

## LC SOT-23 LED, Diffused Low Current LED

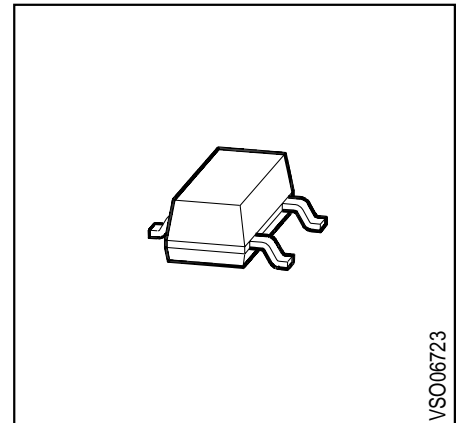
## LS S269, LY S269, LG S269

### Besondere Merkmale

- eingefärbtes, diffuses Gehäuse
- extrem weitwinklig
- als optischer Indikator einsetzbar
- hohe Lichtstärke bei kleinen Strömen (typ. 2 mA)
- für alle SMT-Bestück- und Löttechniken geeignet
- gegurtet (8-mm-Filmgurt)

### Features

- colored, diffused package
- extrem wide-angle LED
- for use as optical indicator
- high luminous intensity at very low currents (typ. 2 mA)
- suitable for all SMT assembly and soldering methods
- available taped on reel (8 mm tape)



Typ Type	Emissionsfarbe Color of Emission	Gehäusefarbe Color of Package	Lichtstärke Luminous Intensity $I_F = 2 \text{ mA}$ $I_V \text{ (mcd)}$	Bestellnummer Ordering Code
LS S269-BO	super-red	red diffused	$\geq 0.16$	Q62703-Q1566
LY S269-BO	yellow	yellow diffused	$\geq 0.16$	Q62703-Q1568
LG S269-BO	green	green diffused	$\geq 0.16$	Q62703-Q1570

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 $t \leq 10 \mu s, D = 0.005$	$I_{FM}$	150	mA
Sperrspannung Reverse voltage	$V_R$	5	V
Verlustleistung Power dissipation $T_A \leq 25 \text{ °C}$	$P_{tot}$	20	mW
Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air <sup>1)</sup>	$R_{th JA}$	750	K/W

1) Auf Platine gelötet: Lötfläche  $\geq 16 \text{ cm}^2$   
 1) Soldered on PC board: pad size  $\geq 16 \text{ cm}^2$

