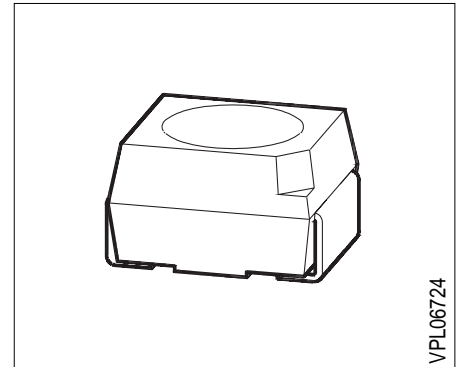


**Super TOPLED®
High-Current LED**

**LS T672, LO T672, LY T672
LG T672, LP T672**

Besondere Merkmale

- Gehäusebauform: P-LCC-2
- Gehäusefarbe: weiß
- als optischer Indikator einsetzbar
- besonders geeignet bei hohem Umgebungslicht durch erhöhten Betriebsstrom (≤ 50 mA DC)
- zur Hinterleuchtung, Lichtleiter- und Linseneinkopplung
- für alle SMT-Bestück- und Löttechniken geeignet
- gegurtet (8-mm-Filmgurt)
- Störimpulsfest nach DIN 40839



Features

- P-LCC-2 package
- color of package: white
- for use as optical indicator
- appropriate for high ambient light because of the higher operating current (≤ 50 mA DC)
- for backlighting, optical coupling into light pipes and lenses
- suitable for all SMT assembly and soldering methods
- available taped on reel (8 mm tape)
- load dump resistant acc. to DIN 40839

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| Typ Type | Emissions- farbe Color of Emission | Farbe der Licht- austrittsfläche Color of the Light Emitting Area | Lichtstärke Luminous Intensity $I_F = 50 \text{ mA}$ $I_V \text{ (mcd)}$ | Lichtstrom Luminous Flux $I_F = 50 \text{ mA}$ $\Phi_V \text{ (lm)}$ | Bestellnummer Ordering Code |
|--------------|---|---|--|--|--------------------------------|
| ■ LS T672-LP | super-red | colorless clear | 10 ... 80 | - | Q62703-Q2334 |
| ■ LS T672-N | | | 25 ... 50 | 100 (typ.) | Q62703-Q2513 |
| ■ LS T672-P | | | 40 ... 80 | 180 (typ.) | Q62703-Q2514 |
| ■ LS T672-NR | | | 25 ... 200 | - | Q62703-Q2331 |
| ■ LO T672-MQ | orange | colorless clear | 16 ... 125 | - | Q62703-Q2623 |
| ■ LO T672-N | | | 25 ... 50 | 100 (typ.) | Q62703-Q2494 |
| ■ LO T672-P | | | 4 ... 80 | 180 (typ.) | Q62703-Q2493 |
| ■ LO T672-NR | | | 25 ... 200 | - | Q62703-Q2330 |
| ■ LY T672-LP | yellow | colorless clear | 10 ... 80 | - | Q62703-Q2624 |
| ■ LY T672-N | | | 25 ... 50 | 100 (typ.) | Q62703-Q2515 |
| ■ LY T672-P | | | 40 ... 80 | 180 (typ.) | Q62703-Q2516 |
| ■ LY T672-NR | | | 25 ... 200 | - | Q62703-Q2332 |
| LG T672-MQ | green | colorless clear | 16 ... 125 | - | Q62703-Q2625 |
| LG T672-N | | | 25 ... 50 | 100 (typ.) | Q62703-Q2517 |
| LG T672-P | | | 40 ... 80 | 180 (typ.) | Q62703-Q2518 |
| LG T672-Q | | | 63 ... 125 | 300 (typ.) | Q62703-Q3081 |
| LG T672-NR | | | 25 ... 200 | - | Q62703-Q3854 |
| LP T672-KN | pure green | colorless clear | 6.3 ... 50 | - | Q62703-Q2626 |
| LP T672-L | | | 10.0 ... 20 | 45 (typ.) | Q62703-Q2627 |
| LP T672-M | | | 16.0 ... 32 | 75 (typ.) | Q62703-Q2289 |
| LP T672-N | | | 25.0 ... 50 | 100 (typ.) | Q62703-Q2290 |
| LP T672-LP | | | 10.0 ... 80 | - | Q62703-Q2334 |

