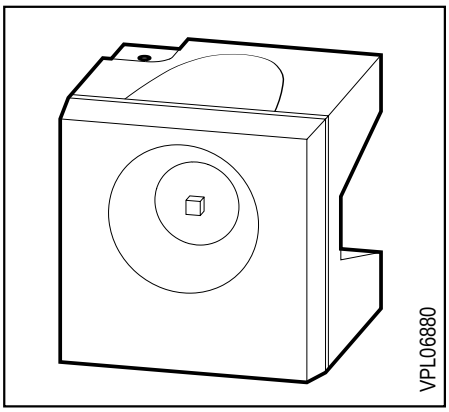
SIEMENS

SIDELED® LH A674
Super-Bright, Hyper-Red GaAlAs-LED



Besondere Merkmale

- Gehäusefarbe: weiß
- Doppel-Heterostruktur in GaAlAs Technologie
- besonders hohe Lichtstärke
- als optischer Indikator einsetzbar
- 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
- double heterojunction in GaAlAs technology
- superior luminous intensity
- 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)
- load dump resistant acc. to DIN 40839

Typ **Type**	**Emissions-farbe** **Color of Emission**	**Farbe der Lichtaustritts-fläche** **Color of the Light Emitting Area**	**Lichtstärke** **Luminous Intensity** I_F **= 10 mA** I_V **(mcd)**	**Lichtstrom** **Luminous Flux** I_F **= 10 mA** Φ_V **(mlm)**	**Bestellnummer** **Ordering code**
LH A674-KM	hyper-red	colorless clear	6.3 ... 32	-	Q62703-Q2546
LH A674-L			10.0 ... 20	45 (typ.)	Q62703-Q2830
LH A674-M			16.0 ... 32	75 (typ.)	Q62703-Q2831
LH A674-LN			10.0 ... 50	-	Q62703-Q2832

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

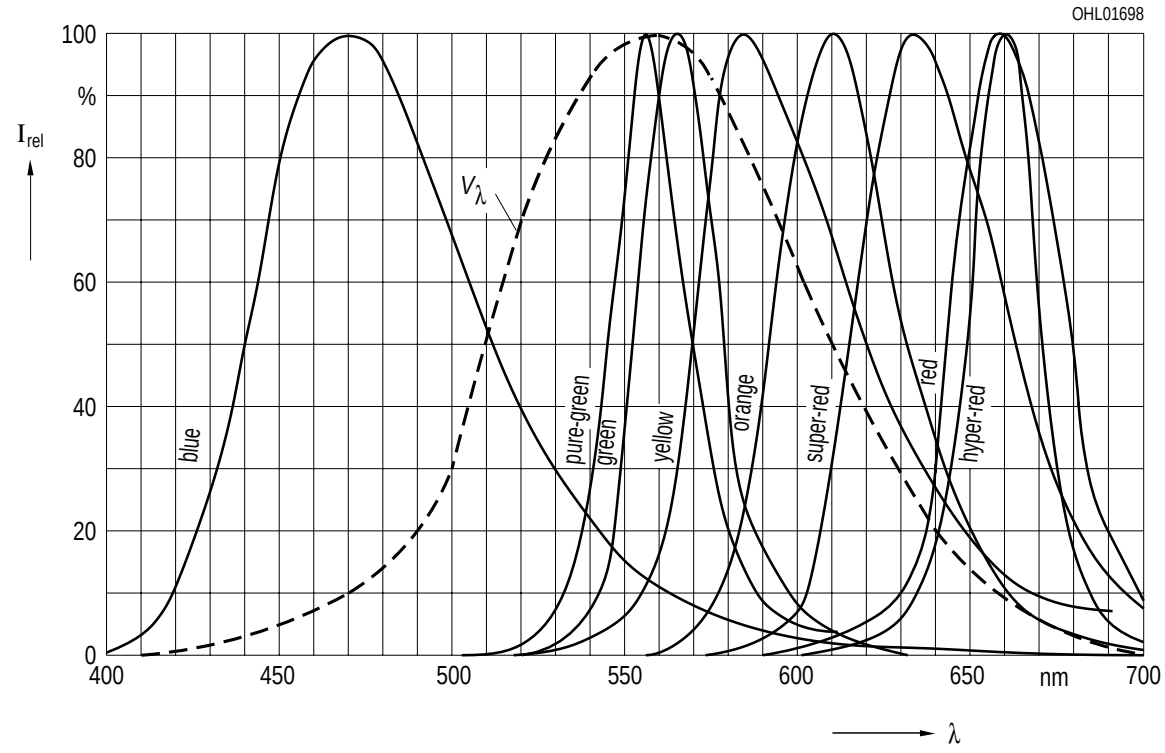
Bezeichnung **Parameter**	**Symbol** **Symbol**	**Werte** **Values**	**Einheit** **Unit**
Betriebstemperatur Operating temperature range	T_{op}	– 55 … + 100	˚C
Lagertemperatur Storage temperature range	T_{stg}	– 55 … + 100	˚C
Sperrschichttemperatur Junction temperature	T_j	+ 100	˚C
Durchlaßstrom Forward current	I_F	30	mA
Stoßstrom Surge current $t \leq 10$ µs, $D = 0.005$	I_{FM}	0.5	A
Sperrspannung Reverse voltage	V_R	3	V
Verlustleistung Power dissipation $T_A \leq 25$ ˚C	P_{tot}	90	mW
Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air Montage auf PC-Board*) (Padgröße je ≥ 16 mm²) mounted on PC-Board*) (pad size ≥ 16 mm² each)	$R_{th\ JA}$	430	K/W