## Kennwerte ( $T_A = 25\text{ °C}$ )

### Characteristics

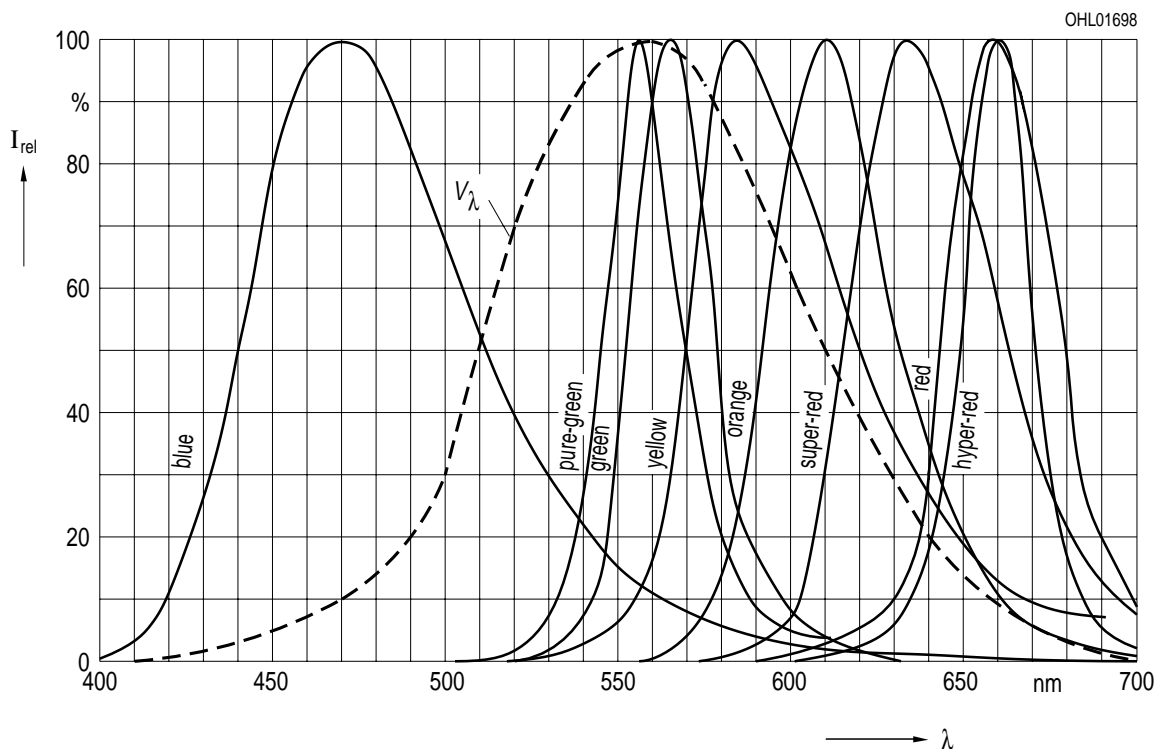
Bezeichnung Parameter	Symbol Symbol	Werte Values			Einheit Unit
		LS	LY	LG	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) $I_F = 7.5\text{ mA}$	$\lambda_{\text{peak}}$	635	586	565	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 7.5\text{ mA}$	$\lambda_{\text{dom}}$	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 % $I_V$	$2\phi$	140	140	140	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	12	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

