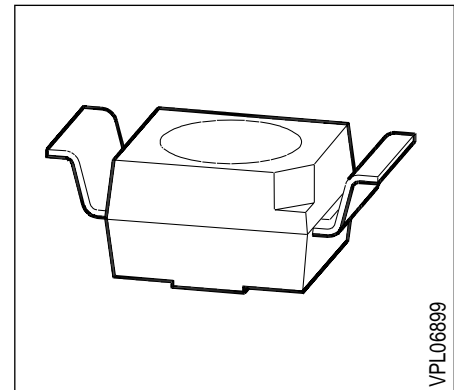


## TOPLED® RG Super-Bright, Hyper-Red GaAIAs-LED

LH T774

### Besondere Merkmale

- Gehäusefarbe: weiß
- Doppel-Heterostruktur in GaAIAs Technologie
- besonders hohe Lichtstärke
- als optischer Indikator einsetzbar
- zur Hinterleuchtung, Lichtleiter- und Linseneinkopplung
- für alle SMT-Bestück- und Löttechniken geeignet
- gegurtet (12-mm-Filmgurt)
- Störimpulsfest nach DIN 40839



### Features

- color of package: white
- double heterojunction in GaAIAs technology
- superior luminous intensity
- for use as optical indicator
- for backlighting, optical coupling into light pipes and lenses
- suitable for all SMT assembly and soldering methods
- available taped on reel (12 mm tape)
- load dump resistant acc. to DIN 40839

Typ	Emissionsfarbe	Farbe der Lichtaustrittsfläche	Lichtstärke	Lichtstrom	Bestellnummer
Type	Color of Emission	Color of the Light Emitting Area	Luminous Intensity $I_F = 10 \text{ mA}$ $I_V \text{ (mcd)}$	Luminous Flux $I_F = 10 \text{ mA}$ $\Phi_V \text{ (lm)}$	Ordering Code
LH T774-KM	hyper-red	colorless clear	6.3 ... 32	-	Q62703-Q2725
LH T774-L			10.0 ... 20	45 (typ.)	Q62703-Q2790
LH T774-M			16.0 ... 32	75 (typ.)	Q62703-Q2791
LH T774-LN			10.0 ... 50	-	Q62703-Q2792

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 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	$I_F$	30	mA
Stoßstrom Surge current $t \leq 10 \mu s, D = 0.005$	$I_{FM}$	0.5	A
Sperrspannung Reverse voltage	$V_R$	3	V
Verlustleistung Power dissipation $T_A \leq 25 \text{ °C}$	$P_{tot}$	90	mW
Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air Montage auf PC-Board*) (Padgröße je $\geq 16 \text{ mm}^2$ ) mounted on PC-Board*) (pad size $\geq 16 \text{ mm}^2$ each)	$R_{th JA}$	400	K/W

