

LC SOT-23 SMT LED Low Current LED

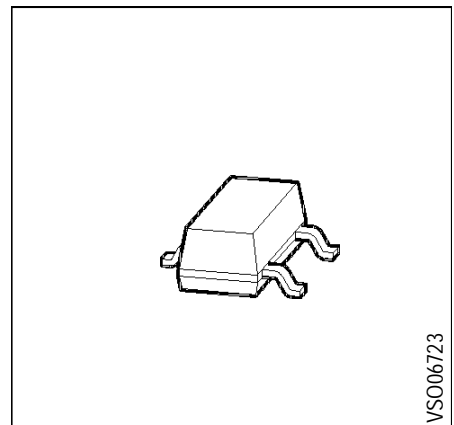
LS S269, LY S269, LG S269

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	≥ 0.16	Q62703-Q1566
LY S269-BO	yellow	yellow diffused	≥ 0.16	Q62703-Q1568
LG S269-BO	green	green diffused	≥ 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 ¹⁾	$R_{th JA}$	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 ($T_A = 25\text{ °C}$)

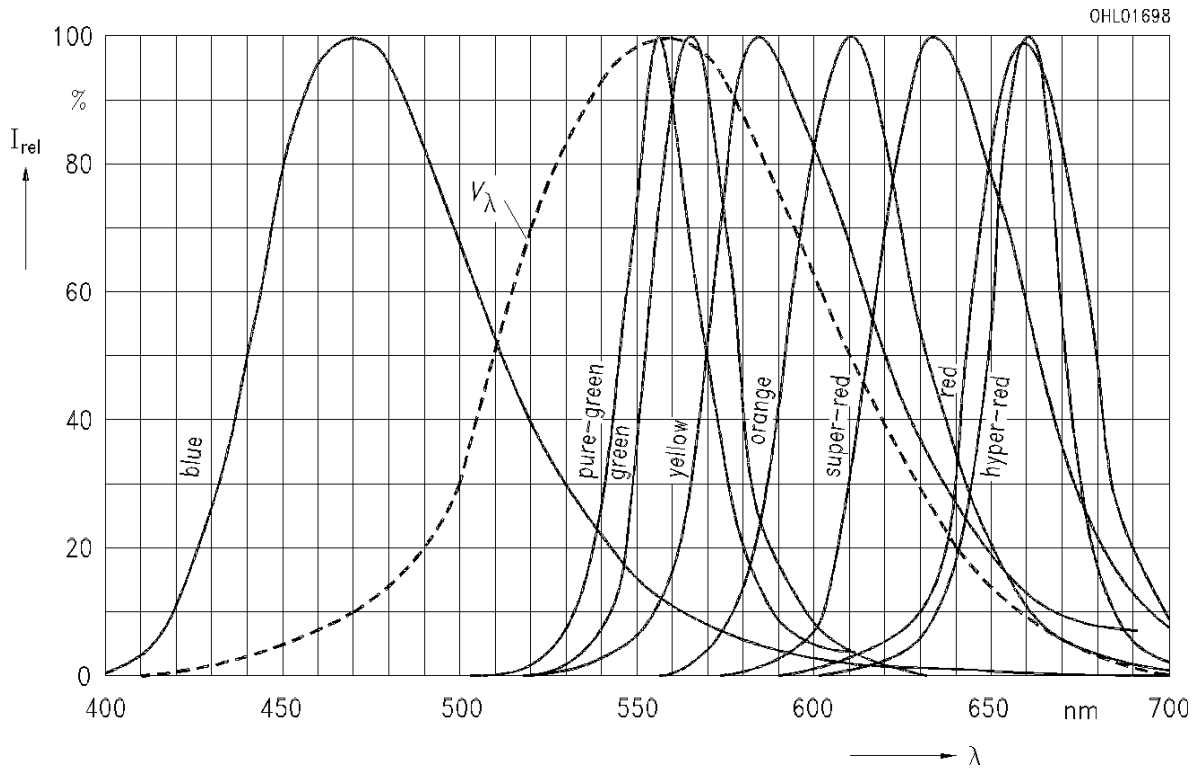
Characteristics

Bezeichnung Parameter	Symbol Symbol	Werte Values			Einheit Unit
		LS	LY	LG	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) $I_F = 7.5\text{ mA}$	λ_{peak}	635	586	565	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 7.5\text{ mA}$	λ_{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	2φ	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	μA μA
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 $I_{rel} = f(\lambda)$, $T_A = 25\text{ }^\circ\text{C}$, $I_F = 7.5\text{ mA}$

