

## Symbol LED 5 mm × 2.5 mm, Partly Diffused

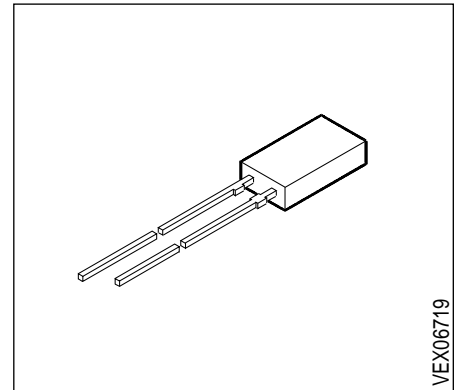
LR B480, LS B480, LY B480  
LG B480

### Besondere Merkmale

- eingefärbtes, teildiffuses Gehäuse
- als optischer Indikator in Frontplatte einsetzbar
- Lötspieße ohne Aufsetzebene
- Bargraphanzeige
- gegurtet lieferbar
- Störimpulsfest nach DIN 40839

### Features

- colored, partly diffused package
- for use as optical indicator in frontpanel
- solder leads without stand-off
- Bargraph displays
- available taped on reel
- load dump resistance acc. to DIN 40839



Typ Type	Emissionsfarbe Color of Emission	Gehäusefarbe Color of Package	Lichtstärke Luminous Intensity $I_F = 10 \text{ mA}$ $I_V \text{ (mcd)}$	Bestellnummer Ordering Code
LR B480-BD	red	red, partly diffused	0.16 ... 0.80	Q62703-Q1464
LR B480-C			0.25 ... 0.50	Q62703-Q1465
LR B480-D			0.40 ... 0.80	Q62703-Q2648
LR B480-CE			0.25 ... 1.25	Q62703-Q3841
LS B480-EH	super-red	red, partly diffused	0.63 ... 5.00	Q62703-Q1466
LS B480-G			1.60 ... 3.20	Q62703-Q1467
LS B480-H			2.50 ... 5.00	Q62703-Q1468
LS B480-GK			1.60 ... 12.50	Q62703-Q1469
LY B480-EH	yellow	yellow, partly diffused	0.63 ... 5.00	Q62703-Q1470
LY B480-G			1.60 ... 3.20	Q62703-Q1471
LY B480-H			2.50 ... 5.00	Q62703-Q2006
LY B480-J			4.00 ... 8.00	Q62703-Q1473
LY B480-GK			1.60 ... 12.50	Q62703-Q2007
LG B480-EH	green	green, partly diffused	0.63 ... 5.00	Q62703-Q1477
LG B480-G			1.60 ... 3.20	Q62703-Q1870
LG B480-H			2.50 ... 5.00	Q62703-Q2025
LG B480-GK			1.60 ... 12.50	Q62703-Q2026

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
		LR	LS, LY, LG	
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	$I_F$	45	40	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 $T_A \leq 25 \text{ °C}$	$P_{tot}$	100	140	mW
Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air	$R_{th JA}$	400		K/W

