

## LC SIDELED® Low Current LED

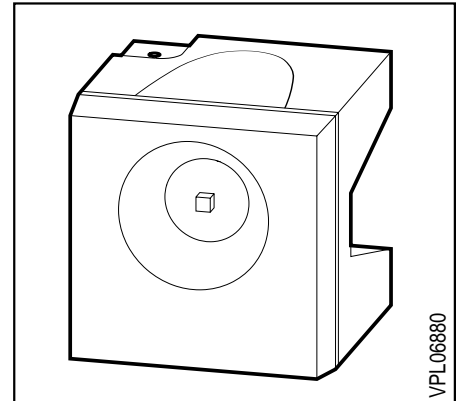
LS A679, LY A679, LG A679

### Besondere Merkmale

- Gehäusefarbe: weiß
- als optischer Indikator einsetzbar
- zur Hinterleuchtung, Lichtleiter- und Linseneinkopplung
- für alle SMT-Bestück- und Reflow-Löttechniken geeignet
- gegurtet (12-mm-Filmgurt)

### Features

- color of package: white
- for use as optical indicator
- for backlighting, optical coupling into light pipes and lenses
- suitable for all SMT assembly and reflow soldering methods
- available taped on reel (12 mm tape)



Typ	Emissionsfarbe	Farbe der Lichtaustrittsfläche	Lichtstärke	Lichtstrom	Bestellnummer
Type	Color of Emission	Color of the Light Emitting Area	Luminous Intensity $I_F = 2 \text{ mA}$ $I_V(\text{mcd})$	Luminous Flux $I_F = 2 \text{ mA}$ $\Phi_V(\text{mlm})$	Ordering Code
LS A679-CO	super-red	colorless clear	$\geq 0.25$ (1.0 typ.)	3.0 (typ.)	Q62703-Q2551
LY A679-CO	yellow	colorless clear	$\geq 0.25$ (1.0 typ.)	3.0 (typ.)	Q62703-Q2554
LG A679-CO	green	colorless clear	$\geq 0.25$ (1.0 typ.)	3.0 (typ.)	Q62703-Q2545

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	$I_F$	7.5	mA
Stoßstrom Surge current $t \leq 10 \mu s, D = 0.005$	$I_{FM}$	0.15	A
Sperrspannung Reverse voltage	$V_R$	5	V
Verlustleistung Power dissipation	$P_{tot}$	20	mW
Wärmewiderstand Thermal resistance Sperrschicht / Umgebung Junction / air Montage auf PC-Board (Padgröße $\geq 16 \text{ mm}^2$ ) mounted on PC board (pad size $\geq 16 \text{ mm}^2$ )	$R_{th JA}$	500	K/W