\*) PC-board: FR4

## Kennwerte ( $T_A = 25\text{ °C}$ )

### Characteristics

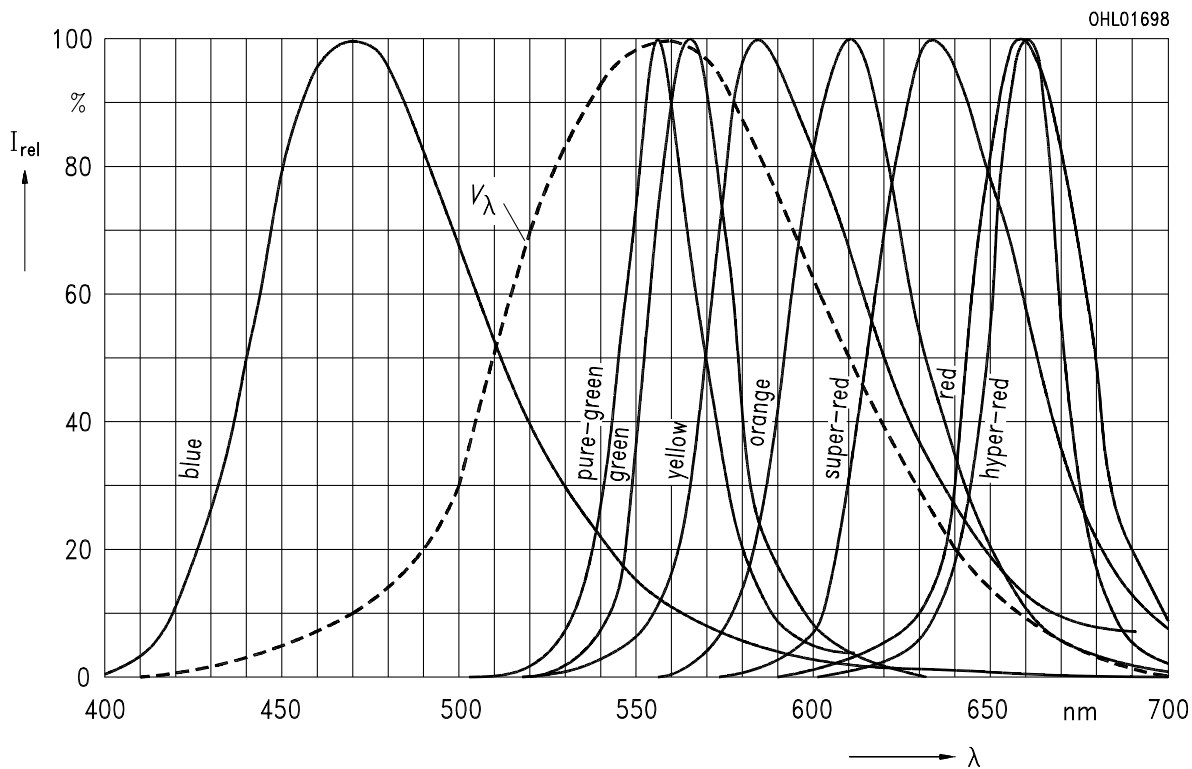
Bezeichnung Parameter		Symbol Symbol	Werte Values	Einheit Unit
Wellenlänge des emittierten Lichtes Wavelength at peak emission $I_F = 10\text{ mA}$	(typ.) (typ.)	$\lambda_{\text{peak}}$	660	nm
Dominantwellenlänge Dominant wavelength $I_F = 10\text{ mA}$	(typ.) (typ.)	$\lambda_{\text{dom}}$	645	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ Spectral bandwidth at 50 % $I_{\text{rel max}}$ $I_F = 10\text{ mA}$	(typ.) (typ.)	$\Delta\lambda$	22	nm
Abstrahlwinkel bei 50 % $I_V$ (Vollwinkel) Viewing angle at 50 % $I_V$		$2\phi$	120	Grad deg.
Durchlaßspannung Forward voltage $I_F = 10\text{ mA}$	(typ.) (max.)	$V_F$ $V_F$	1.75 2.6	V V
Sperrstrom Reverse current $V_R = 3\text{ V}$	(typ.) (max.)	$I_R$ $I_R$	0.01 10	$\mu\text{A}$ $\mu\text{A}$
Kapazität Capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	(typ.)	$C_0$	25	pF
Schaltzeiten: Switching times: $I_V$ from 10 % to 90 % $I_V$ from 90 % to 10 % $I_F = 100\text{ mA}, t_p = 10\text{ }\mu\text{s}, R_L = 50\text{ }\Omega$	(typ.) (typ.)	$t_r$ $t_f$	140 110	ns ns

