

TOPLED®

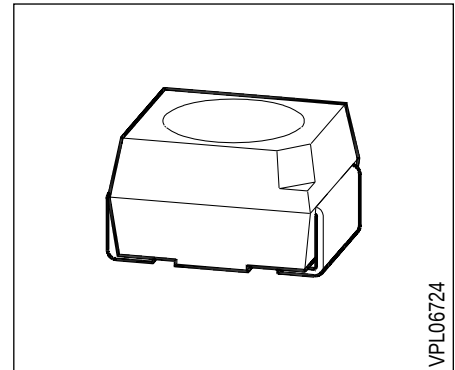
**LS T670, LO T670, LY T670
LG T670, LP T670**

Besondere Merkmale

- Gehäusebauform: P-LCC-2
- Gehäusefarbe: weiß
- als optischer Indikator einsetzbar
- 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
- 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



Typ	Emissions- farbe	Farbe der Lichtaustritts- fläche	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 $I_F = 10 \text{ mA}$ $\Phi_V \text{ (mlm)}$	Ordering Code
LS T670-HK LS T670-J LS T670-K LS T670-L LS T670-JM	super-red	colorless clear	2.5 ... 12.5 4.0 ... 8.0 6.3 ... 12.5 10.0 ... 20.0 4.0 ... 32.0	- 18 (typ.) 30 (typ.) 45 (typ.) -	Q62703-Q2309 Q62703-Q2357 Q62703-Q2358 Q62703-Q3848 Q62703-Q3849
LO T670-HK LO T670-J LO T670-K LO T670-L LO T670-JM	orange	colorless clear	2.5 ... 12.5 4.0 ... 8.0 6.3 ... 12.5 10.0 ... 20.0 4.0 ... 32.0	- 18 (typ.) 30 (typ.) 45 (typ.) -	Q62703-Q2310 Q62703-Q2475 Q62703-Q2476 Q62703-Q3850 Q62703-Q3851
LY T670-HK LY T670-J LY T670-K LY T670-L LY T670-JM	yellow	colorless clear	2.5 ... 12.5 4.0 ... 8.0 6.3 ... 12.5 10.0 ... 20.0 4.0 ... 32.0	- 18 (typ.) 30 (typ.) 45 (typ.) -	Q62703-Q2311 Q62703-Q2376 Q62703-Q2375 Q62703-Q3098 Q62703-Q3852
LG T670-HK LG T670-J LG T670-K LG T670-L LG T670-JM	green	colorless clear	2.5 ... 12.5 4.0 ... 8.0 6.3 ... 12.5 10.0 ... 20.0 4.0 ... 32.0	- 18 (typ.) 30 (typ.) 45 (typ.) -	Q62703-Q2312 Q62703-Q2377 Q62703-Q2378 Q62703-Q3146 Q62703-Q3853
LP T670-FJ LP T670-G LP T670-H LP T670-J LP T670-GK	pure green	colorless clear	1.0 ... 2.0 1.6 ... 3.2 2.5 ... 5.0 4.0 ... 8.0 1.6 ... 12.5	- 8 (typ.) 12 (typ.) 18 (typ.) -	Q62703-Q2619 Q62703-Q3102 Q62703-Q2555 Q62703-Q2553 Q62703-Q2456

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	5	V
Verlustleistung Power dissipation	P_{tot}	100	mW
Wärmewiderstand Thermal resistance Sperrschicht / Umgebung Junction / air Montage auf PC-board*) (Padgröße $\geq 16 \text{ mm}^2$) mounted on PC board*) (pad size $\geq 16 \text{ mm}^2$)	$R_{th JA}$	400	K/W

*) PC-board: FR4

Kennwerte ($T_A = 25\text{ °C}$)