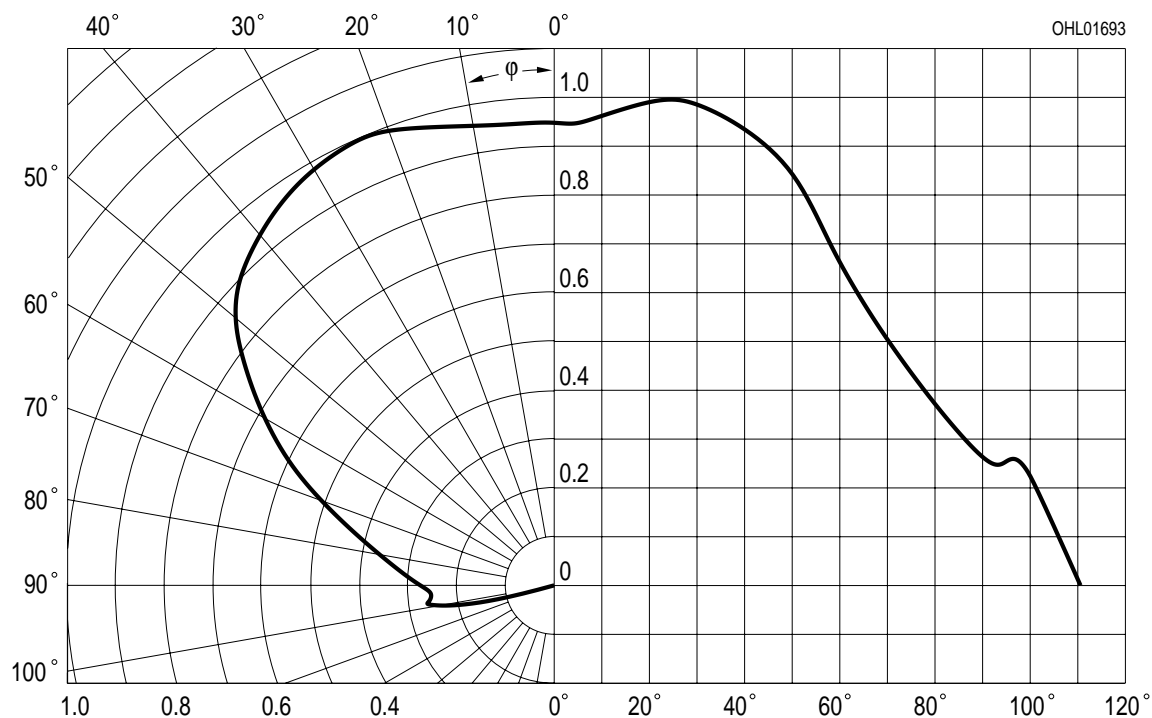
Standard eye response curve



OHL01698

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

### Radiation characteristic

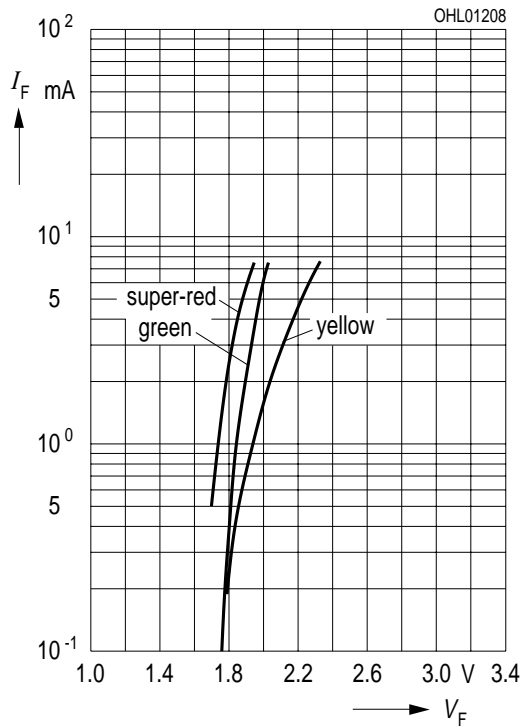


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### Durchlaßstrom $I_F = f(V_F)$