*) PC-board: FR4

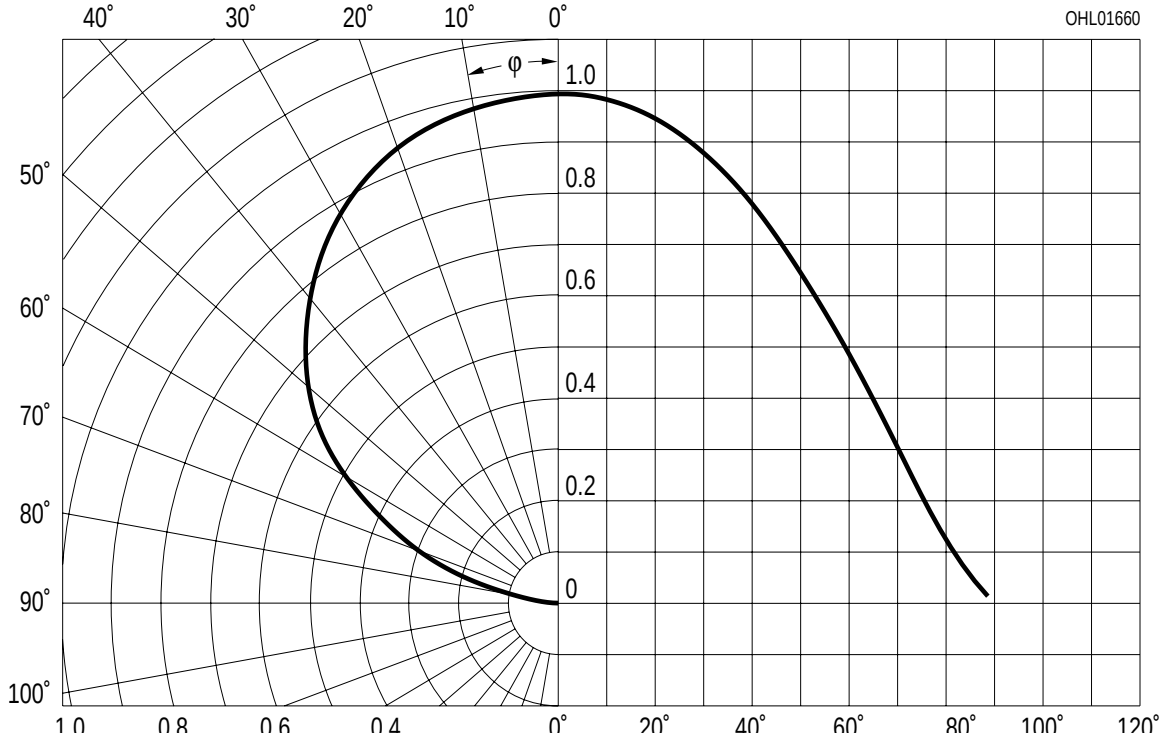
Kennwerte (T_A = 25 ˚C)
Characteristics

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

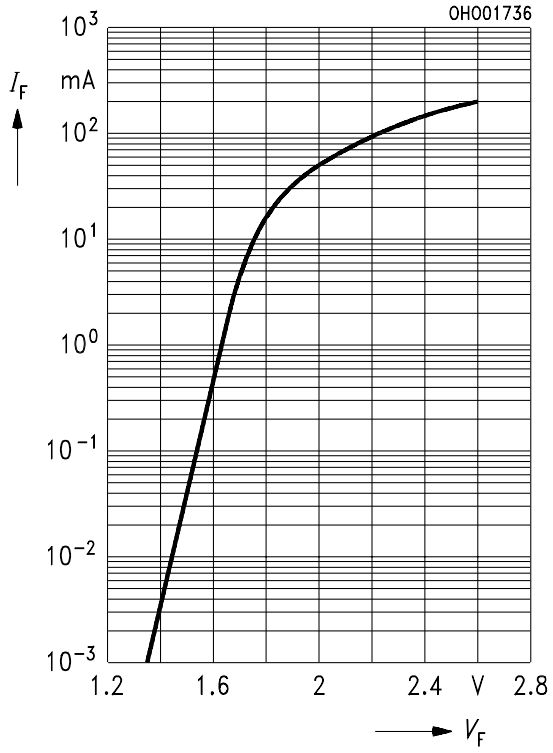
Relative spektrale Emission $I_{rel} = f(\lambda)$, T_A = 25 ˚C, I_F = 10 mA
Relative spectral emission