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

**Relative spectral emission**

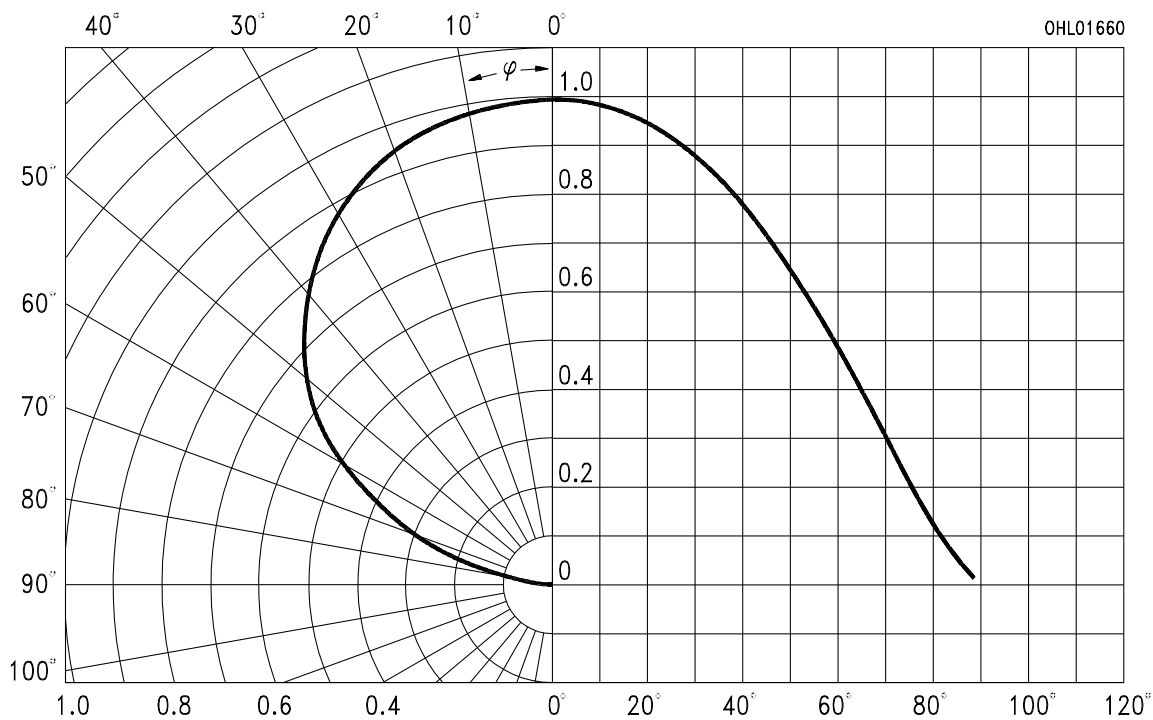
$V(\lambda)$  = spektrale Augenempfindlichkeit