## Kennwerte ( $T_A = 25\text{ °C}$ )

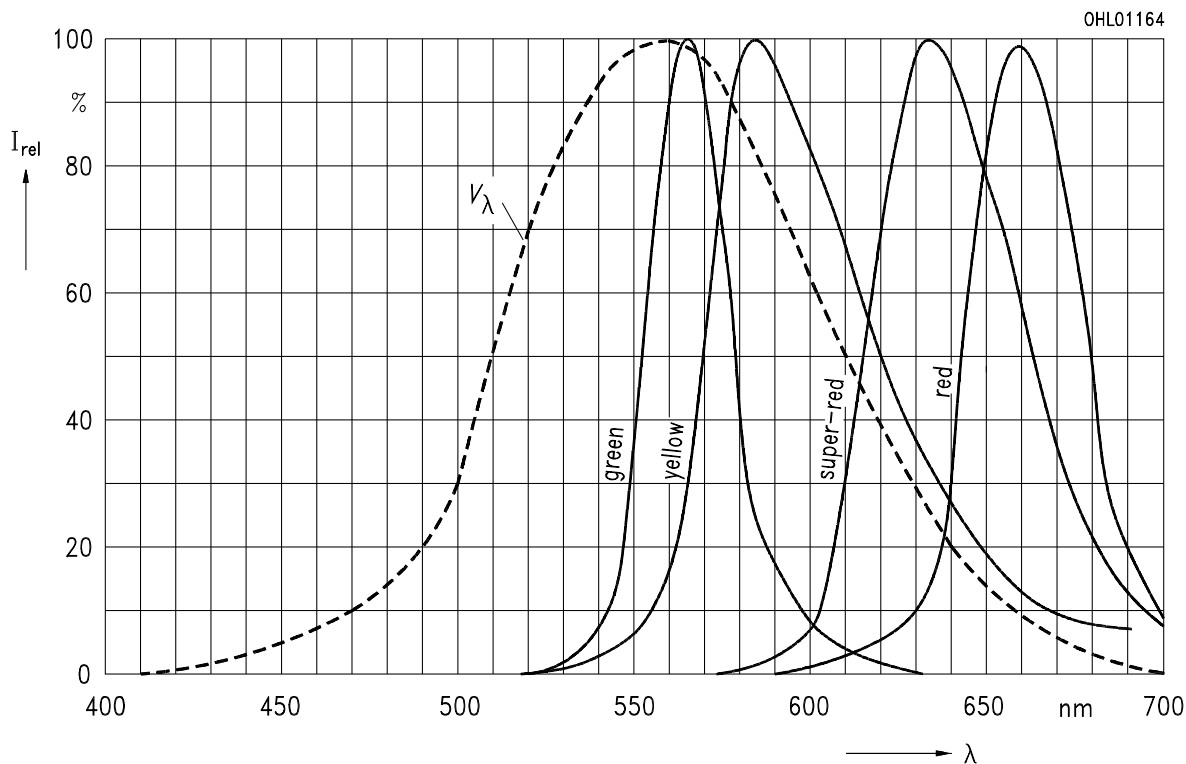
### Characteristics

Bezeichnung Parameter	Symbol Symbol	Werte Values				Einheit Unit
		LR	LS	LY	LG	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) $I_F = 20\text{ mA}$	$\lambda_{\text{peak}}$	660	635	586	565	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 20\text{ mA}$	$\lambda_{\text{dom}}$	645	628	590	570	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.) Spectral bandwidth at 50 % $I_{\text{rel max}}$ (typ.) $I_F = 20\text{ mA}$	$\Delta\lambda$	35	45	45	25	nm
Abstrahlwinkel bei 50 % $I_V$ (Vollwinkel) Viewing angle at 50 % $I_V$	$2\phi$	100	100	100	100	Grad deg.
Durchlaßspannung (typ.) Forward voltage (max.) $I_F = 10\text{ mA}$	$V_F$ $V_F$	1.6 2.0	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	$\mu\text{A}$ $\mu\text{A}$
Kapazität (typ.) Capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_0$	25	12	10	15	pF
Schaltzeiten: Switching times: $I_V$ from 10 % to 90 % (typ.) $I_V$ from 90 % to 10 % (typ.) $I_F = 100\text{ mA}, t_p = 10\text{ }\mu\text{s}, R_L = 50\text{ }\Omega$	$t_r$ $t_f$	120 50	300 150	300 150	450 200	ns ns

Relative spektrale Emission  $I_{rel} = f(\lambda)$ ,  $T_A = 25\text{ °C}$ ,  $I_F = 20\text{ mA}$