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

**Characteristics**

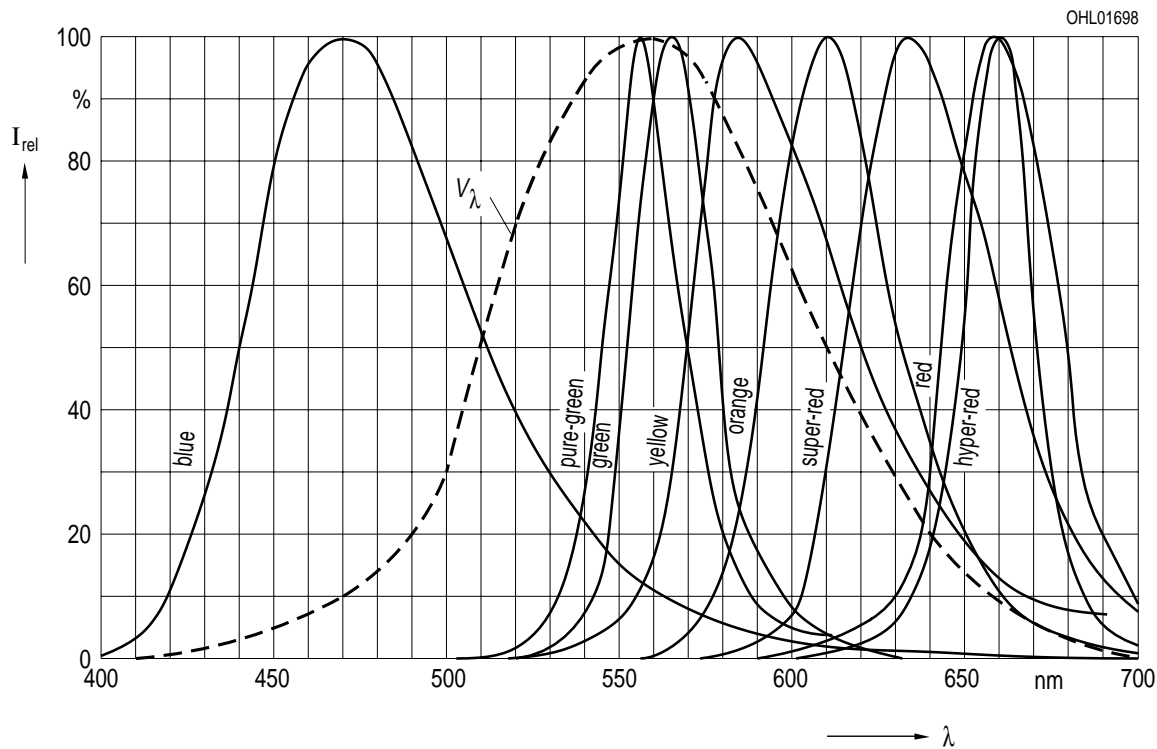
Bezeichnung Parameter	Symbol Symbol	Werte Values			Einheit Unit
		LS	LY	LG	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) $I_F = 7.5\text{ mA}$	$\lambda_{\text{peak}}$	635	586	565	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 7.5\text{ mA}$	$\lambda_{\text{dom}}$	628	590	570	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.) Spectral bandwidth at 50 % $I_{\text{rel max}}$ (typ.) $I_F = 7.5\text{ mA}$	$\Delta\lambda$	45	45	25	nm
Abstrahlwinkel bei 50 % $I_V$ (Vollwinkel) Viewing angle at 50 % $I_V$	$2\phi$	120	120	120	Grad deg.
Durchlaßspannung (typ.) Forward voltage (max.) $I_F = 2\text{ mA}$	$V_F$ $V_F$	1.8 2.6	2.0 2.7	1.9 2.6	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	$\mu\text{A}$ $\mu\text{A}$
Kapazität (typ.) Capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_0$	3	3	15	pF
Schaltzeiten: Switching times: $I_V$ from 10 % to 90 % (typ.) $I_V$ from 90 % to 10 % (typ.) $I_F = 100\text{ mA}, t_p = 10\text{ }\mu\text{s}, R_L = 50\text{ }\Omega$	$t_r$ $t_f$	200 150	200 150	450 200	ns ns

**Relative spektrale Emission**  $I_{rel} = f(\lambda)$ ,  $T_A = 25\text{ °C}$ ,  $I_F = 7.5\text{ mA}$

**Relative spectral emission**

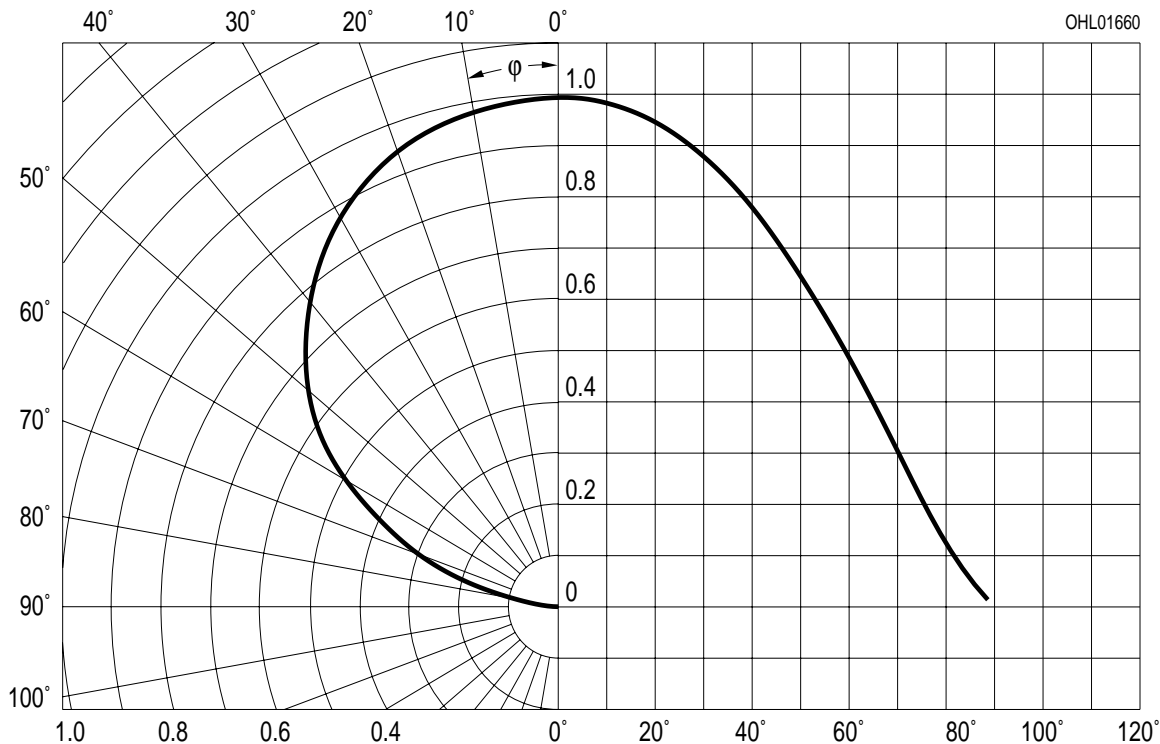
$V(\lambda)$  = spektrale Augenempfindlichkeit