Characteristics

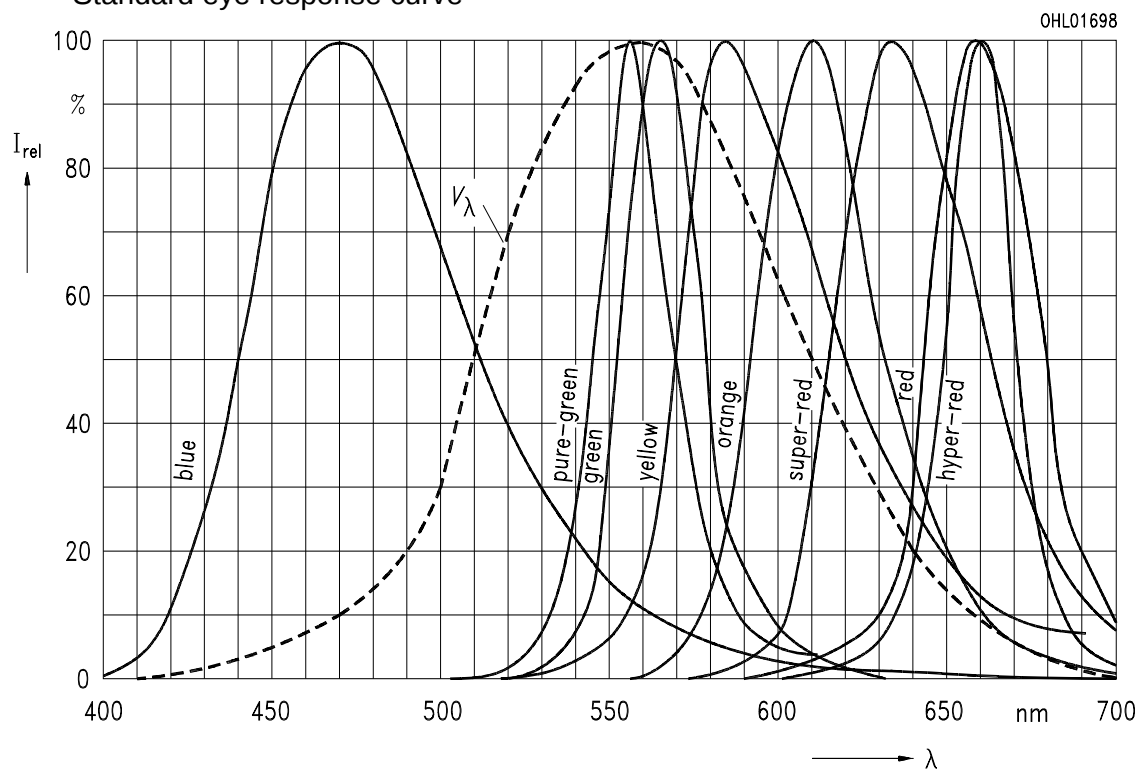
Bezeichnung Parameter	Symbol Symbol	Werte Values					Einheit Unit
		LS	LO	LY	LG	LP	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) $I_F = 10\text{ mA}$	λ_{peak}	635	610	586	565	557	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 10\text{ mA}$	λ_{dom}	628	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	Grad deg.
Durchlaßspannung (typ.) Forward voltage (max.) $I_F = 10\text{ mA}$	V_F V_F	2.0 2.6	2.0 2.6	2.0 2.6	2.0 2.6	2.0 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	0.01 10	0.01 10	μA μA
Kapazität (typ.) Capacitance $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_0	12	8	10	15	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	300 150	300 150	300 150	450 200	450 200	ns ns