#### Forward current

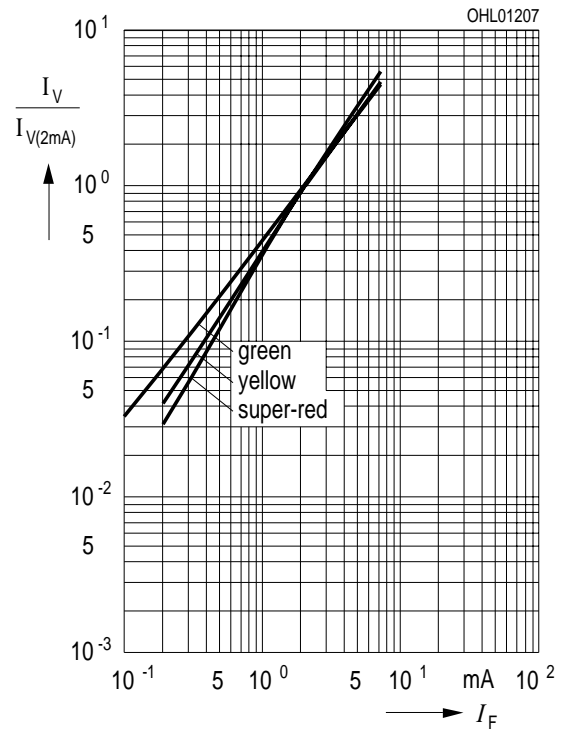
$T_A = 25\text{ °C}$



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

#### Relative luminous intensity

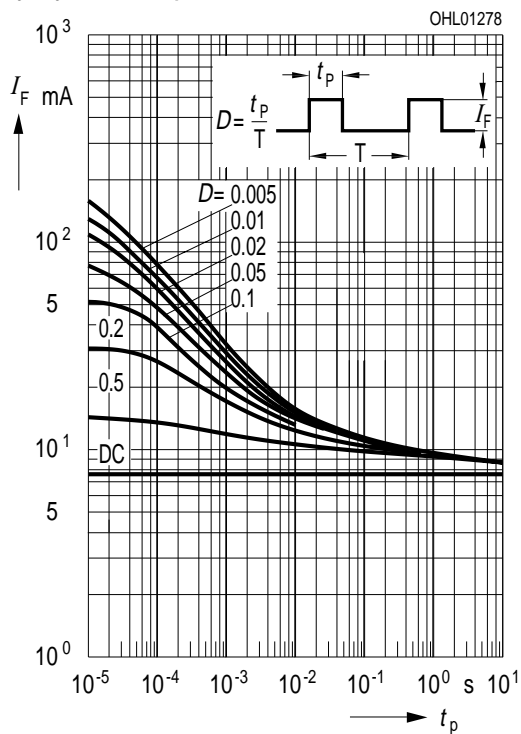
$T_A = 25\text{ °C}$



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

#### Permissible pulse handling capability

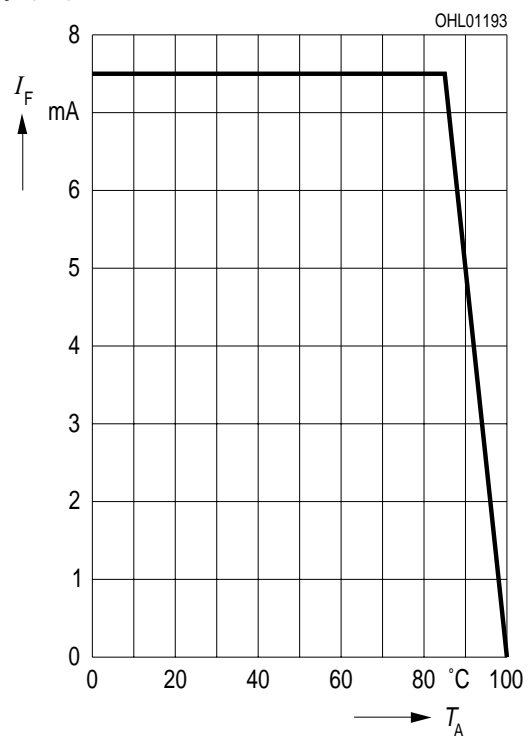
Duty cycle  $D =$  parameter,  $T_A = 25\text{ °C}$