■ Nicht für Neuentwicklungen/Not for new design

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

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

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**Grenzwerte
Maximum Ratings**

| Bezeichnung Parameter | Symbol Symbol | Werte Values | Einheit Unit |
|--|--------------------------|-------------------------|-------------------------|
| Betriebstemperatur Operating temperature range | T_{op} | - 55 ... + 100 | °C |
| Lagertemperatur Storage temperature range | T_{stg} | - 55 ... + 100 | °C |
| Sperrschichttemperatur Junction temperature | T_j | + 100 | °C |
| Durchlaßstrom Forward current | I_F | 50 | mA |
| Stoßstrom Surge current $t \leq 10 \mu s, D = 0.005$ | I_{FM} | 1 | A |
| Sperrspannung Reverse voltage | V_R | 5 | V |
| Verlustleistung Power dissipation | P_{tot} | 190 | mW |
| Wärmewiderstand Thermal resistance Sperrschicht / Umgebung Junction / air Montage auf PC-board*) (Padgröße $\geq 16 \text{ mm}^2$) mounted on PC board*) (pad size 16 mm^2) | $R_{th JA}$ | 300 | K/W |

*) PC-board: FR4

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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.) $I_F = 10\text{ mA}$ | λ_{peak} | 635 | 610 | 586 | 565 | 557 | nm |
| Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 10\text{ mA}$ | λ_{dom} | 628 | 605 | 590 | 570 | 560 | nm |
| Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.) Spectral bandwidth at 50 % $I_{\text{rel max}}$ (typ.) $I_F = 10\text{ mA}$ | $\Delta\lambda$ | 45 | 40 | 45 | 25 | 22 | nm |
| Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V | 2ϕ | 120 | 120 | 120 | 120 | 120 | deg. |
| Durchlaßspannung (typ.) Forward voltage (max.) $I_F = 50\text{ mA}$ | V_F V_F | 2.0 3.8 | 2.1 3.8 | 2.2 3.8 | 2.6 3.8 | 2.6 3.8*) | V V |
| Sperrstrom (typ.) Reverse current (max.) $V_R = 5\text{ V}$ | I_R I_R | 0.01 10 | 0.01 10 | 0.01 10 | 0.01 10 | 0.01 10 | μA μA |
| Kapazität (typ.) Capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$ | C_0 | 40 | 35 | 35 | 60 | 80 | 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 t_f | 350 200 | 500 250 | 350 200 | 500 250 | 500 250 | ns ns |