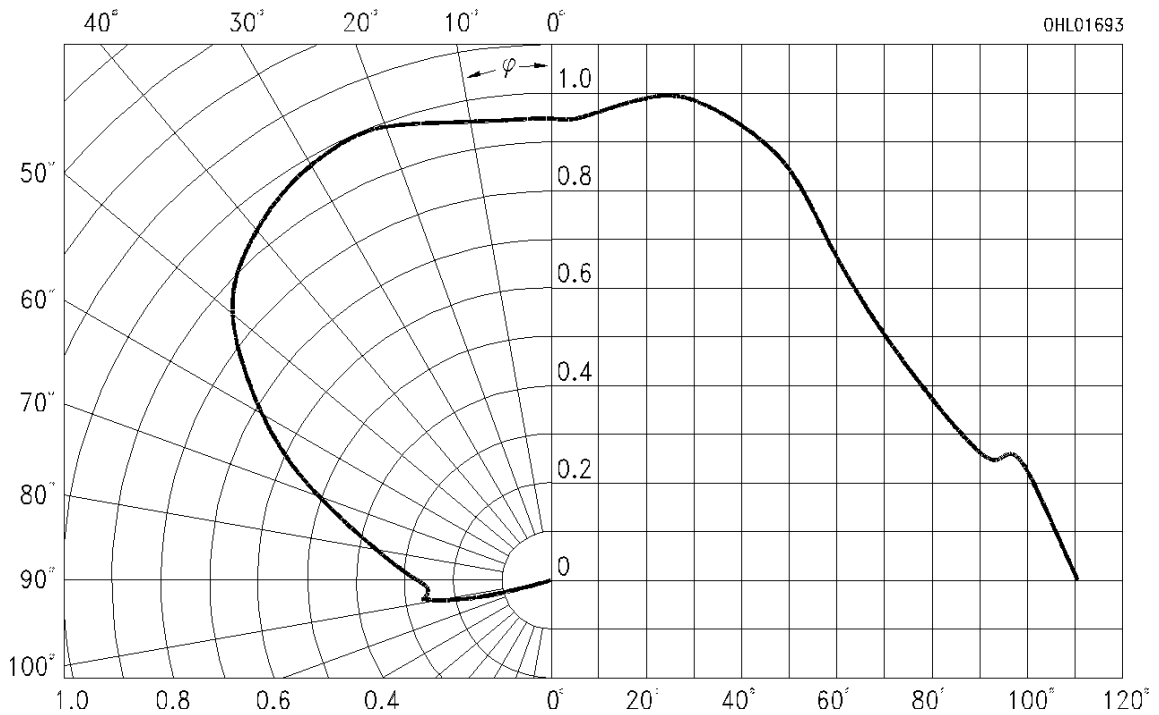
Relative spectral emission

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



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

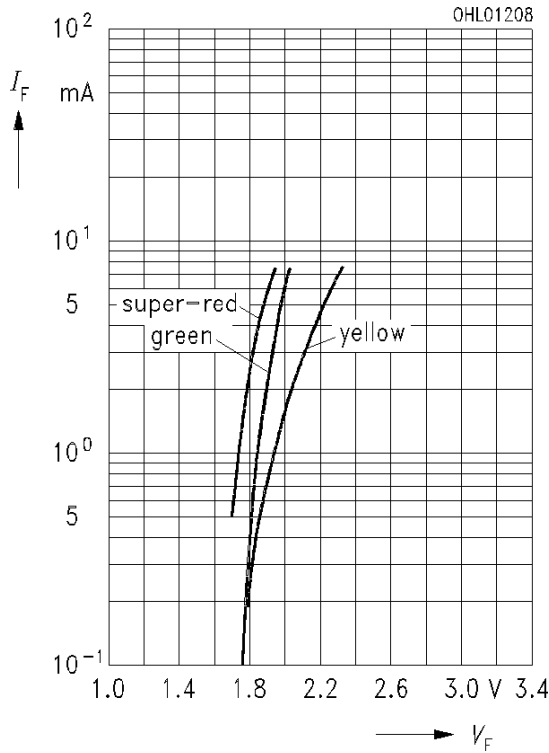
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