Standard eye response curve



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

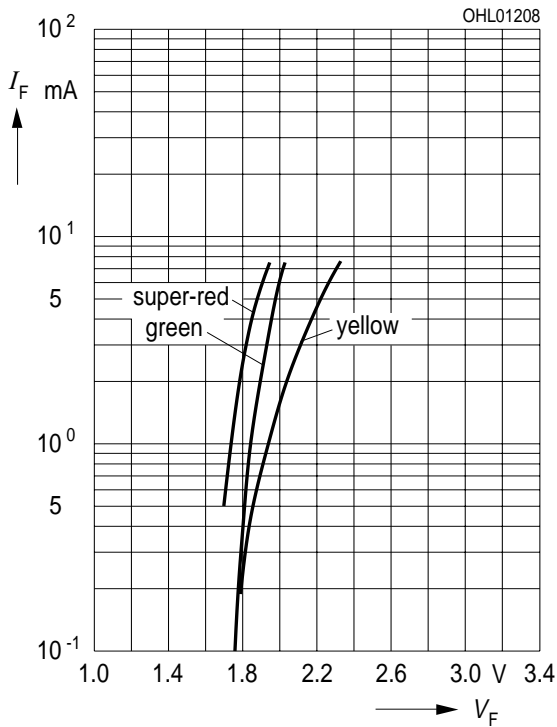
**Radiation characteristic**



### Durchlaßstrom $I_F = f(V_F)$

#### Forward current

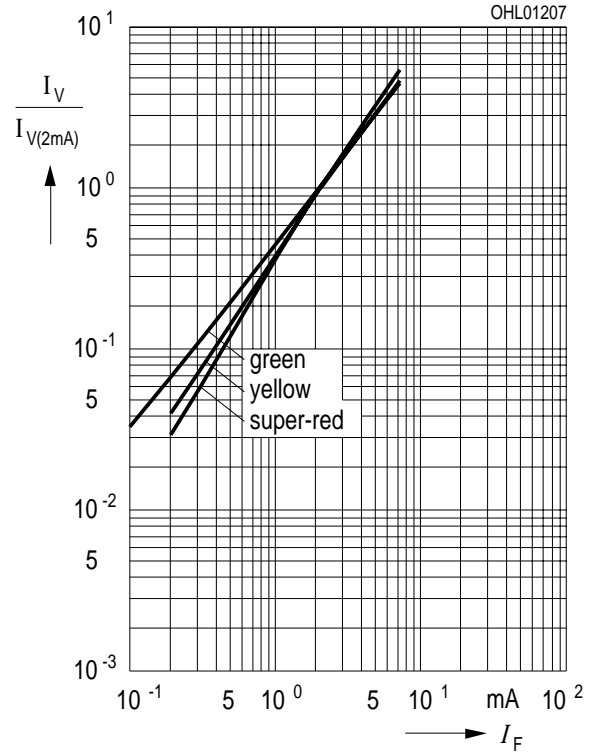
$T_A = 25^\circ\text{C}$



### Relative Lichtstärke $I_V / I_{V(2\text{mA})} = f(I_F)$

#### Relative luminous intensity

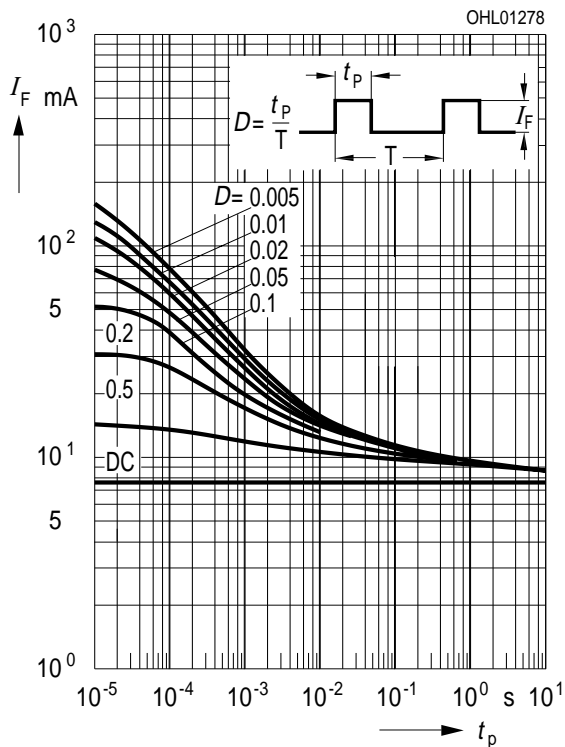