*) $V_F \text{ max} = 3.2\text{ V}$ as of Febr. 97

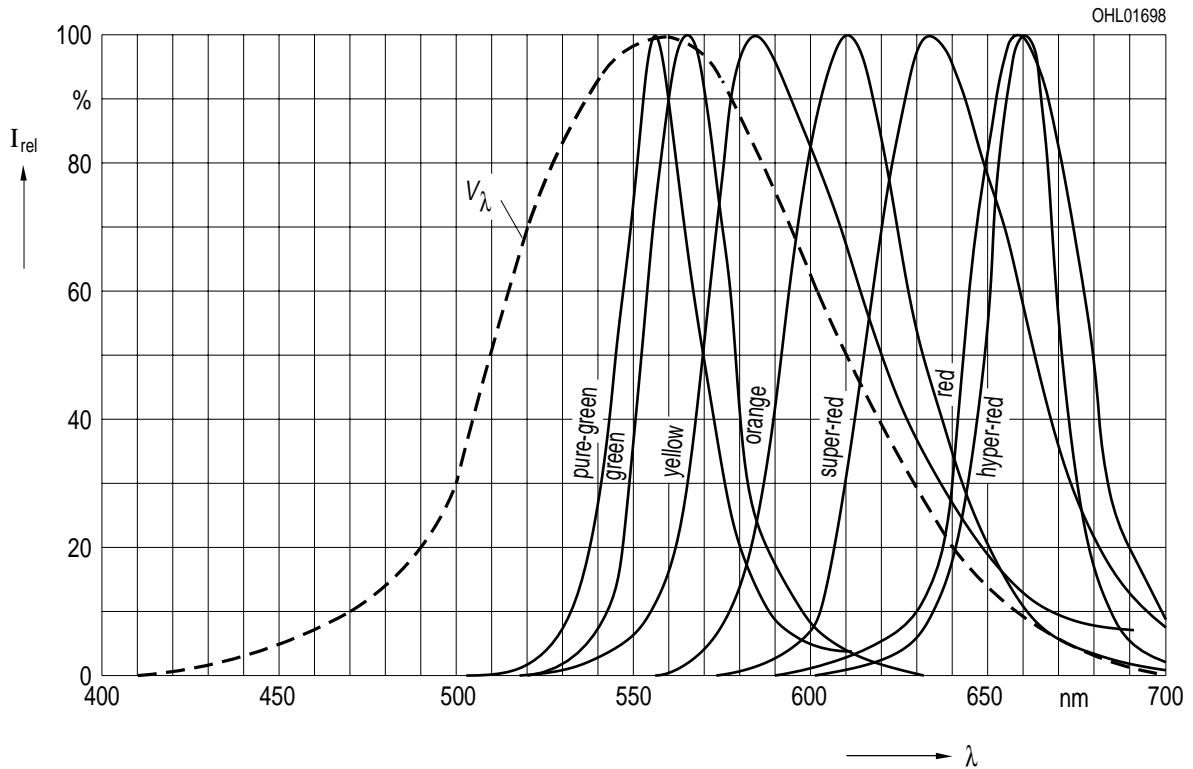
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Relative spektrale Emission $I_{rel} = f(\lambda)$, $T_A = 25\text{ °C}$, $I_F = 10\text{ mA}$

Relative Spectral Emission

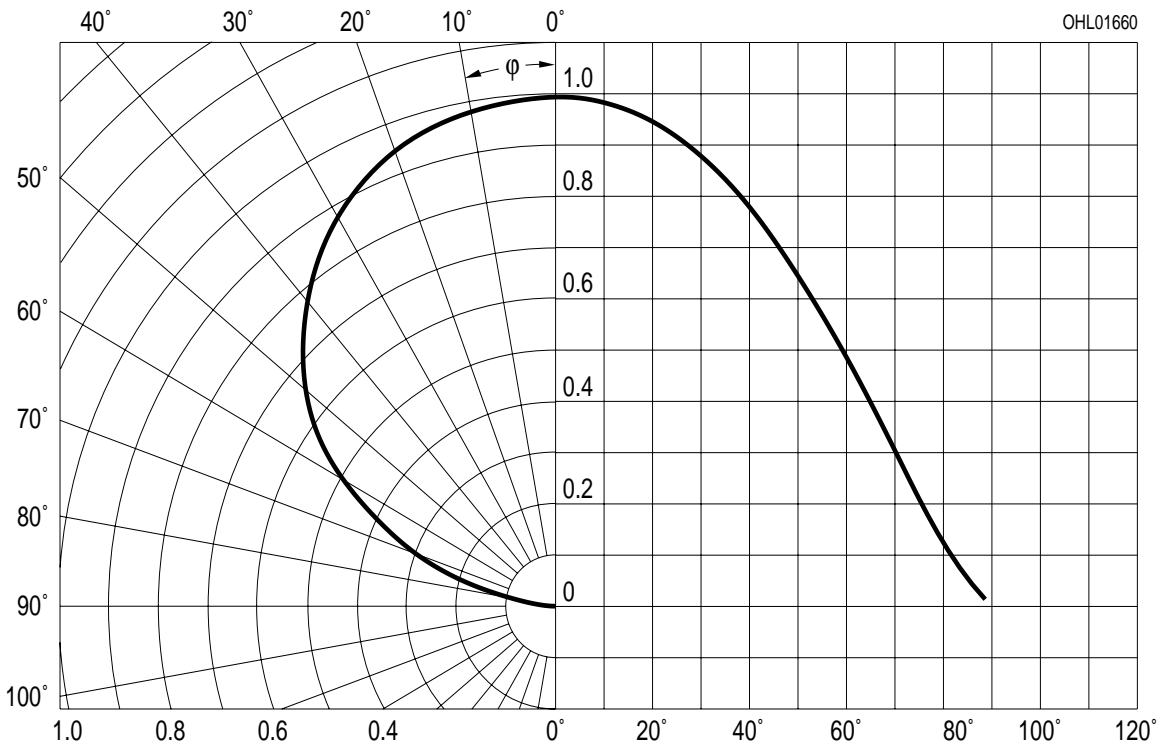
$V(\lambda)$ = spektrale Augenempfindlichkeit