Standard eye response curve



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

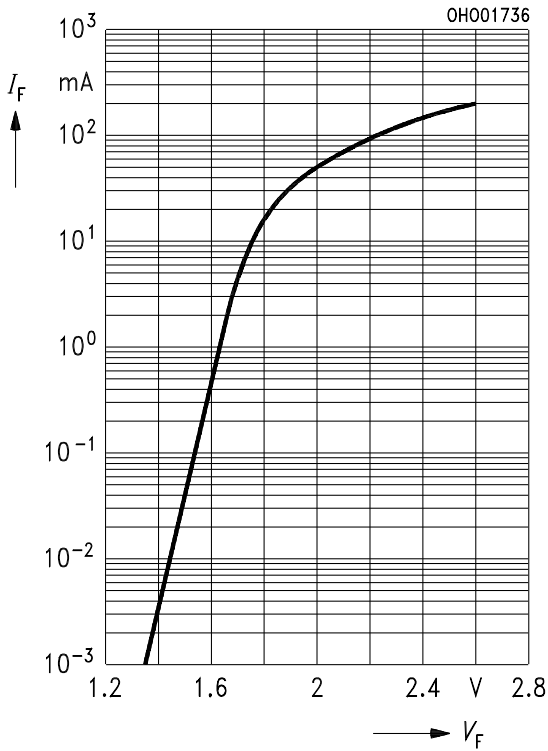
**Radiation characteristic**



**Durchlaßstrom  $I_F = f(V_F)$**

**Forward current**

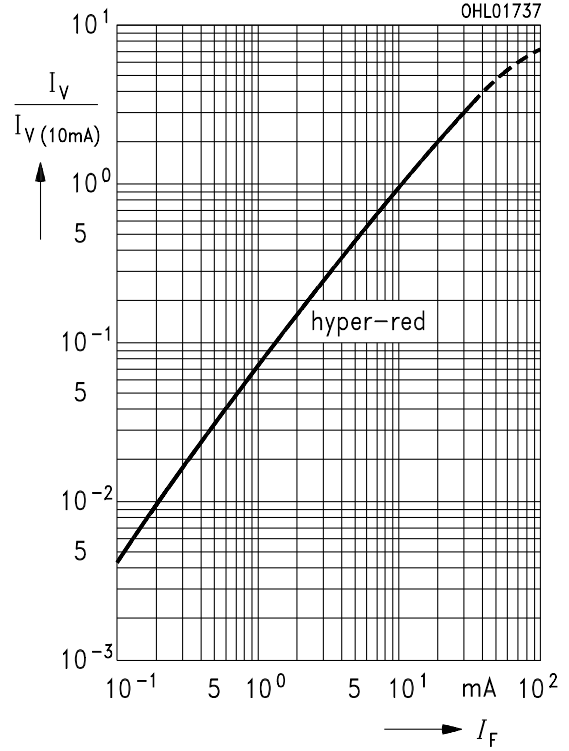
$T_A = 25\text{ °C}$



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

**Relative luminous intensity**

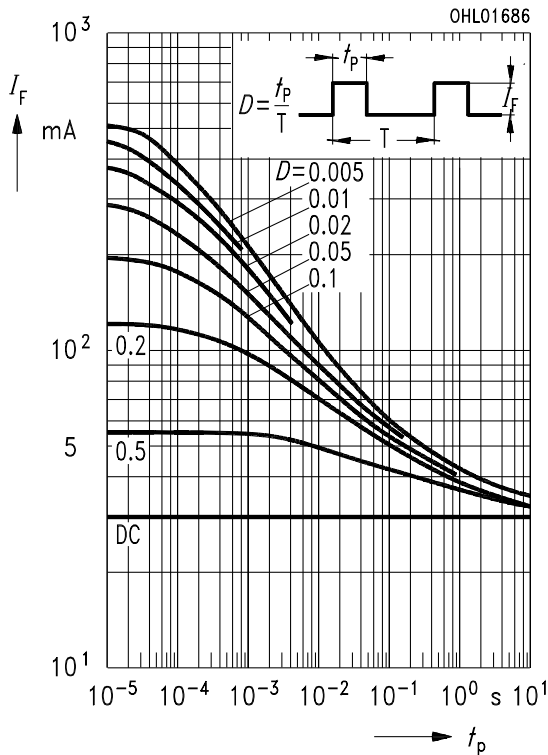
$T_A = 25\text{ °C}$



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

**Permissible pulse handling capability**

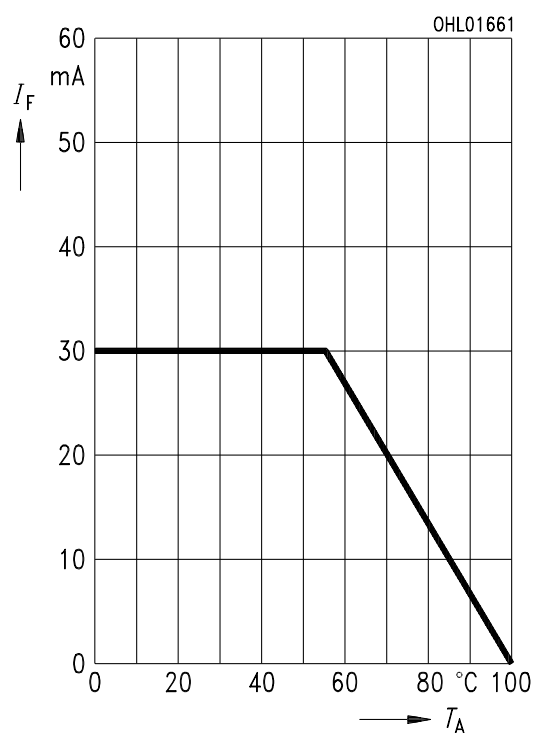
Duty cycle  $D = \text{parameter}$ ,  $T_A = 25\text{ °C}$



