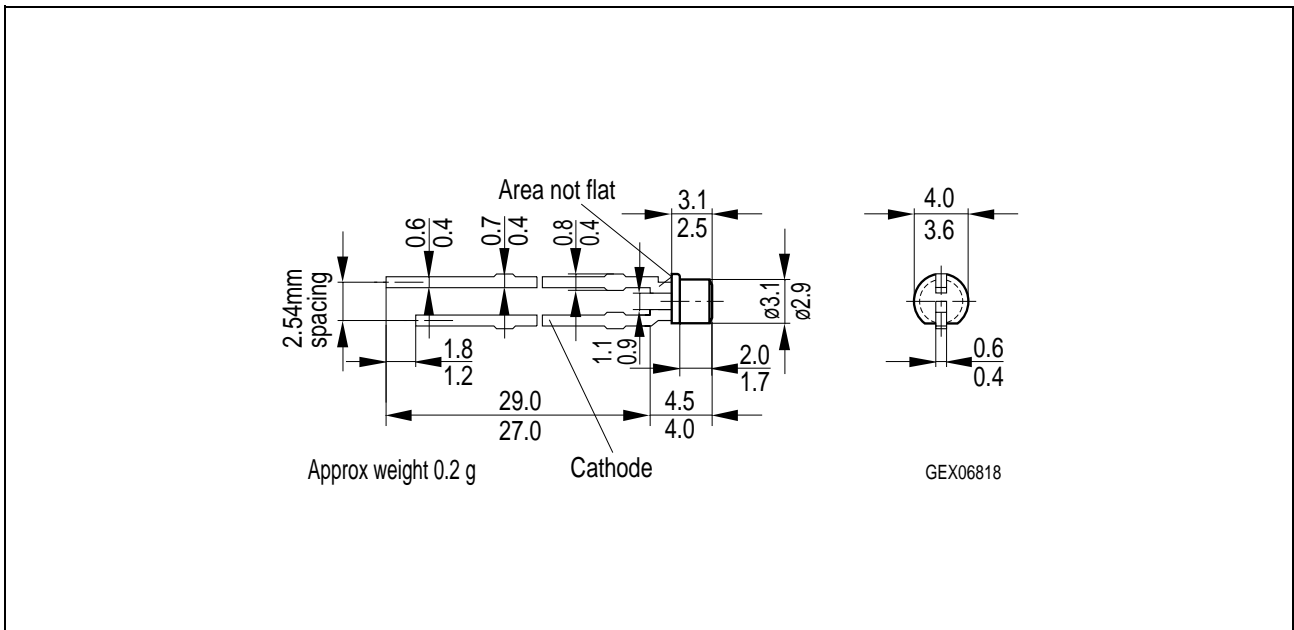
Durchlaßspannung $V_F = f(T_A)$
Forward voltage
 $I_F = 15\text{ mA}$



Relativer Lichtstrom $\Phi_V / \Phi_{V(25^\circ\text{C})} = f(T_A)$
Relative luminous flux
 $I_F = 15\text{ mA}$



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



Kathodenkennzeichnung: Kürzerer Lötspieß
Cathode mark: Short solder lead