

## Super SIDELED® High-Current LED

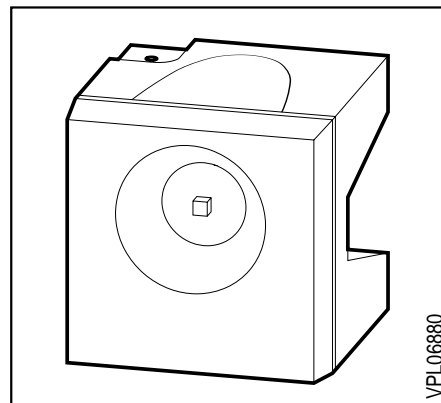
LS A672, LO A672, LY A672  
LG A672, LP A672

### Besondere Merkmale

- Gehäusefarbe: weiß
- als optischer Indikator einsetzbar
- besonders geeignet bei hohem Umgebungslicht durch erhöhten Betriebsstrom ( $\leq 50$  mA DC)
- zur Hinterleuchtung, Lichtleiter- und Linseneinkopplung
- für alle SMT-Bestück- und Reflow-Löttechniken geeignet
- gegurtet (12-mm-Filmgurt)
- Störimpulsfest nach DIN 40839

### Features

- color of package: white
- for use as optical indicator
- appropriate for high ambient light because of the higher operating current ( $\leq 50$  mA DC)
- 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)
- load dump resistant acc. to DIN 40839



Typ	Emissions- farbe	Farbe der Lichtaustritts- fläche	Lichtstärke	Lichtstrom	Bestellnummer
Type	Color of Emission	Color of the Light Emitting Area	Luminous Intensity $I_F = 50 \text{ mA}$ $I_V \text{ (mcd)}$	Luminous Flux $I_F = 50 \text{ mA}$ $\Phi_V \text{ (mlm)}$	Ordering Code
■ LS A672-LP	super-red	colorless clear	10 ... 80	-	Q62703-Q2761
■ LS A672-N			25 ... 50	100 (typ.)	Q62703-Q2849
■ LS A672-P			40 ... 80	180 (typ.)	Q62703-Q3226
■ LS A672-NR			25 ... 200	-	Q62703-Q2850
■ LO A672-LP	orange	colorless clear	10 ... 80	-	Q62703-Q2548
■ LO A672-N			25 ... 50	100 (typ.)	Q62703-Q2851
■ LO A672-P			40 ... 80	180 (typ.)	Q62703-Q2852
■ LO A672-NR			25 ... 200	-	Q62703-Q2853
■ LY A672-LN	yellow	colorless clear	10 ... 50	-	Q62703-Q2553
■ LY A672-N			25 ... 50	100 (typ.)	Q62703-Q2854
■ LY A672-P			40 ... 80	180 (typ.)	Q62703-Q2855
■ LY A672-MQ			16 ... 125	-	Q62703-Q2856
LG A672-LP	green	colorless clear	10 ... 80	-	Q62703-Q2544
LG A672-N			25 ... 50	100 (typ.)	Q62703-Q2857
LG A672-P			40 ... 80	180 (typ.)	Q62703-Q2858
LG A672-MQ			16 ... 125	-	Q62703-Q2859
LP A672-KN	pure green	colorless clear	6.3 ... 50	-	Q62703-Q2860
LP A672-L			10 ... 20	45 (typ.)	Q62703-Q3838
LP A672-M			16 ... 32	75 (typ.)	Q62703-Q3839
LP A672-N			25 ... 50	100 (typ.)	Q62703-Q3148
LP A672-LP			10 ... 80	-	Q62703-Q2863

■ 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  $I_{V \max} / I_{V \min} \leq 2.0$ .

**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 je $\geq 16 \text{ mm}^2$ ) mounted on PC board*) (padsize $\geq 16 \text{ mm}^2$ each)	$R_{th JA}$	330	K/W

\*) PC-board: FR4

**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.) $I_F = 10\text{ mA}$	$\lambda_{\text{peak}}$	635	610	586	565	557	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 10\text{ mA}$	$\lambda_{\text{dom}}$	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 % $I_v$	$2\phi$	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	$\mu\text{A}$ $\mu\text{A}$
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