**Maximal zulässiger Durchlaßstrom**

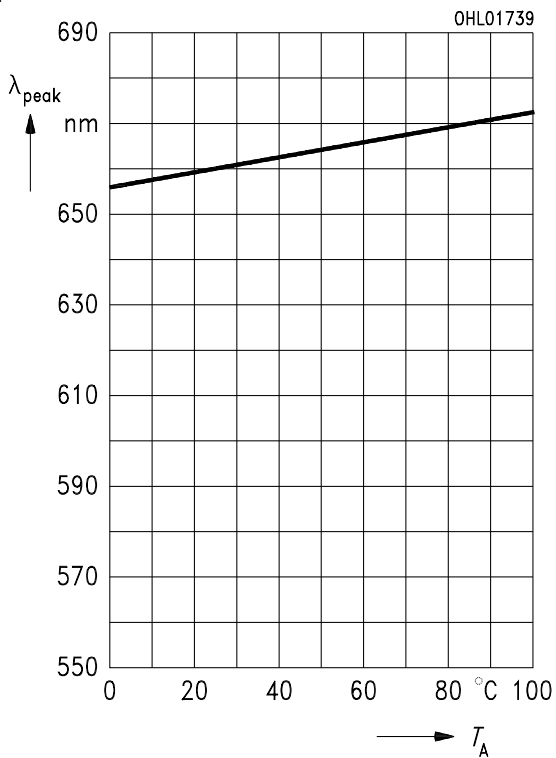
**Max. permissible forward current**

$I_F = f(T_A)$



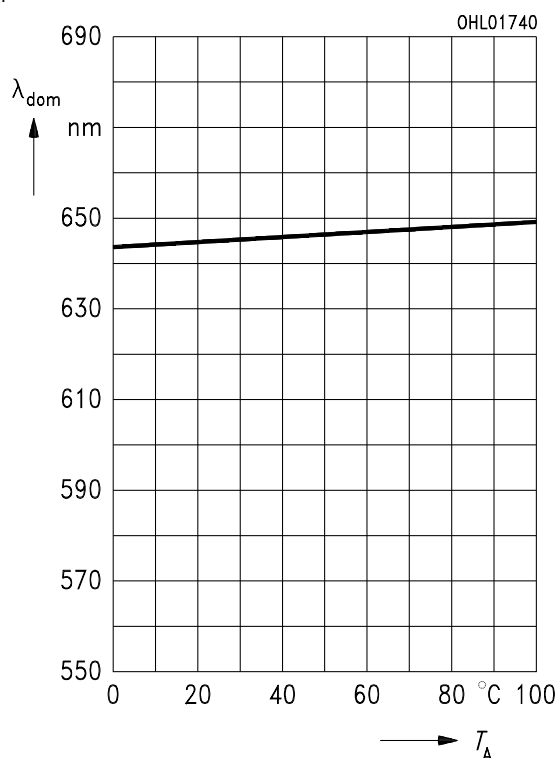
**Wellenlänge der Strahlung  $\lambda_{\text{peak}} = f(T_A)$**   
**Wavelength at peak emission**

$I_F = 10 \text{ mA}$



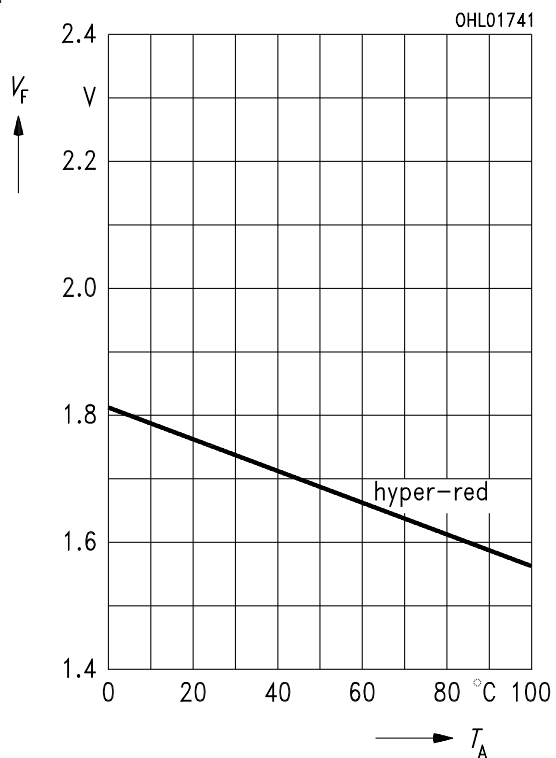
**Dominantwellenlänge  $\lambda_{\text{dom}} = f(T_A)$**   
**Dominant wavelength**