Forward current

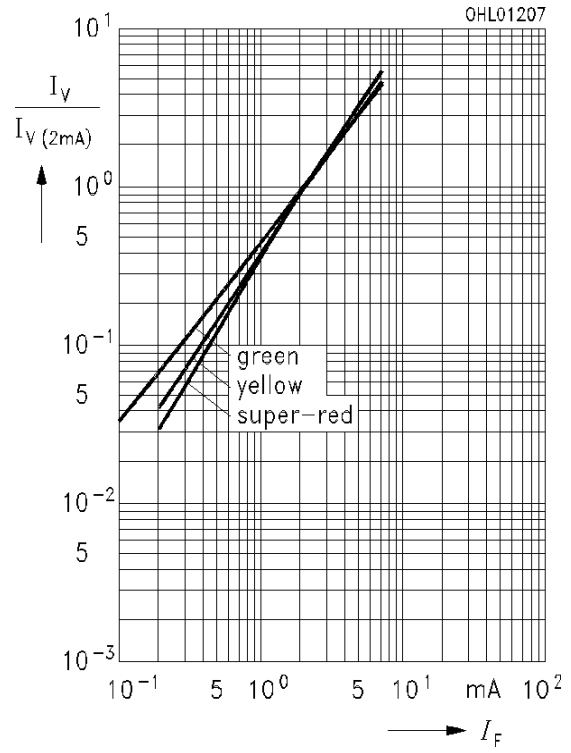
$T_A = 25^\circ\text{C}$



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

Relative luminous intensity

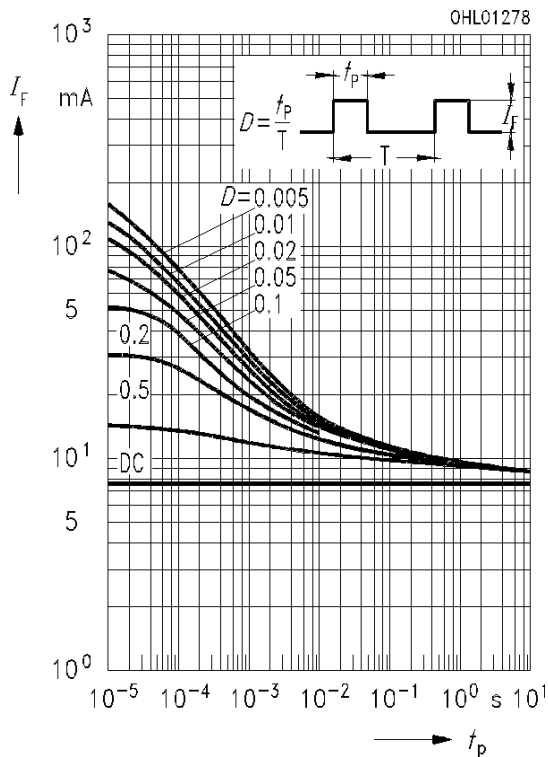
$T_A = 25^\circ\text{C}$



Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

Permissible pulse handling capability

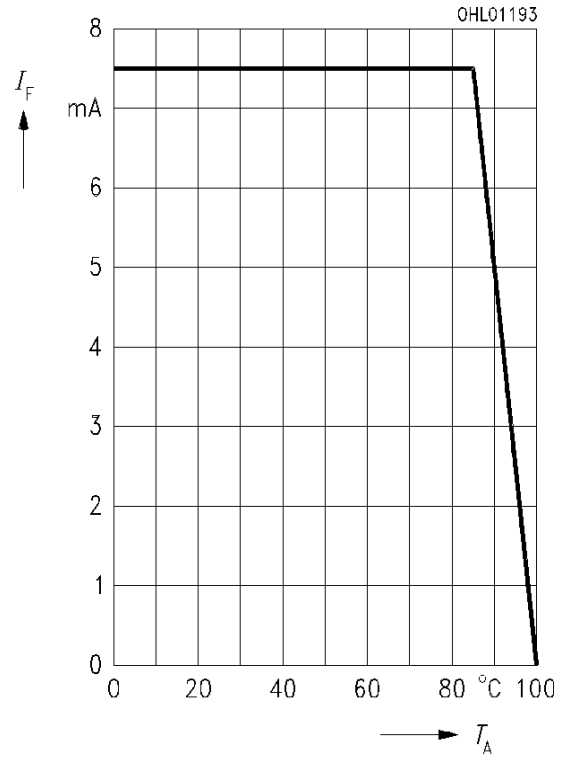
Duty cycle $D =$ parameter, $T_A = 25^\circ\text{C}$