### Maximal zulässiger Durchlaßstrom

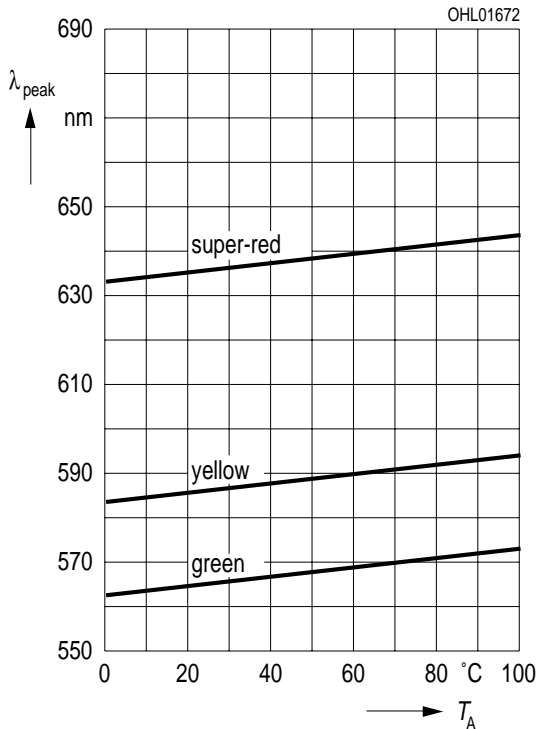
#### Max. permissible forward current

$I_F = f(T_A)$



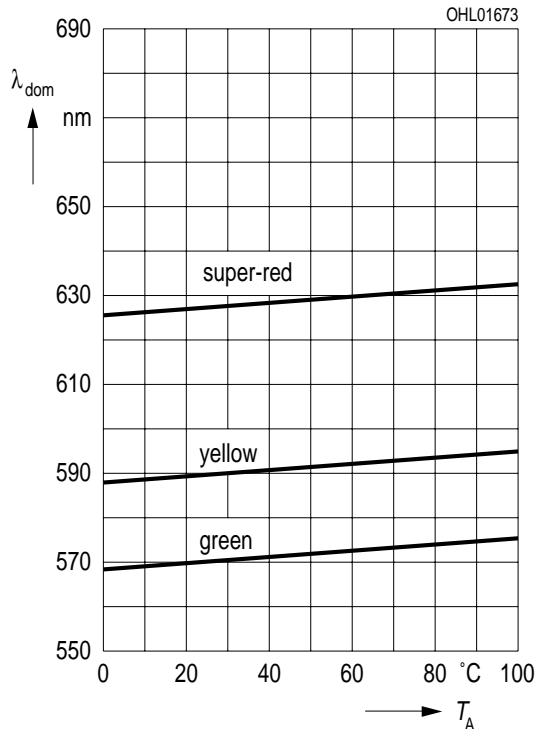
**Wellenlänge der Strahlung  $\lambda_{\text{peak}} = f(T_A)$**   
**Wavelength at peak emission**

$I_F = 7.5 \text{ mA}$



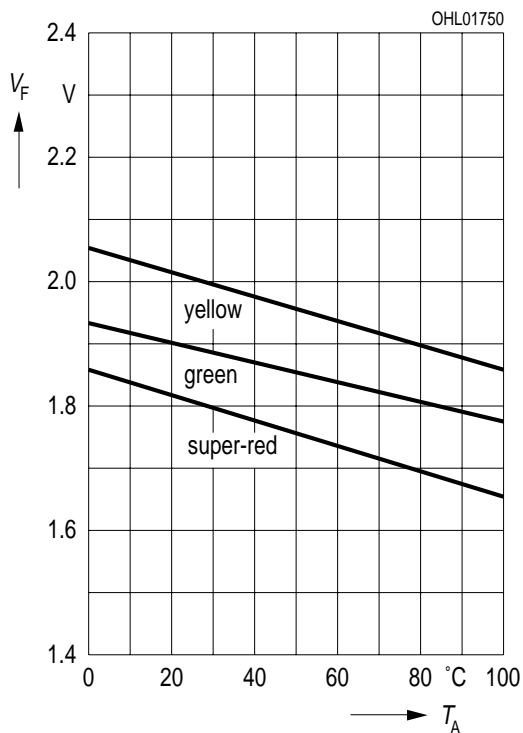
**Dominantwellenlänge  $\lambda_{\text{dom}} = f(T_A)$**   
**Dominant wavelength**

$I_F = 7.5 \text{ mA}$



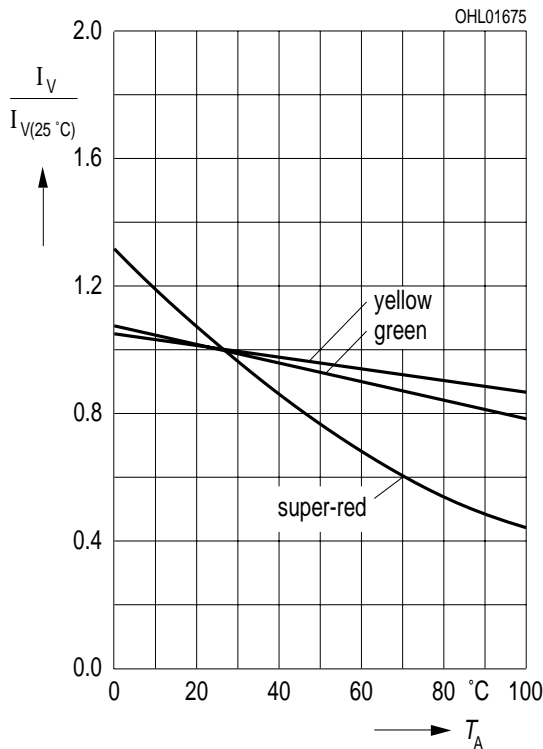
**Durchlaßspannung  $V_F = f(T_A)$**   
**Forward voltage**