V (λ) = spektrale Augenempfindlichkeit
Standard eye response curve



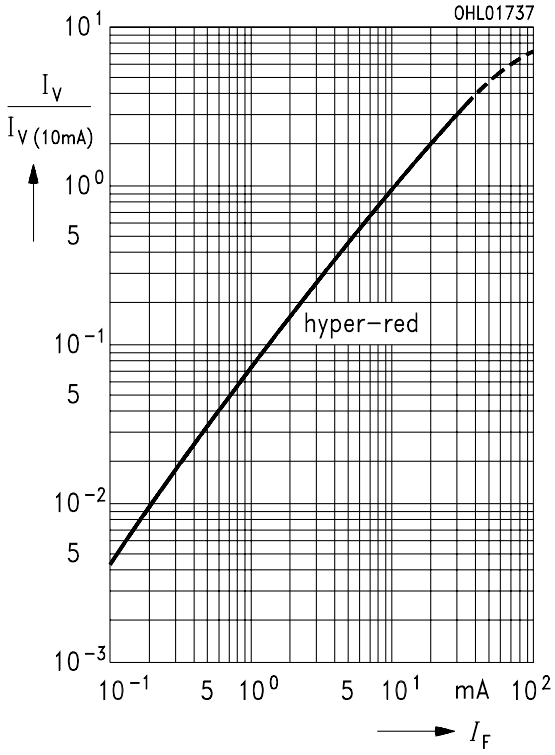
Abstrahlcharakteristik $I_{rel} = f(\varphi)$
Radiation characteristic



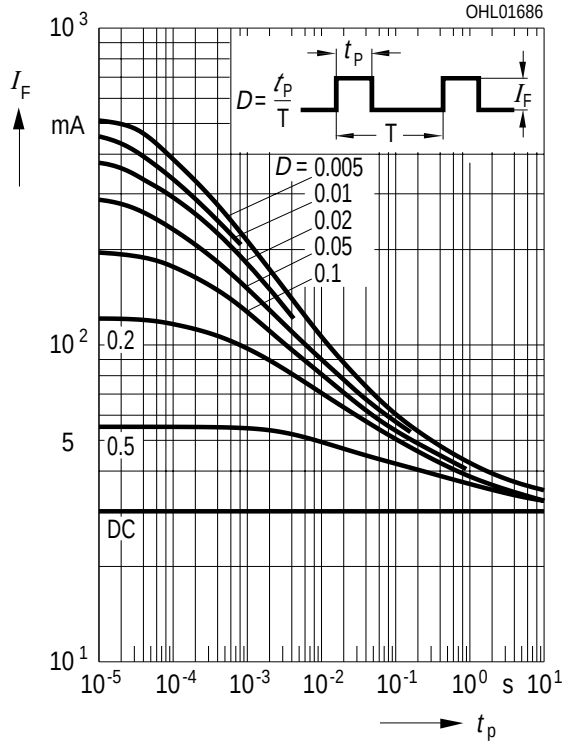
Durchlaßstrom $I_F = f(V_F)$
Forward current
T_A = 25 ˚C