Maximal zulässiger Durchlaßstrom

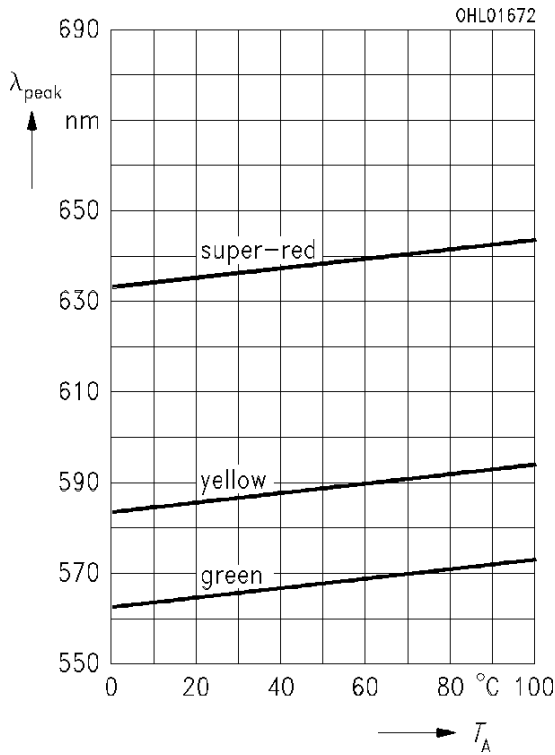
Max. permissible forward current

$I_F = f(T_A)$



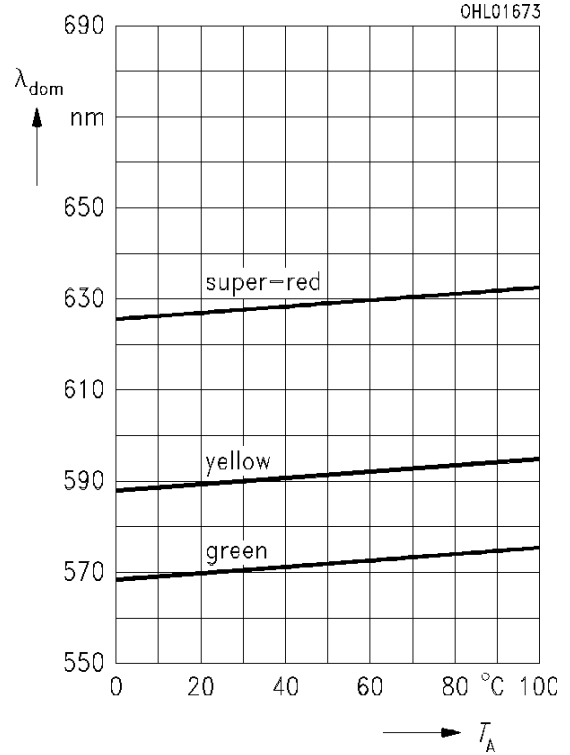
Wellenlänge der Strahlung $\lambda_{peak} = f(T_A)$
Wavelength at peak emission