$I_F = 2 \text{ mA}$

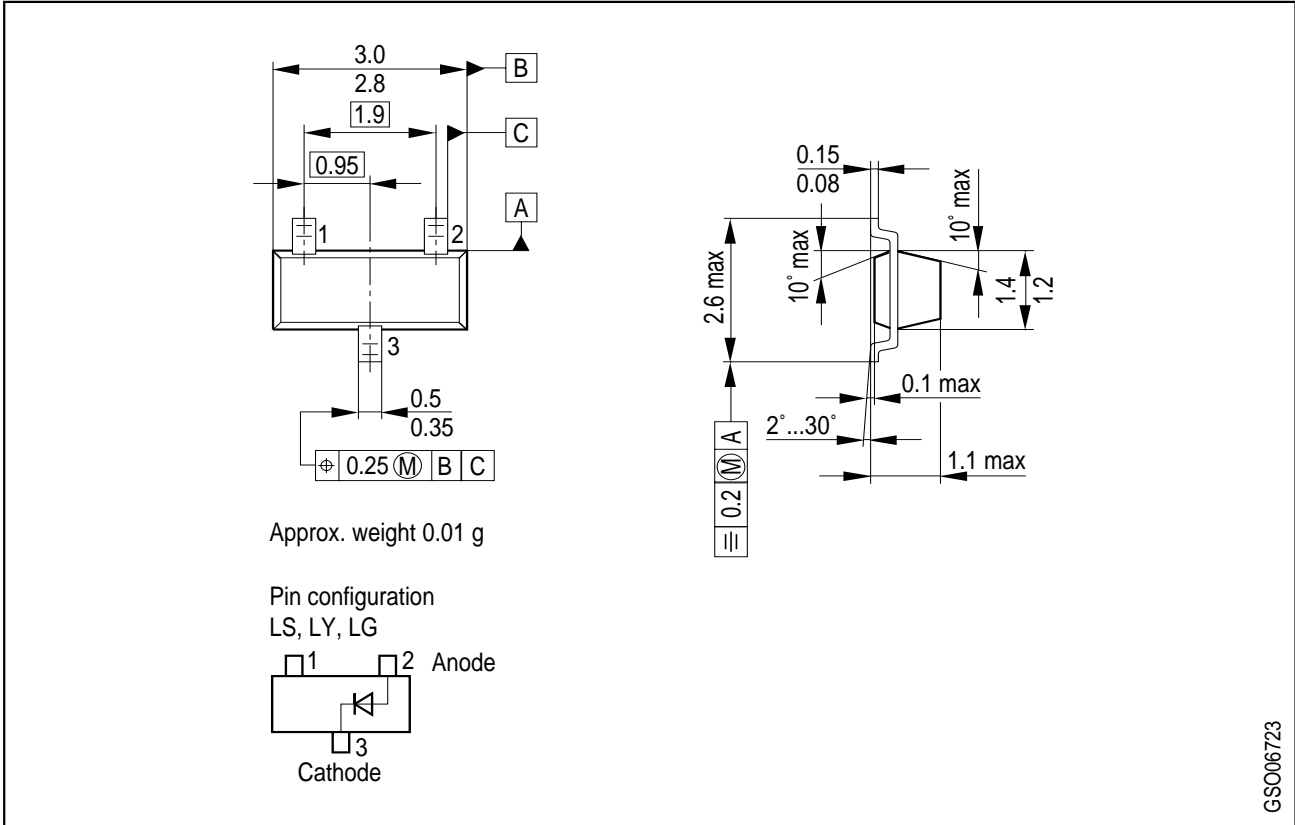


**Relative Lichtstärke  $I_V/I_{V(25^\circ\text{C})} = f(T_A)$**   
**Relative luminous intensity**

$I_F = 2 \text{ mA}$



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



**Anschlußbelegung:** (Draufsicht)  
**Pin configuration:** (top view)