$T_A = 25^\circ\text{C}$



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

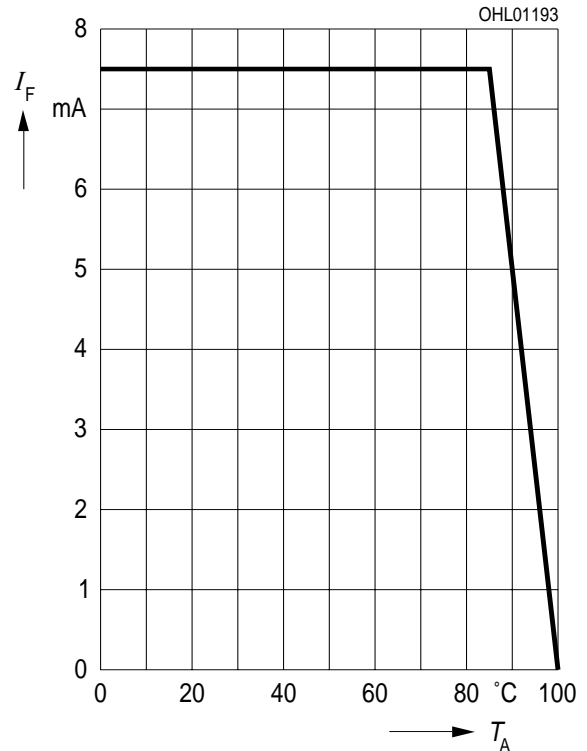
#### Permissible pulse handling capability

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



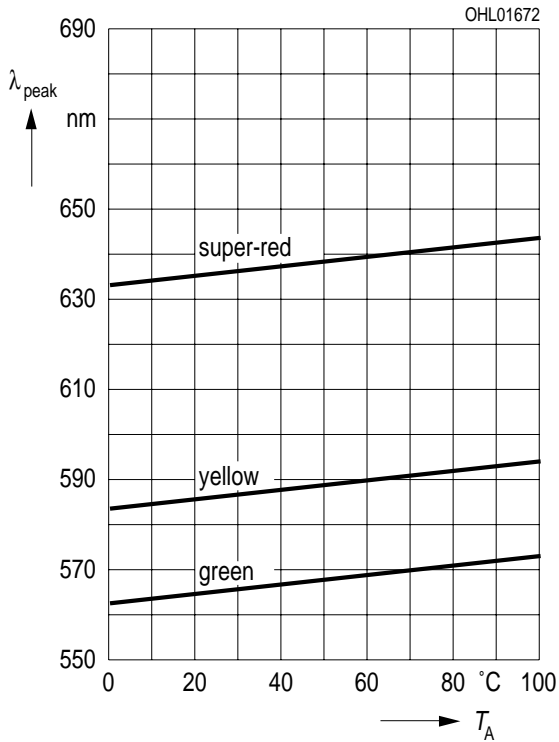
### Maximal zulässiger Durchlaßstrom $I_F = f(T_A)$