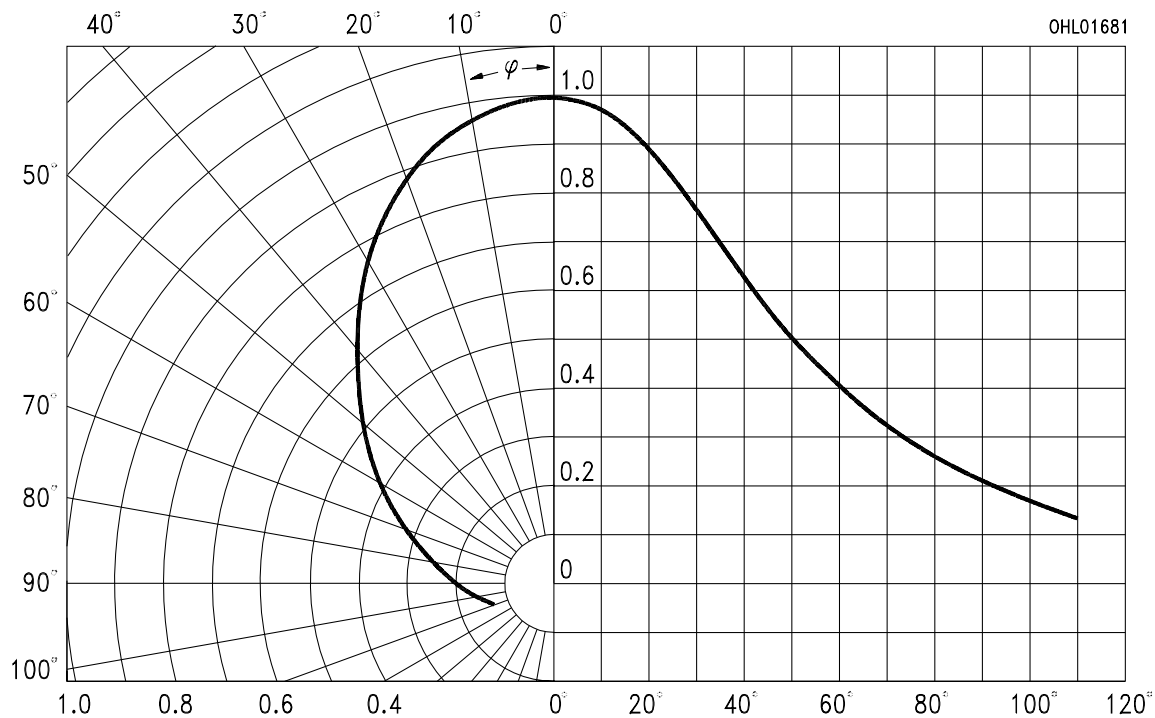
**Relative spectral emission**

$V(\lambda)$  = spektrale Augenempfindlichkeit  
Standard eye response curve



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

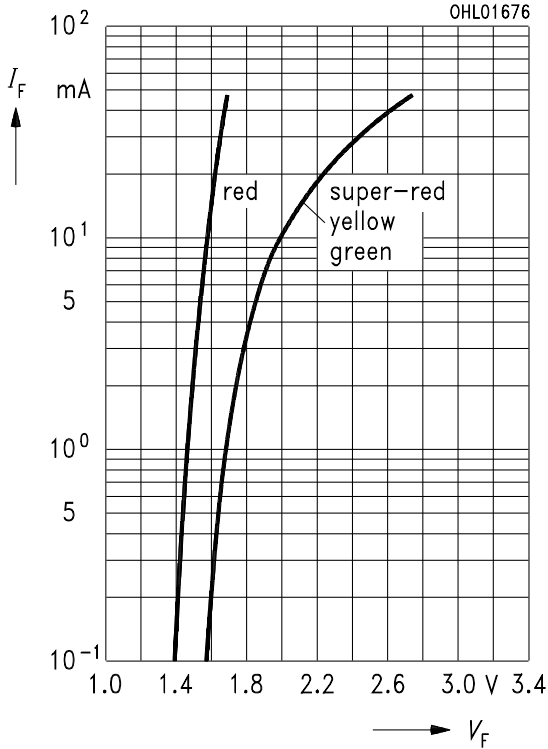
**Radiation characteristic**



### Durchlaßstrom $I_F = f(V_F)$

#### Forward current

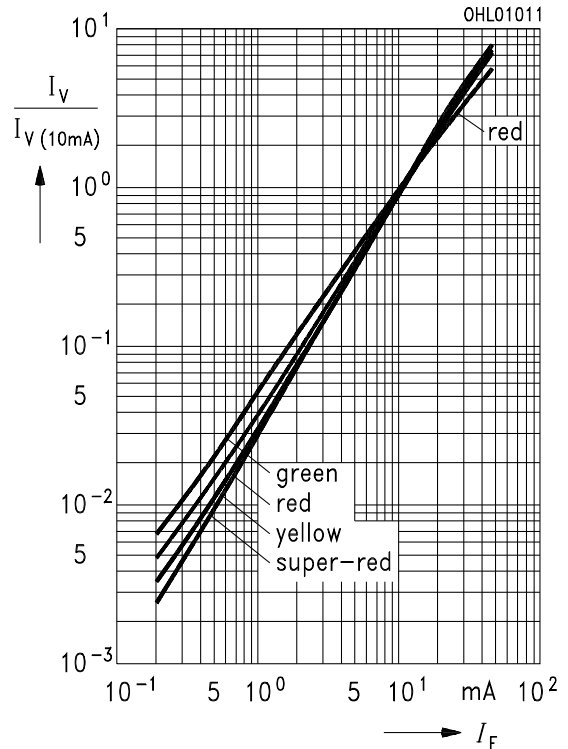
$T_A = 25^\circ\text{C}$



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