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

Relative spectral emission

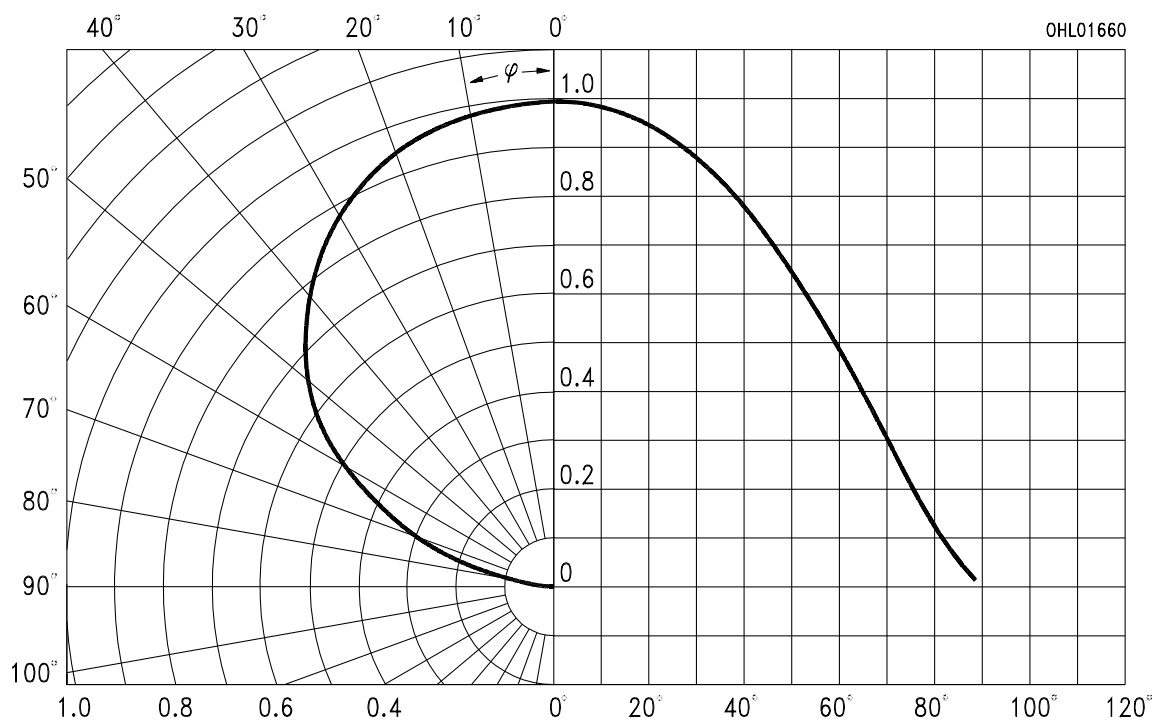
$V(\lambda)$ = spektrale Augenempfindlichkeit

Standard eye response curve



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

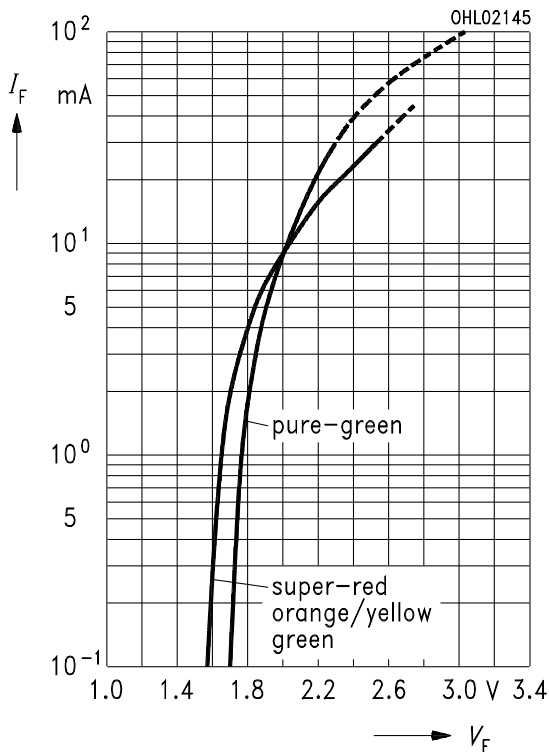
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