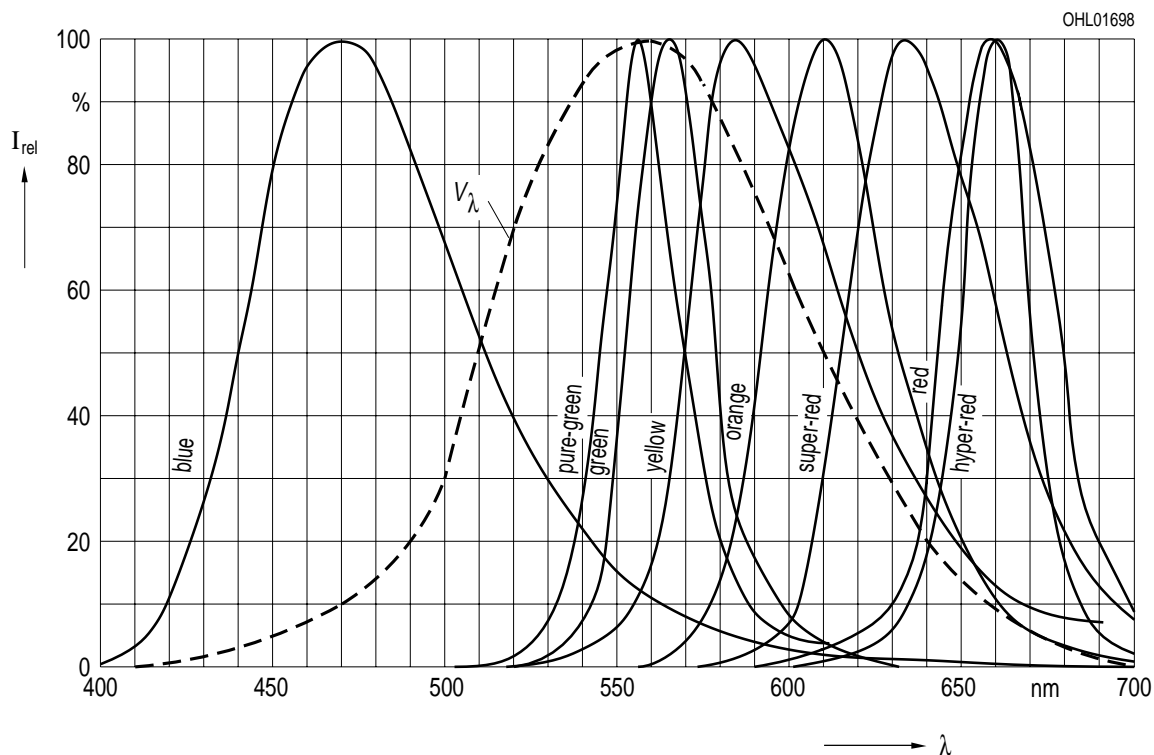
\*)  $V_F \text{ max} = 3.2\text{ V}$  as of Febr. 97

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

### Relative Spectral Emission

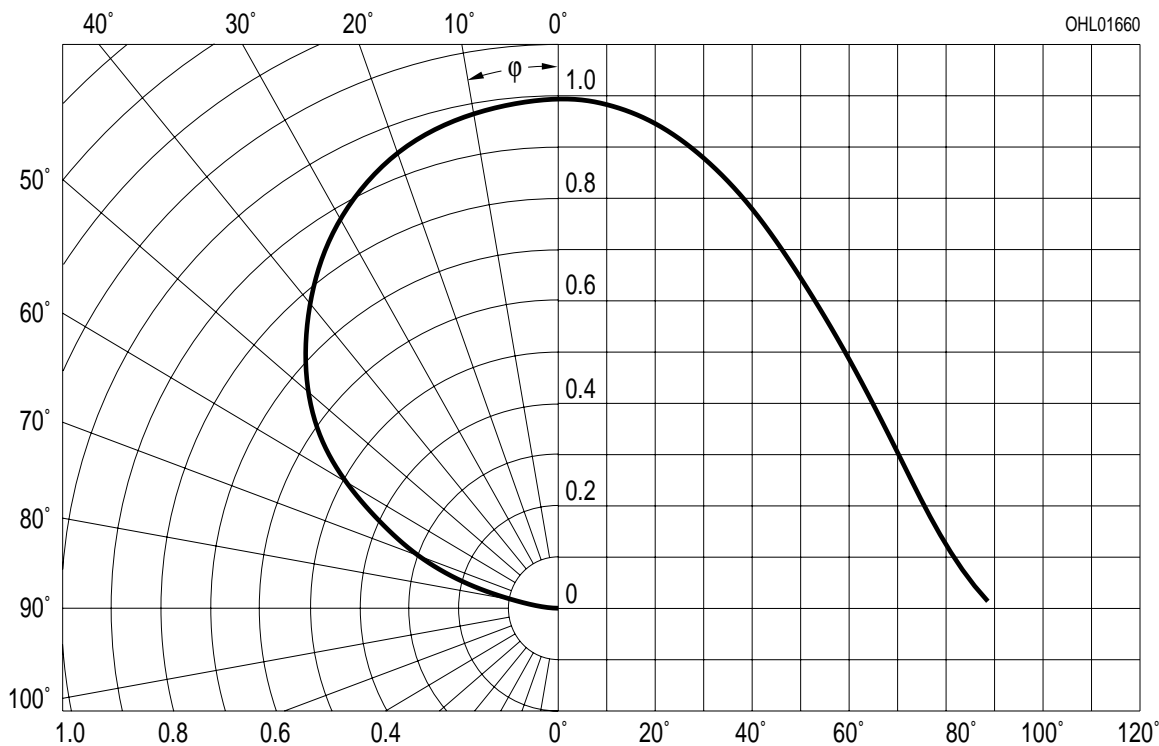
$V(\lambda)$  = spektrale Augenempfindlichkeit