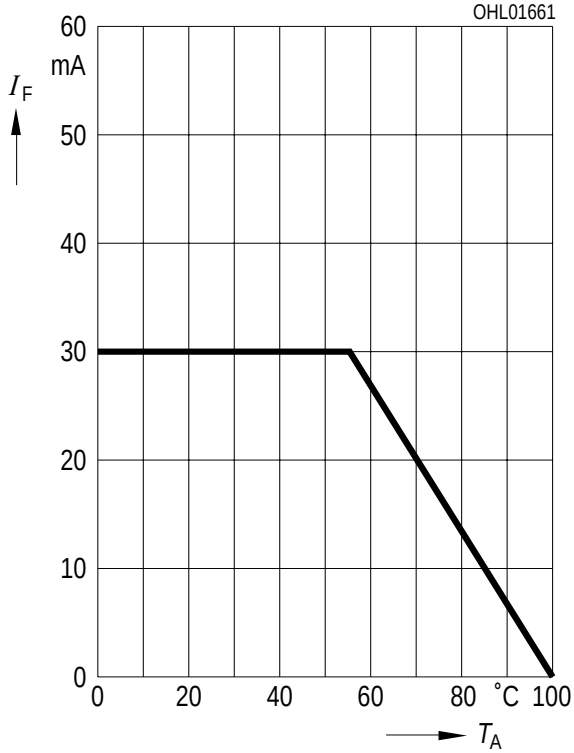
Relative Lichtstärke $I_V/I_{V(10\ mA)} = f(I_F)$
Relative luminous intensity
T_A = 25 ˚C



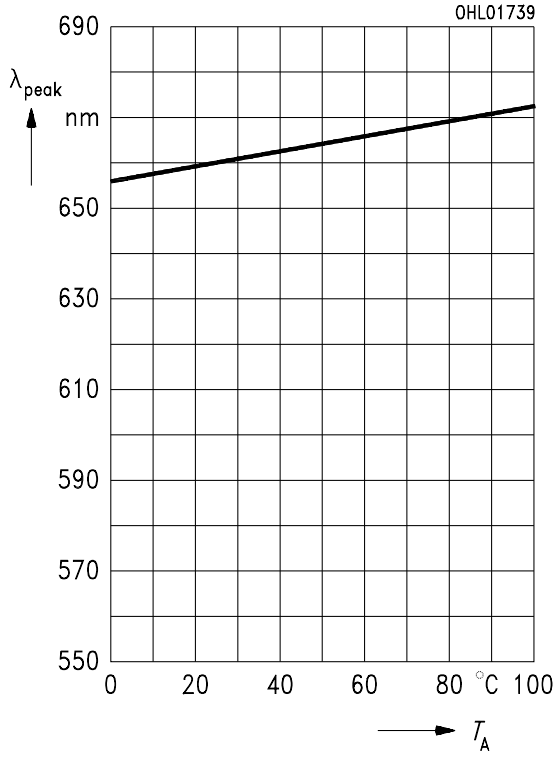
Zulässige Impulsbelastbarkeit $I_F = f(t_P)$
Permissible pulse handling capability
Duty cycle D = parameter, T_A = 25 ˚C