Forward current

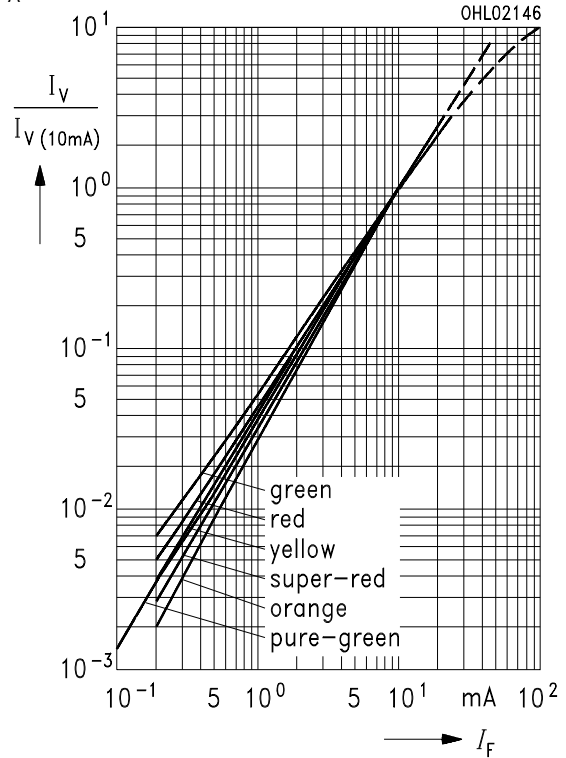
$T_A = 25^\circ\text{C}$



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

Relative luminous intensity

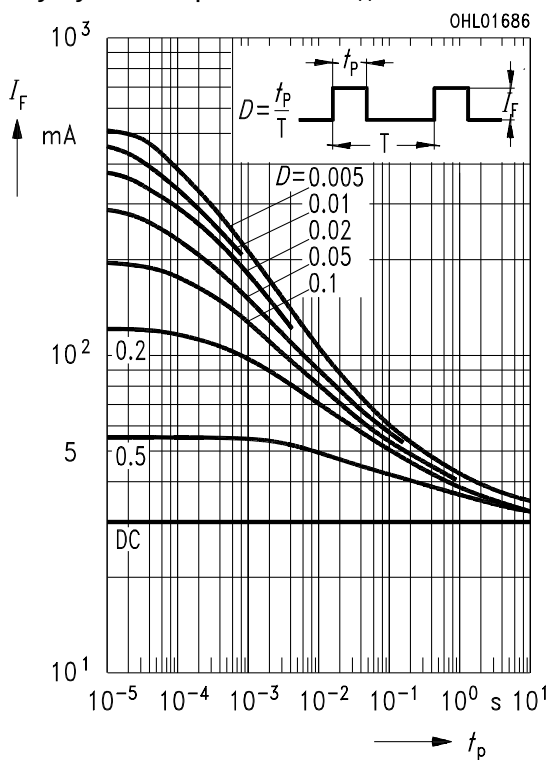
$T_A = 25^\circ\text{C}$



Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

Permissible pulse handling capability

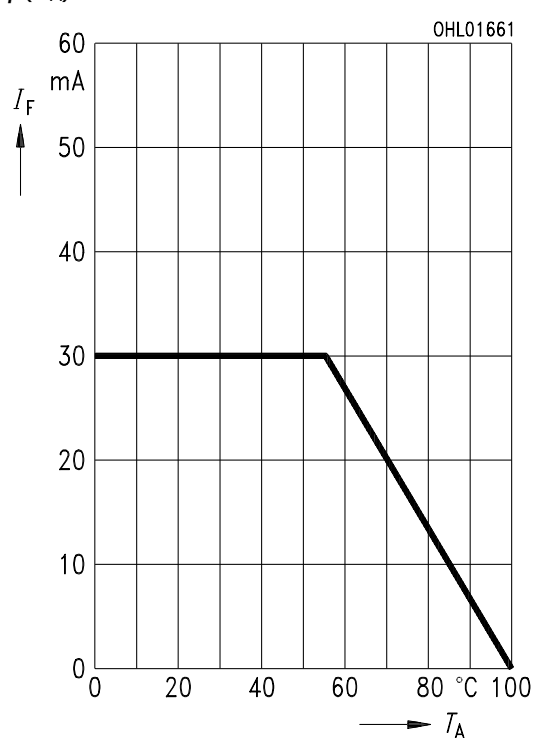
Duty cycle $D = \text{parameter}$, $T_A = 25^\circ\text{C}$