Standard eye response curve



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

Radiation characteristic

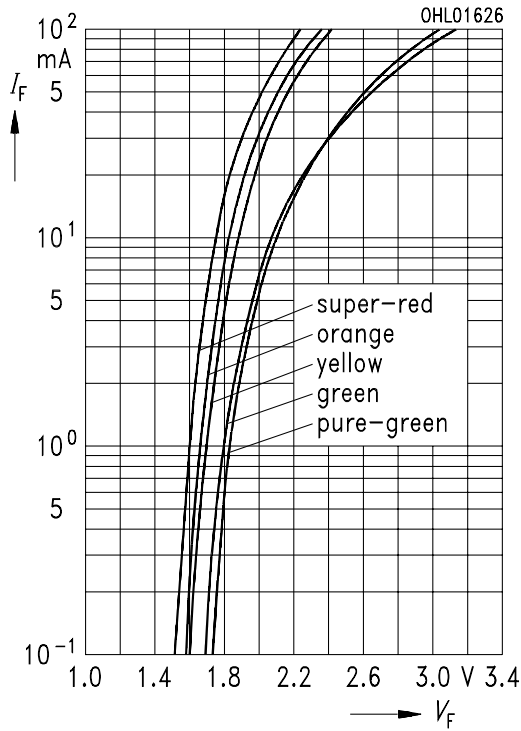


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Durchlaßstrom $I_F = f(V_F)$