$I_F = 10 \text{ mA}$



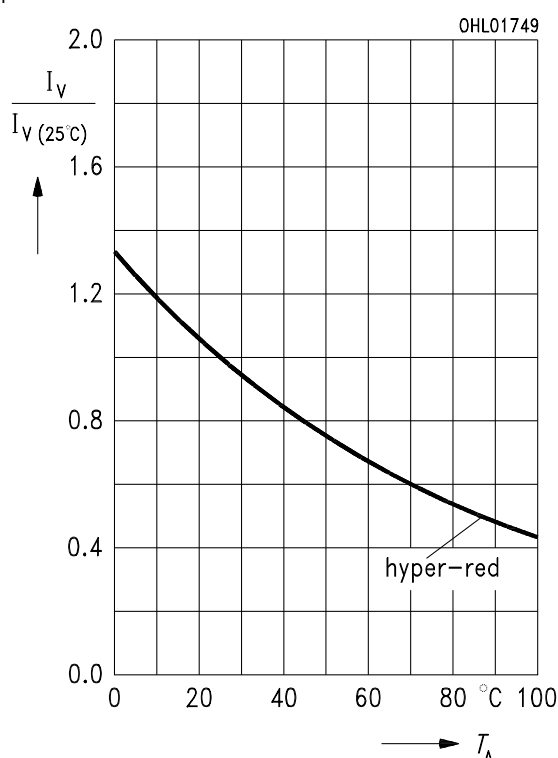
**Durchlaßspannung  $V_F = f(T_A)$**   
**Forward voltage**

$I_F = 10 \text{ mA}$

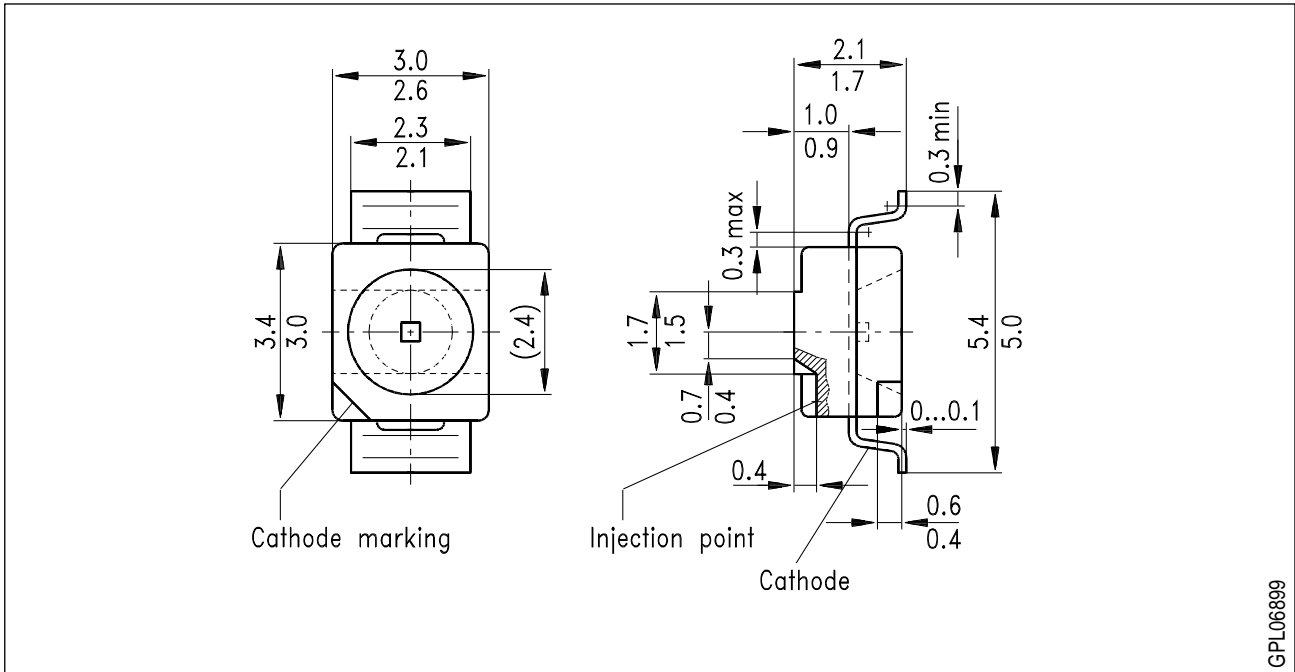


**Relative Lichtstärke  $I_V/I_{V(25^\circ\text{C})} = f(T_A)$**   
**Relative luminous intensity**

$I_F = 10 \text{ mA}$



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



GPL06899

**Kathodenkennzeichnung:** abgeschrägte Ecke  
**Cathode mark:** bevelled edge