$I_F = 7.5 \text{ mA}$



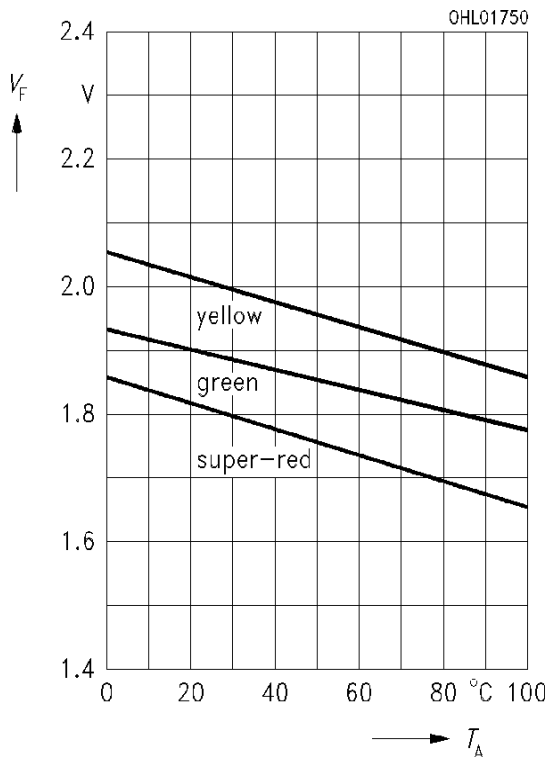
Dominantwellenlänge $\lambda_{dom} = f(T_A)$
Dominant wavelength

$I_F = 7.5 \text{ mA}$



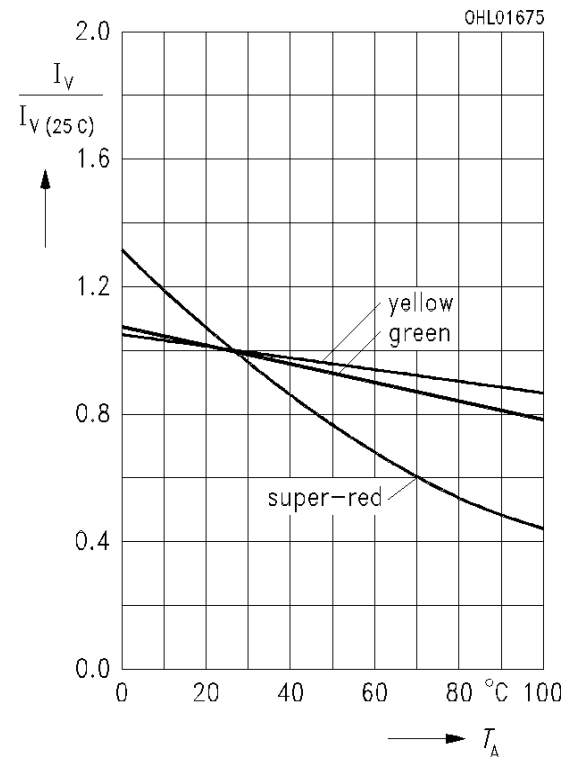
Durchlaßspannung $V_F = f(T_A)$
Forward voltage