Standard eye response curve

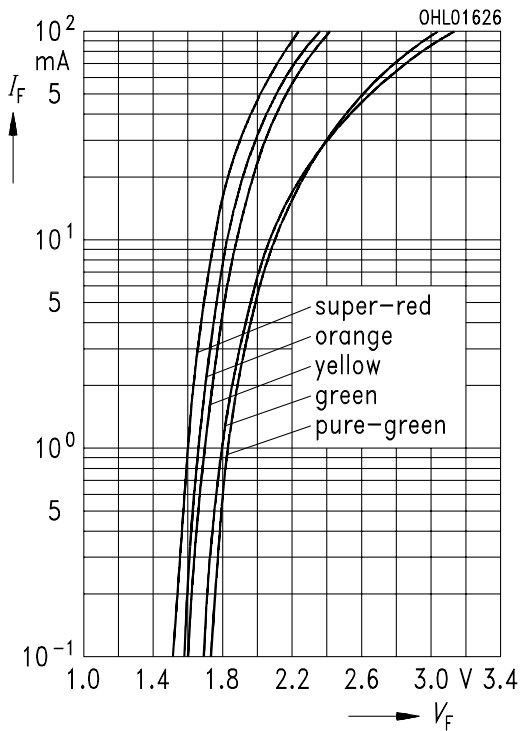


Abstrahlcharakteristik  $I_{rel} = f(\varphi)$

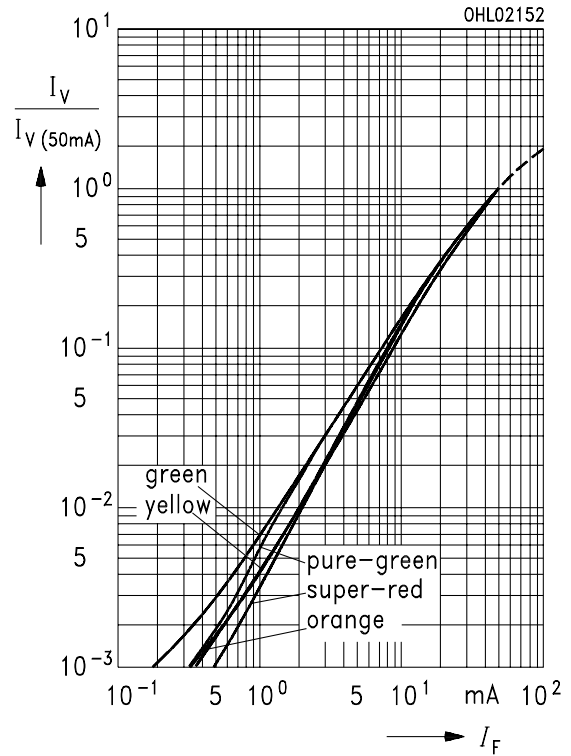
### Radiation characteristic



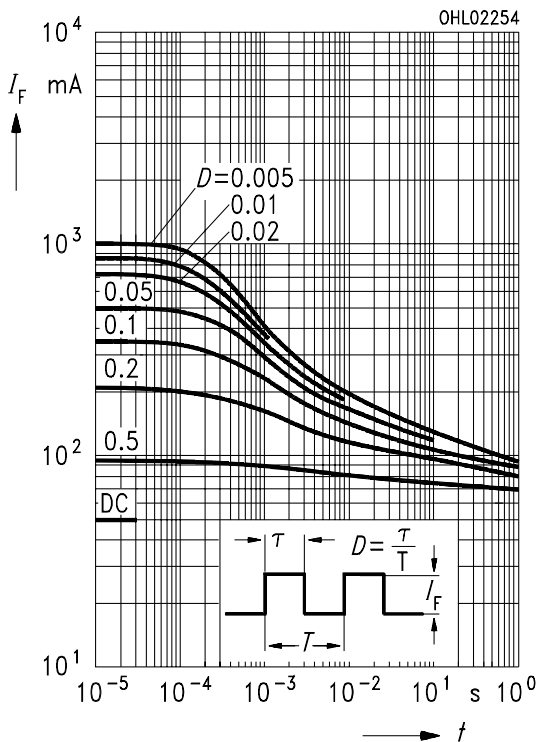
**Durchlaßstrom  $I_F = f(V_F)$**   
**Forward current**  
 $T_A = 25^\circ\text{C}$



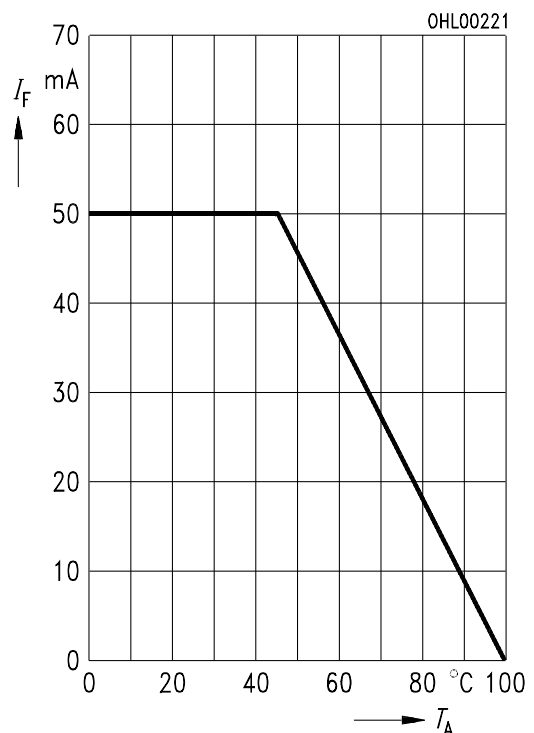
**Relative Lichtstärke  $I_V/I_{V(50\text{mA})} = f(I_F)$**   
**Relative luminous intensity**  
 $T_A = 25^\circ\text{C}$



**Zulässige Impulsbelastbarkeit  $I_F = f(t_p)$**   
**Permissible pulse handling capability**  
 Duty cycle  $D =$  parameter,  $T_A = 25^\circ\text{C}$