#### Max. permissible forward current



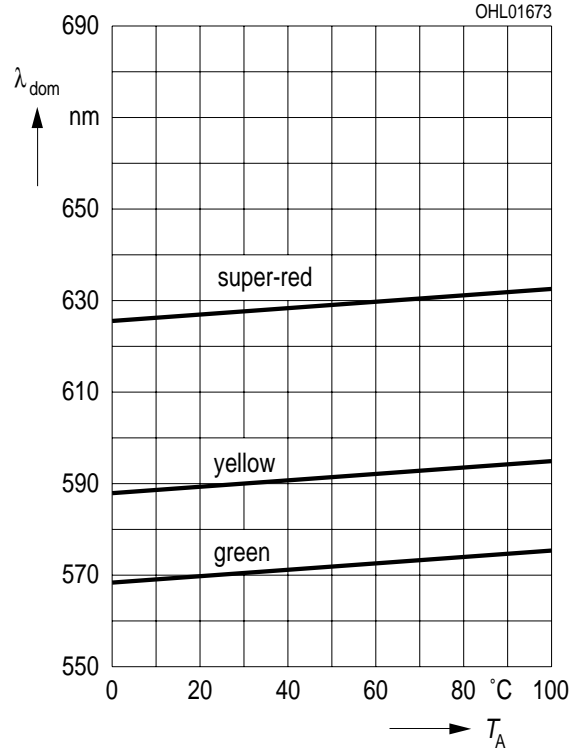
**Wellenlänge der Stahlung  $\lambda_{\text{peak}} = f(T_A)$**   
**Wavelength at peak emission**

$I_F = 7.5 \text{ mA}$



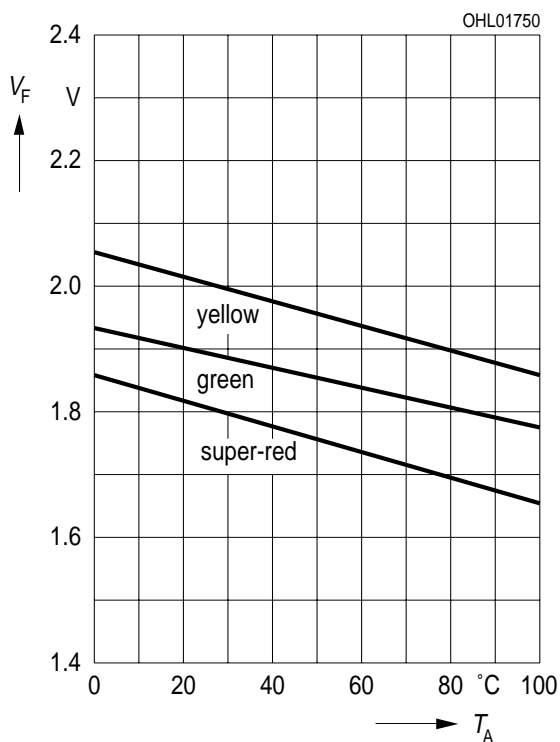
**Dominantwellenlänge  $\lambda_{\text{dom}} = f(T_A)$**   
**Dominant wavelength**

$I_F = 7.5 \text{ mA}$



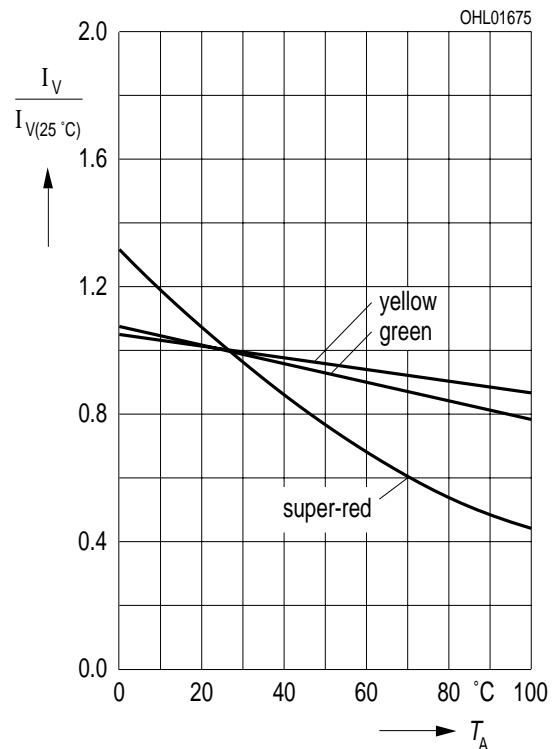
**Durchlaßspannung  $V_F = f(T_A)$**   
**Forward voltage**