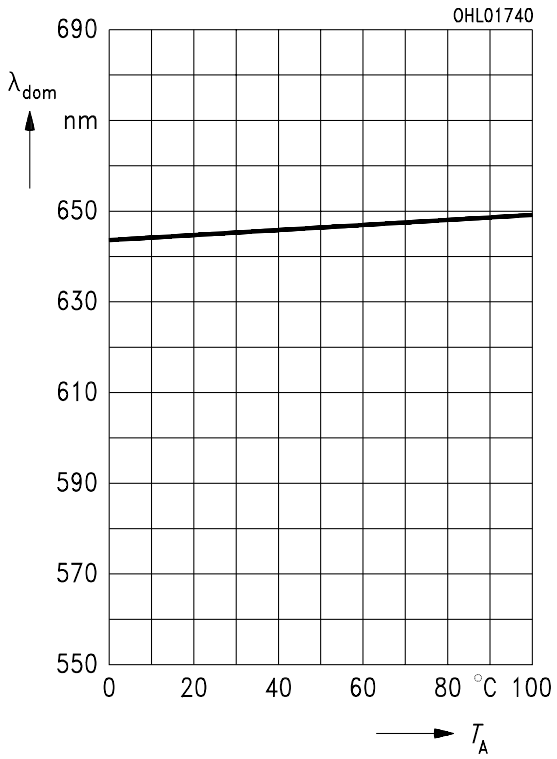
Maximal zulässiger Durchlaßstrom
Max. permissible forward current
$I_F = f(T_A)$



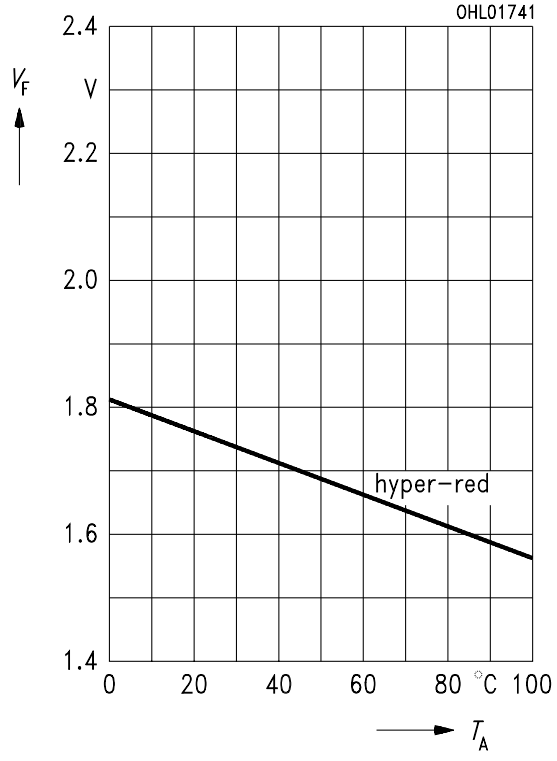
Wellenlänge der Strahlung $\lambda_{peak} = f(T_A)$
Wavelength at peak emission
I_F = 10 mA



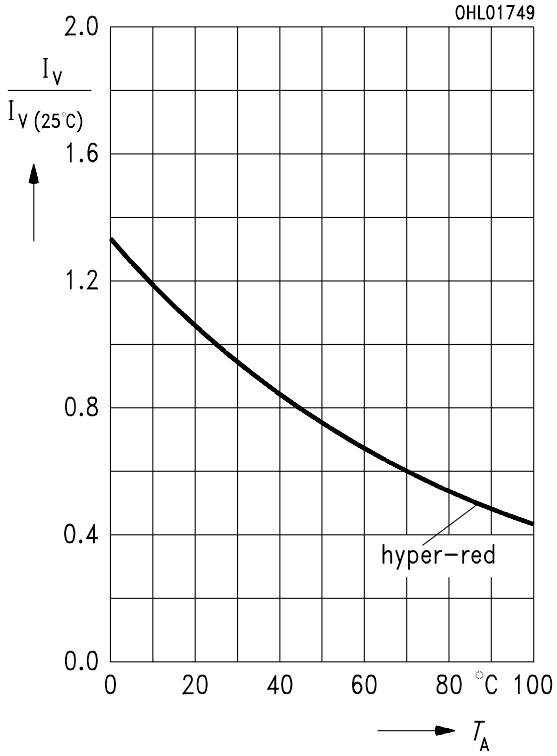
Dominantwellenlänge $\lambda_{dom} = f(T_A)$
Dominant wavelength
I_F = 10 mA