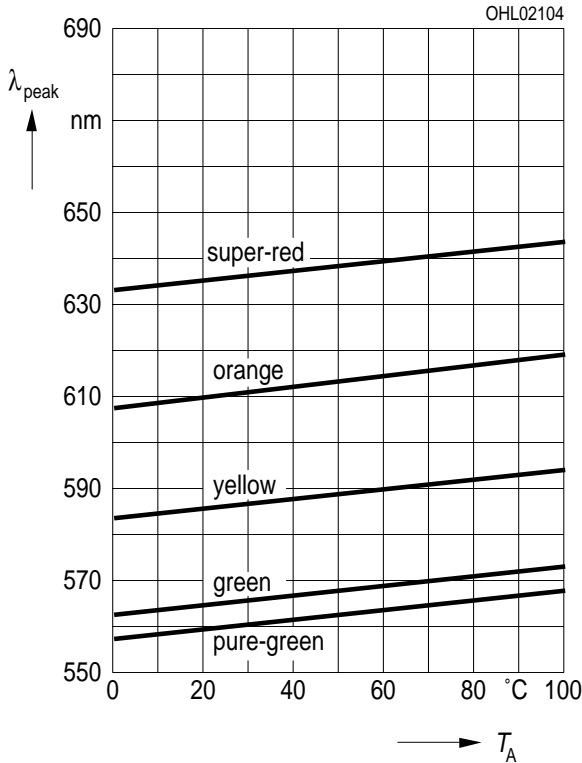


**Maximal zulässiger Durchlaßstrom**  
**Max. permissible forward current**  
 $I_F = f(T_A)$



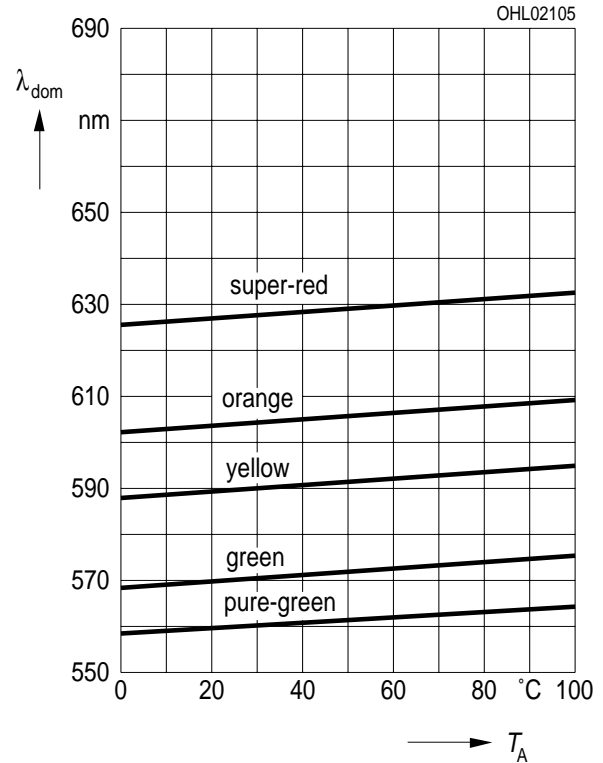
**Wellenlänge der Strahlung  $\lambda_{\text{peak}} = f(T_A)$**   
**Wavelength at peak emission**

$I_F = 10 \text{ mA}$