$I_F = 2 \text{ mA}$

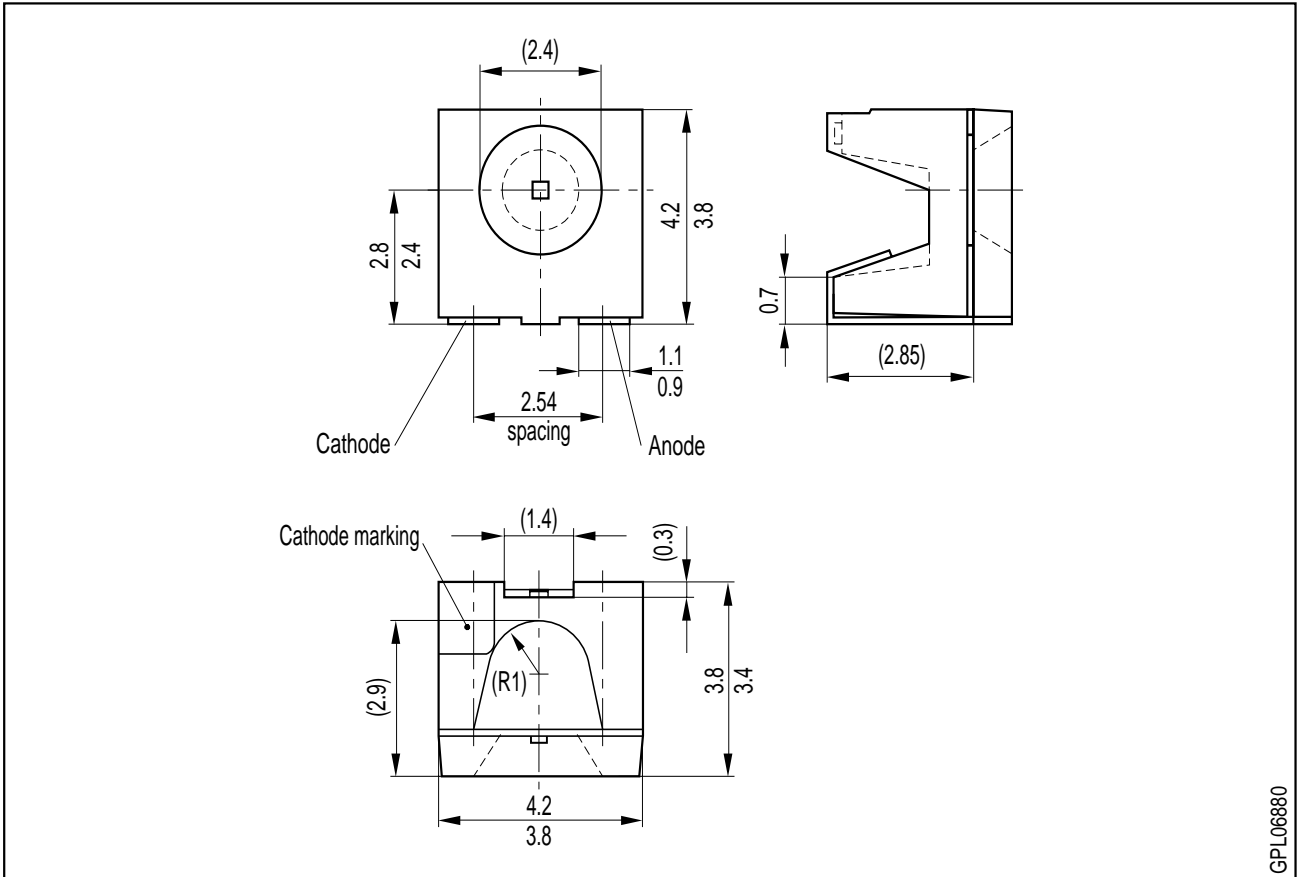


**Relative Lichtstärke  $I_V / I_{V(25^\circ\text{C})} = f(T_A)$**   
**Relative luminous intensity**

$I_F = 2 \text{ mA}$



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



GPL06880

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