#### Relative luminous intensity

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

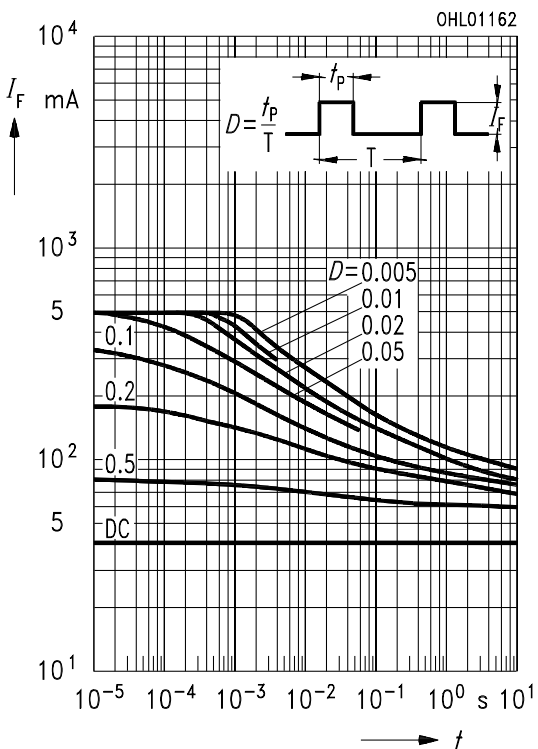


### Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

#### Permissible pulse handling capability

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

LS, LY, LG

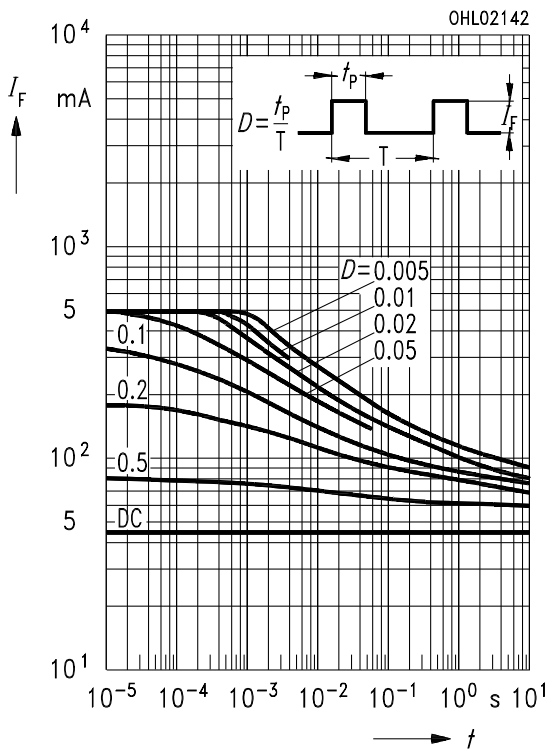


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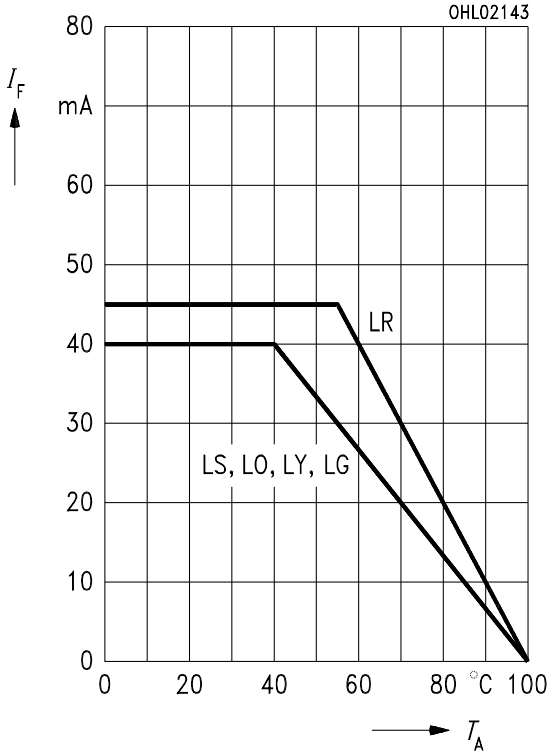
Duty cycle  $D = \text{parameter}$ ,  $T_A = 25^\circ\text{C}$