Maximal zulässiger Durchlaßstrom

Max. permissible forward current

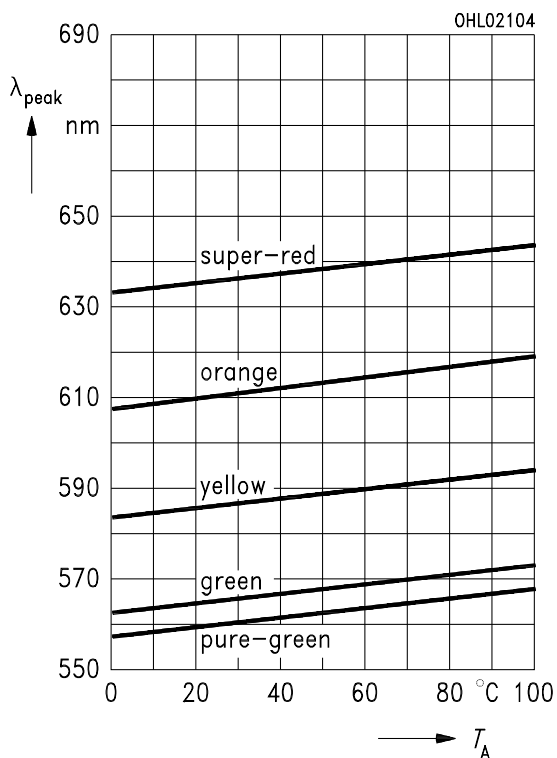
$I_F = f(T_A)$



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

Wavelength at peak emission

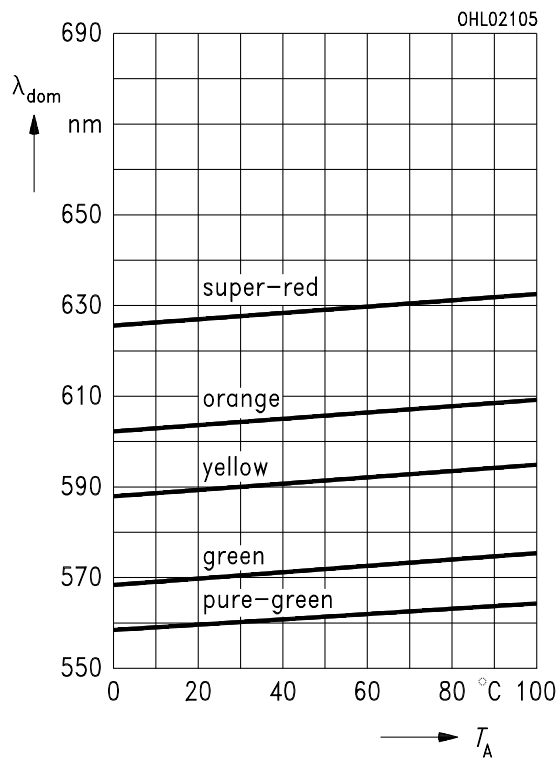
$I_F = 10 \text{ mA}$



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

Dominant wavelength

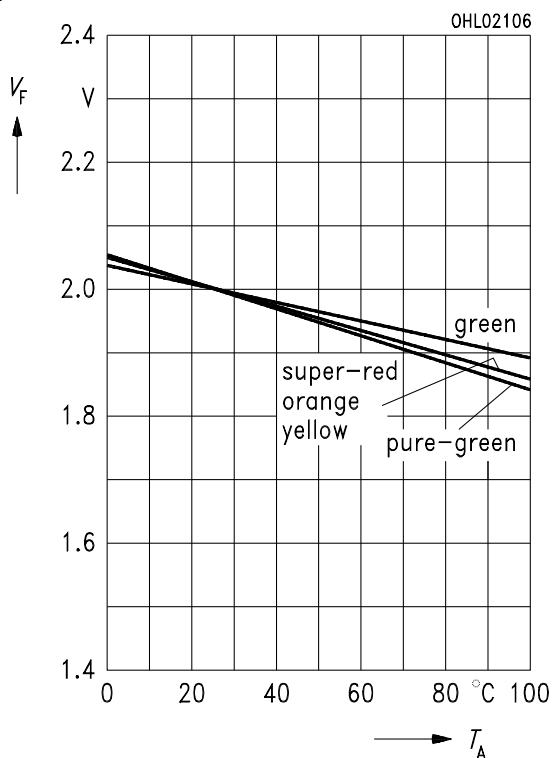
$I_F = 10 \text{ mA}$