Forward current

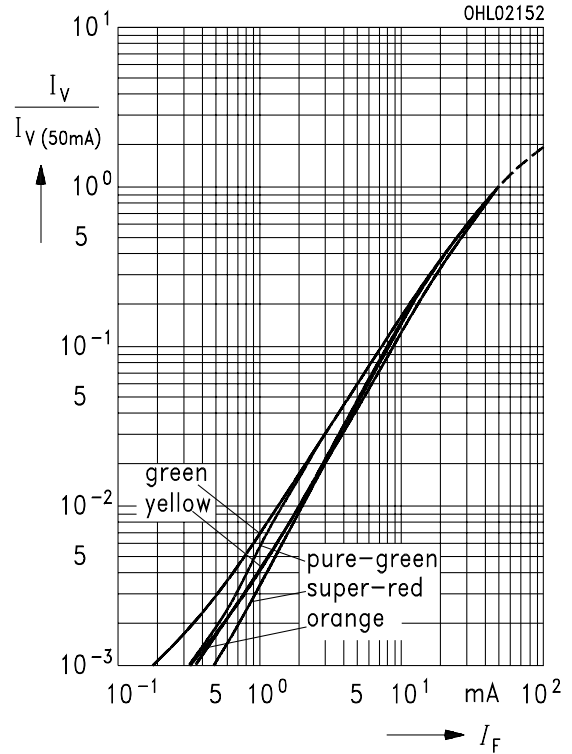
$T_A = 25^\circ\text{C}$



Relative Lichtstärke $I_V/I_{V(50\text{mA})} = f(I_F)$

Relative luminous intensity

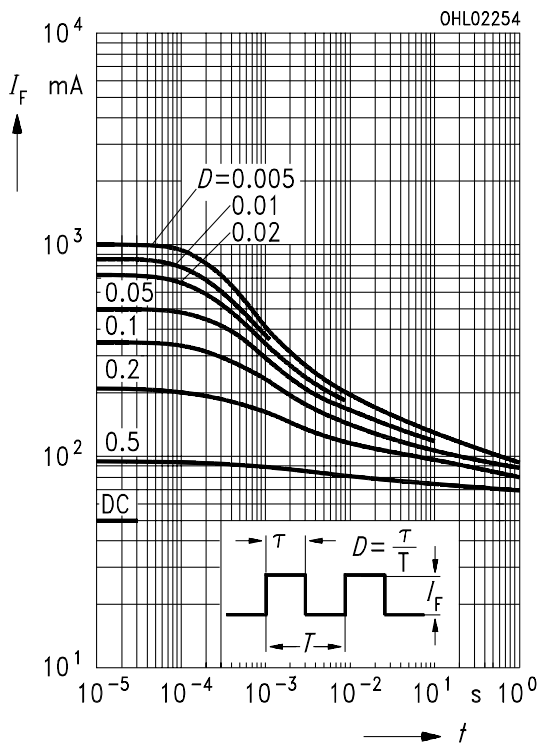
$T_A = 25^\circ\text{C}$



Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

Permissible pulse handling capability

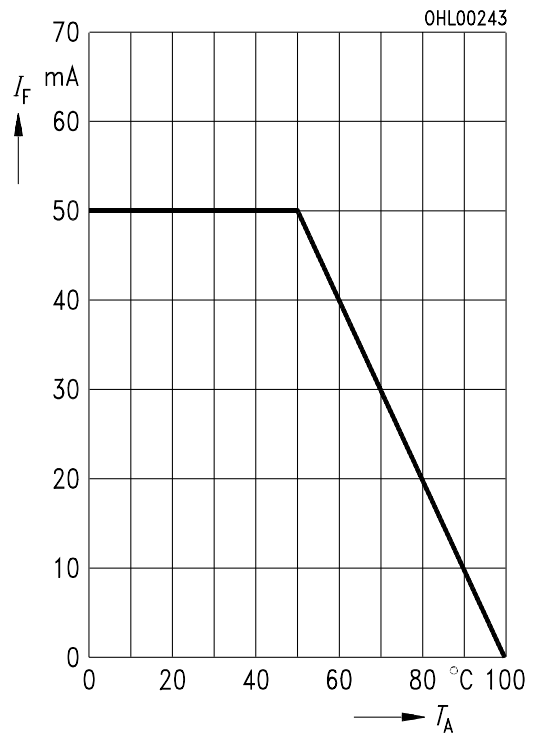
Duty cycle $D =$ parameter, $T_A = 25^\circ\text{C}$