LR



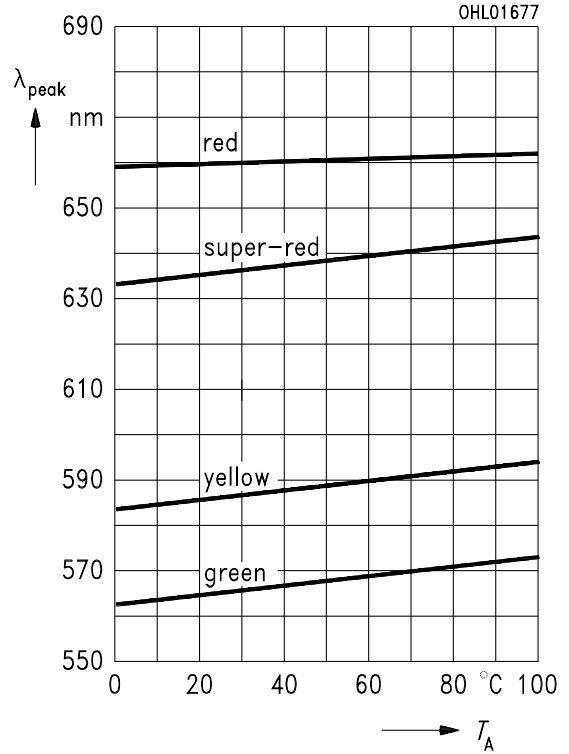
**Maximal zulässiger Durchlaßstrom  
Max. permissible forward current**

$I_F = f(T_A)$



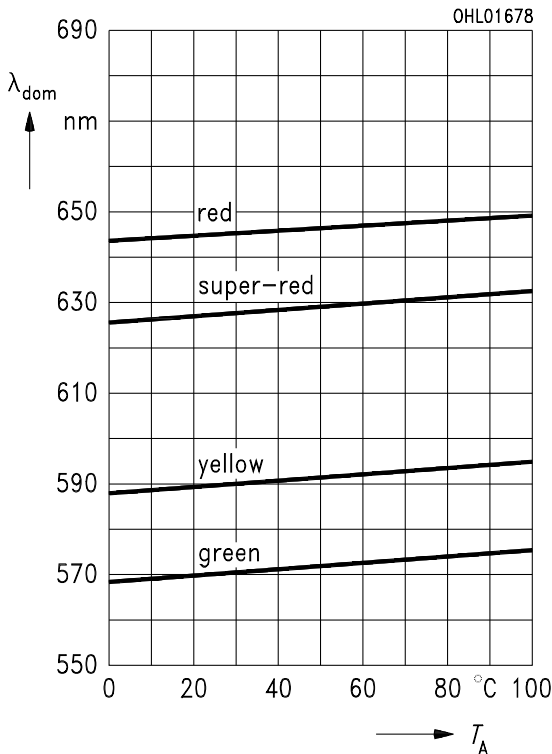
**Wellenlänge der Strahlung  $\lambda_{peak} = f(T_A)$   
Wavelength at peak emission**

$I_F = 20 \text{ mA}$



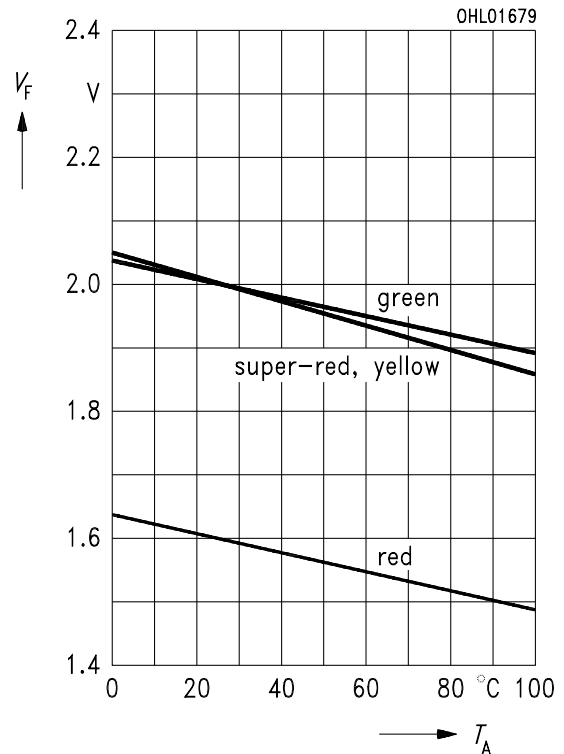
**Dominantwellenlänge  $\lambda_{dom} = f(T_A)$   
Dominant wavelength**