Durchlaßspannung $V_F = f(T_A)$

Forward voltage

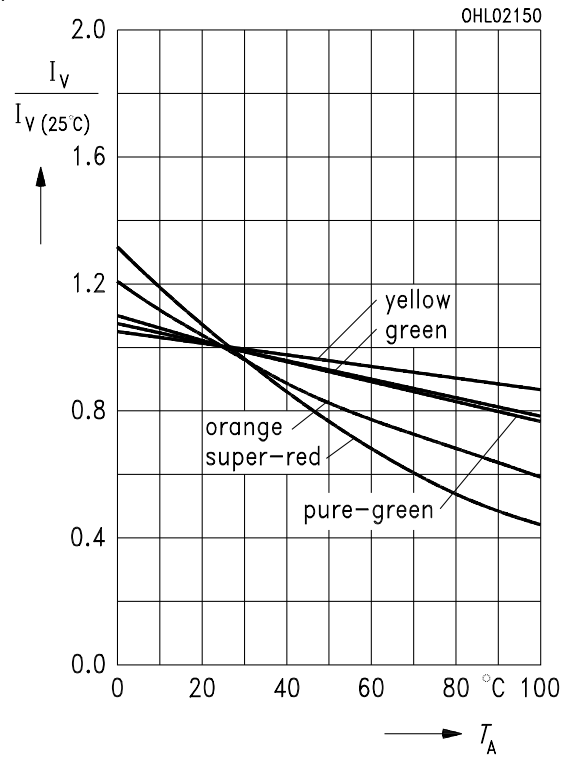
$I_F = 10 \text{ mA}$



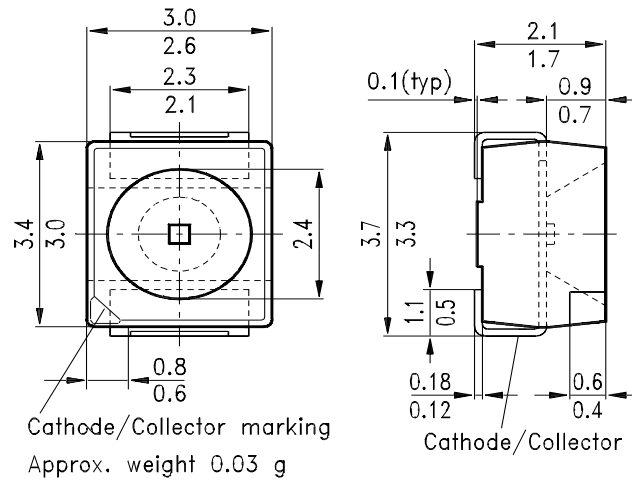
Relative Lichtstärke $I_V / I_{V(25^\circ\text{C})} = f(T_A)$

Relative luminous intensity

$I_F = 10 \text{ mA}$



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



GPL06724

Kathodenkennung: abgeschrägte Ecke
Cathode mark: bevelled edge