Maximal zulässiger Durchlaßstrom

Max. permissible forward current

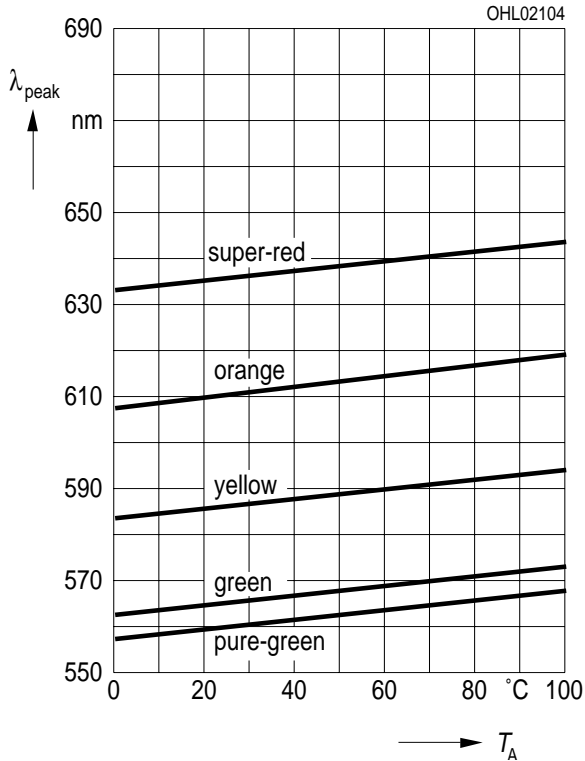
$I_F = f(T_A)$



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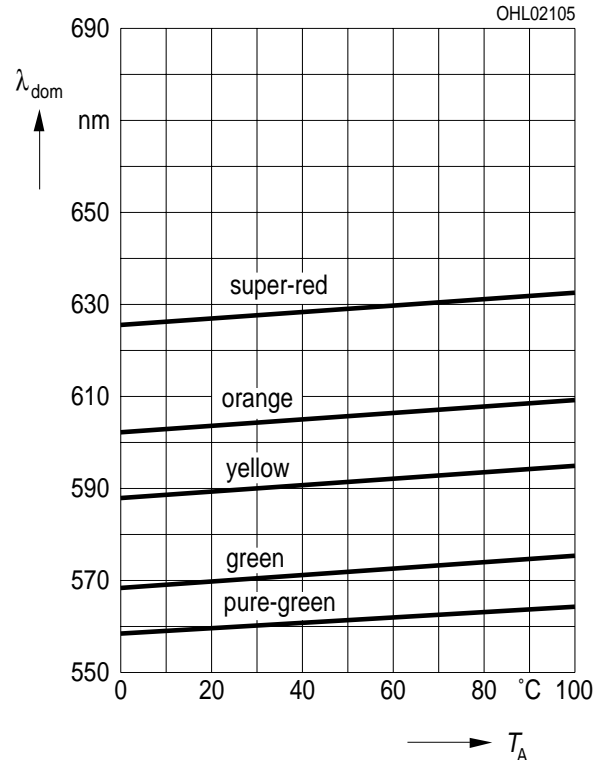
Wellenlänge der Strahlung $\lambda_{\text{peak}} = f(T_A)$
Wavelength at peak emission

$I_F = 10 \text{ mA}$



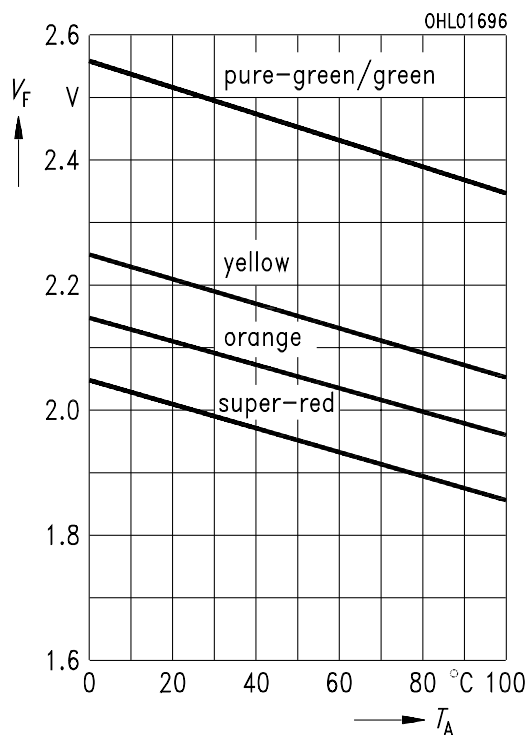
Dominantwellenlänge $\lambda_{\text{dom}} = f(T_A)$
Dominant wavelength