$I_F = 2 \text{ mA}$



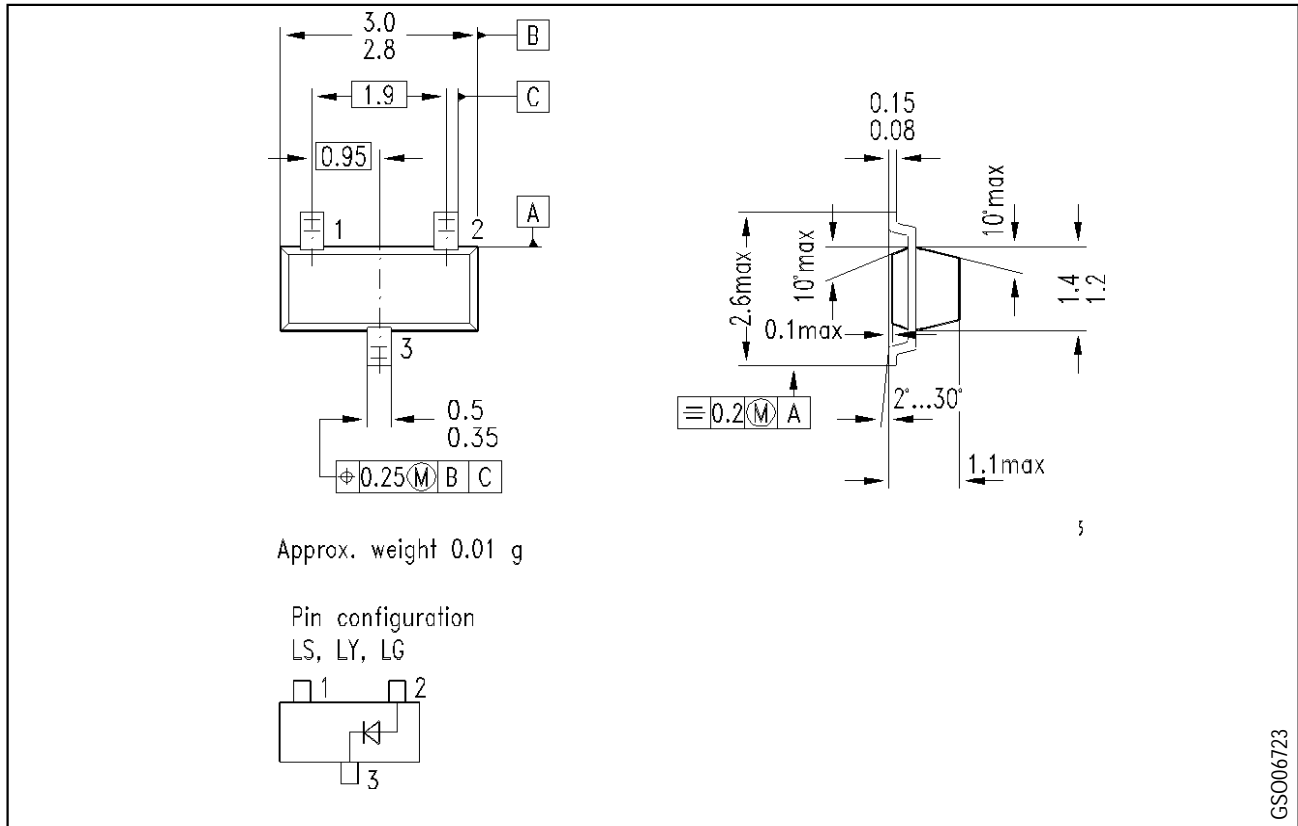
Relative Lichtstärke $I_V/I_{V(25^\circ\text{C})} = f(T_A)$
Relative luminous intensity

$I_F = 2 \text{ mA}$



**Maßzeichnung
Package Outlines**

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



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