$I_F = 20 \text{ mA}$



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

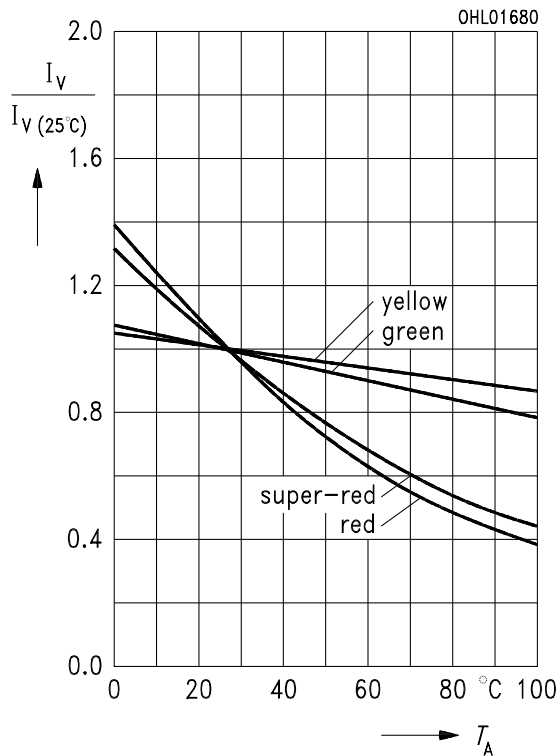
$I_F = 10 \text{ mA}$



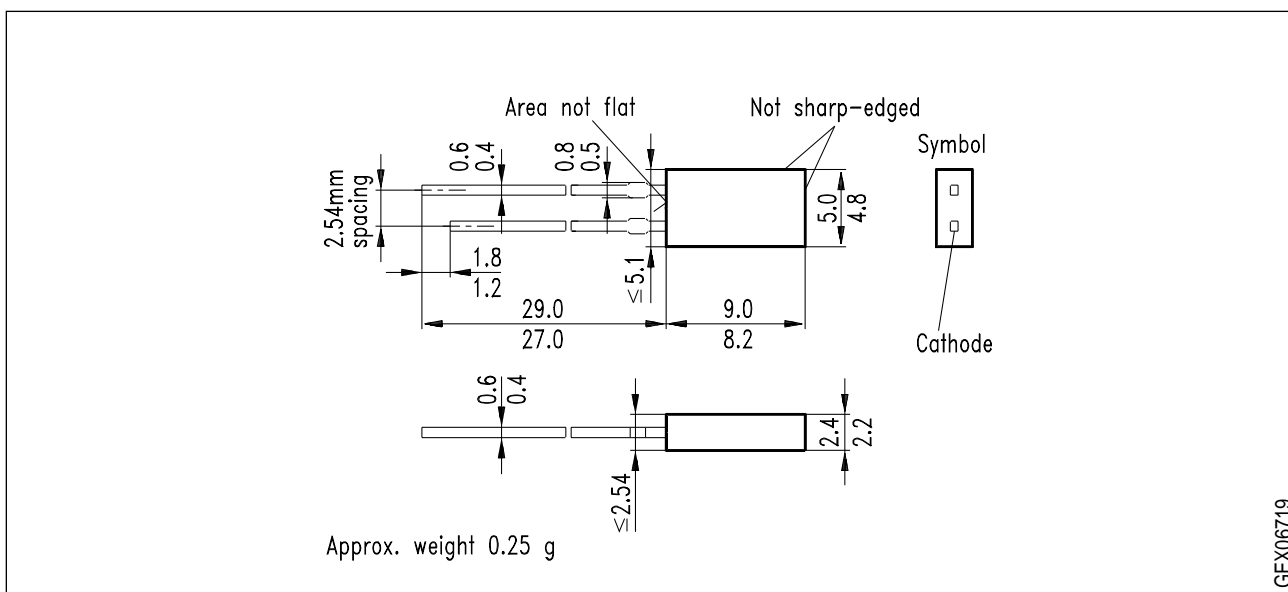
Relative Lichtstärke  $I_V/I_{V(25^\circ\text{C})} = f(T_A)$

Relative luminous intensity

$I_F = 10 \text{ mA}$



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



**Kathodenkennzeichnung:** Kürzerer Lötspieß  
**Cathode mark:** Short solder lead