$I_F = 10 \text{ mA}$



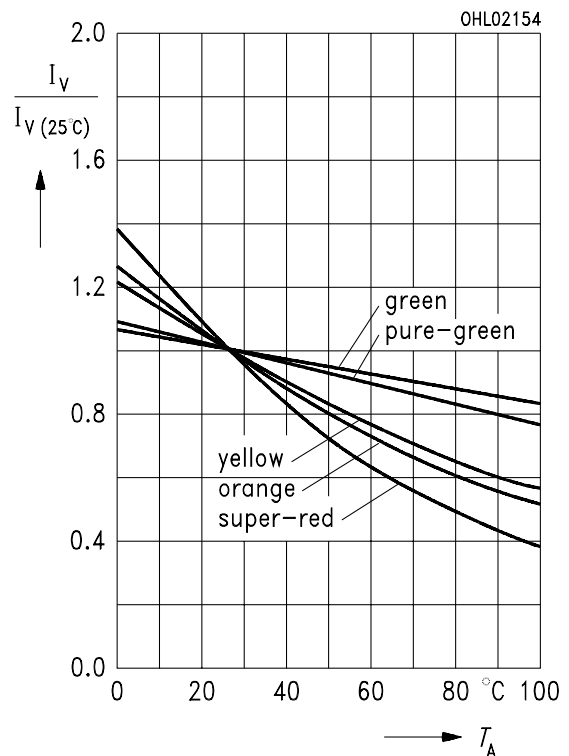
Durchlaßspannung $V_F = f(T_A)$
Forward voltage

$I_F = 50 \text{ mA}$



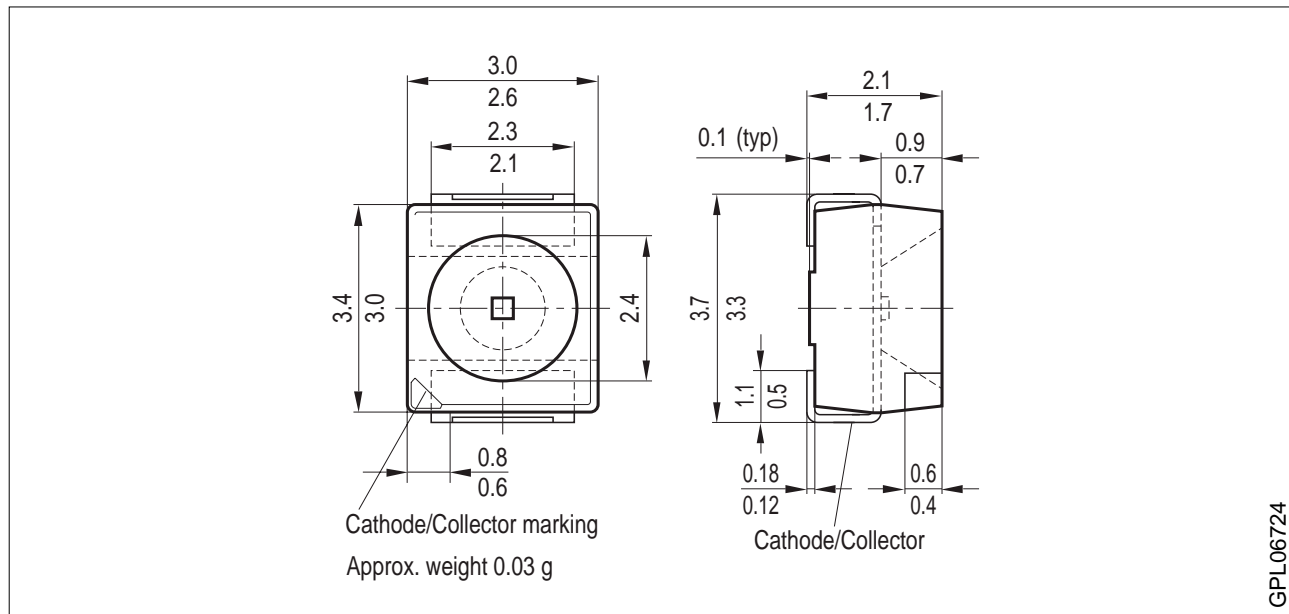
Relative Lichtstärke $I_V / I_{V(25^\circ\text{C})} = f(T_A)$
Relative luminous intensity

$I_F = 50 \text{ mA}$



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



Kathodenkennung: abgeschrägte Ecke
Cathode mark: bevelled edge