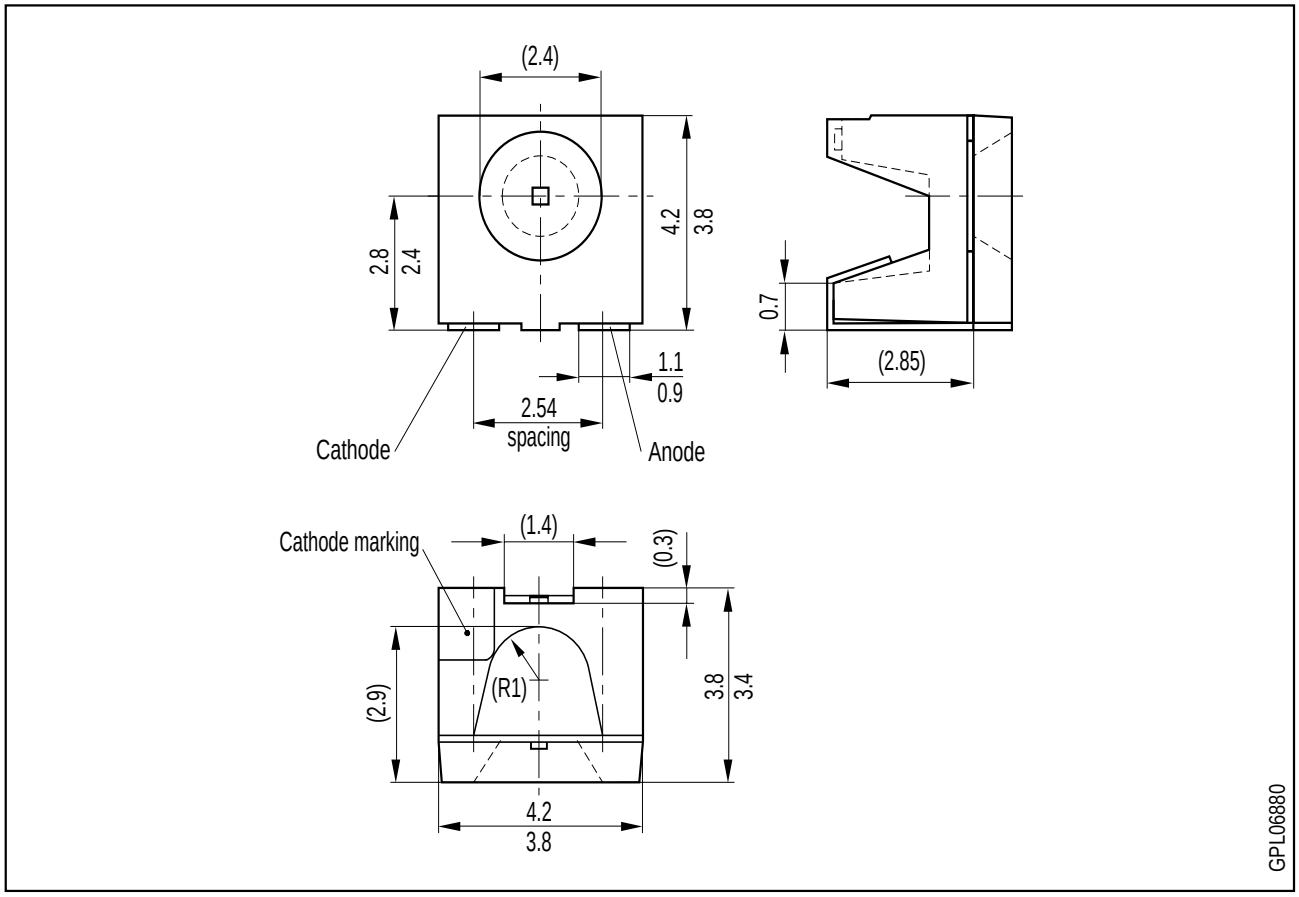
Durchlaßspannung $V_F = f(T_A)$
Forward voltage
I_F = 10 mA



Relative Lichtstärke $I_V/I_{V(25\,°C)} = f(T_A)$
Relative luminous intensity
I_F = 10 mA



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



Kathodenkennzeichnung: abgeschrägte Ecke
Cathode mark: bevelled edge