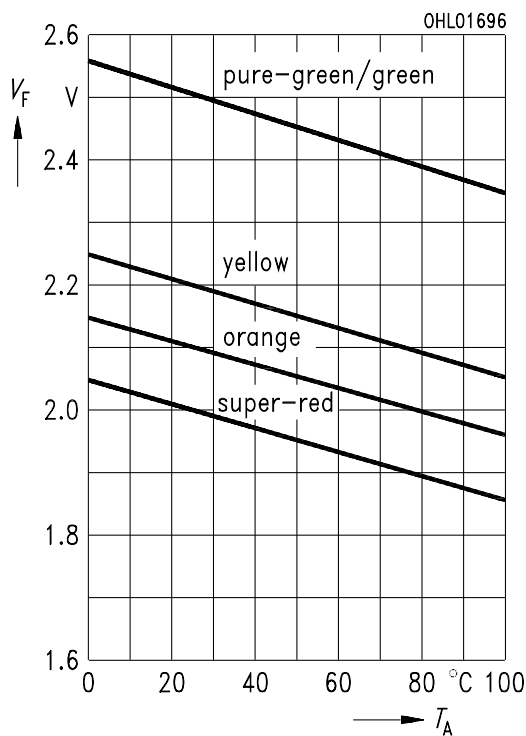
**Dominantwellenlänge  $\lambda_{\text{dom}} = f(T_A)$**   
**Dominant wavelength**

$I_F = 10 \text{ mA}$



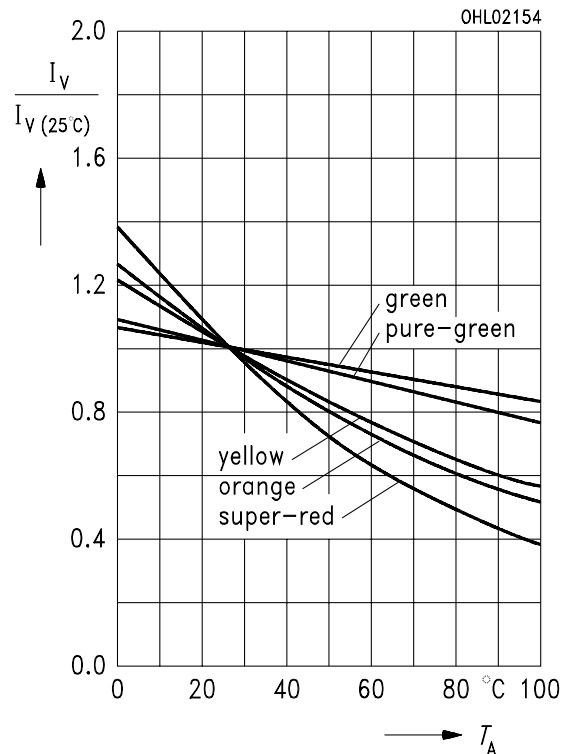
**Durchlaßspannung  $V_F = f(T_A)$**   
**Forward voltage**

$I_F = 50 \text{ mA}$

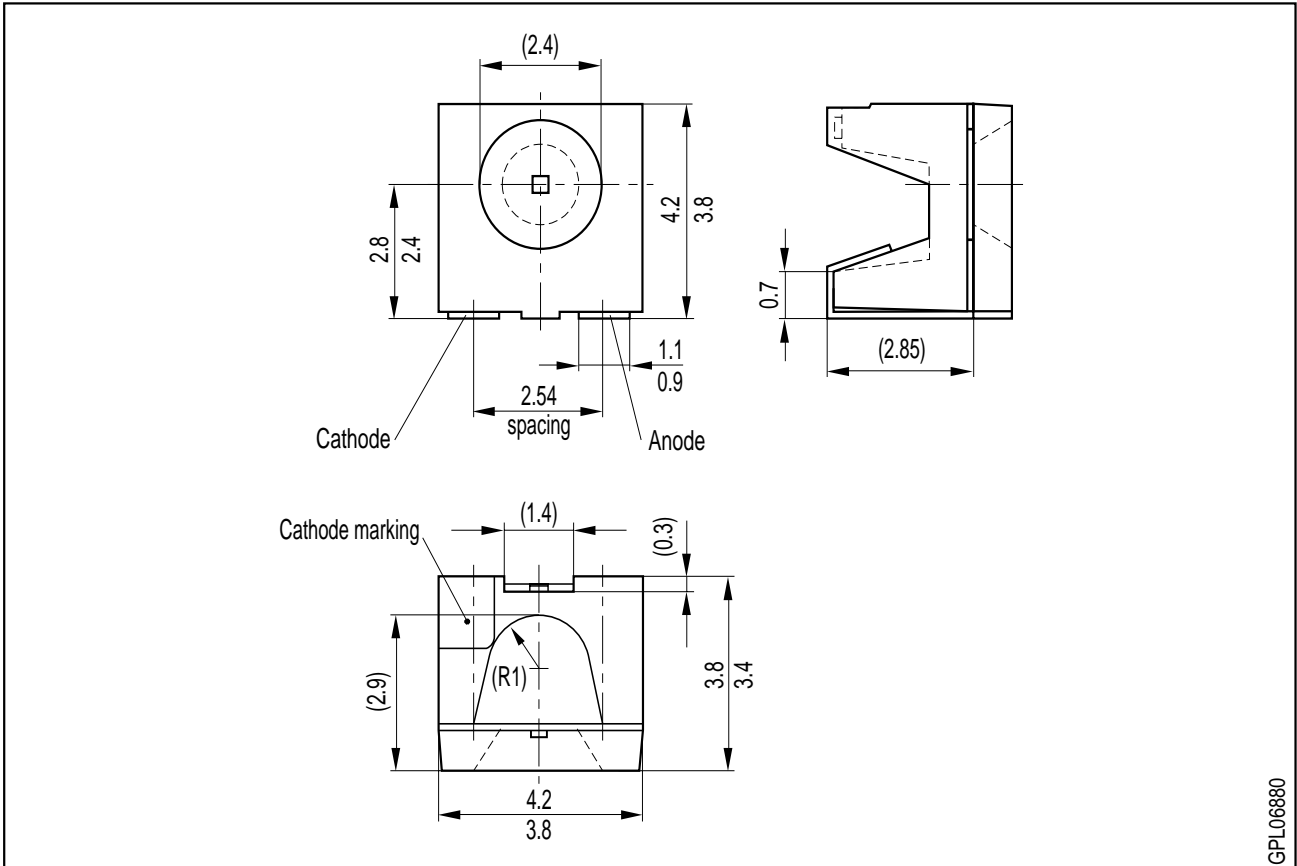


**Relative Lichtstärke  $I_V / I_{V(25^\circ\text{C})} = f(T_A)$**   
**Relative luminous intensity**

$I_F = 50 \text{ mA}$



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



GPL06880

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