

5 mm (T1 3/4) LED, Diffused Wide-Angle LED

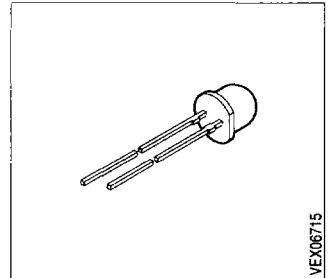
LS 5380, LY 5380, LG 5380

Besondere Merkmale

- eingefärbtes, diffuses "Low Profile"-Gehäuse
- als optischer Indikator einsetzbar
- Lötspieße ohne Aufsetzebene
- gegurtet lieferbar
- Störimpulsfest nach DIN 40839

Features

- colored, diffused "Low Profile"-package
- for use as optical indicator
- solder leads without stand-off
- available taped on reel
- load dump resistant 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
LS 5380-FJ	super-red	red diffused	1.0 ... 8.0	Q62703-Q1452
LS 5380-G			1.6 ... 3.2	Q62703-Q1740
LS 5380-H			2.5 ... 5.0	Q62703-Q1453
LS 5380-J			4.0 ... 8.0	Q62703-Q1454
LS 5380-HL			2.5 ... 20.0	Q62703-Q1455
LY 5380-GK	yellow	yellow diffused	1.6 ... 12.5	Q62703-Q2002
LY 5380-H			2.5 ... 5.0	Q62703-Q1457
LY 5380-J			4.0 ... 8.0	Q62703-Q2319
LY 5380-K			6.3 ... 12.5	Q62703-Q3909
LY 5380-HL			2.5 ... 20.0	Q62703-Q2003
LG 5380-GK	green	green diffused	1.6 ... 12.5	Q62703-Q1463
LG 5380-H			2.5 ... 5.0	Q62703-Q2032
LG 5380-J			4.0 ... 8.0	Q62703-Q2016
LG 5380-K			6.3 ... 12.5	Q62703-Q3189
LG 5380-HL			2.5 ... 20.0	Q62703-Q3825

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	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}	140	mW
Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air	$R_{th JA}$	400	K/W

Kennwerte ($T_A = 25\text{ °C}$)

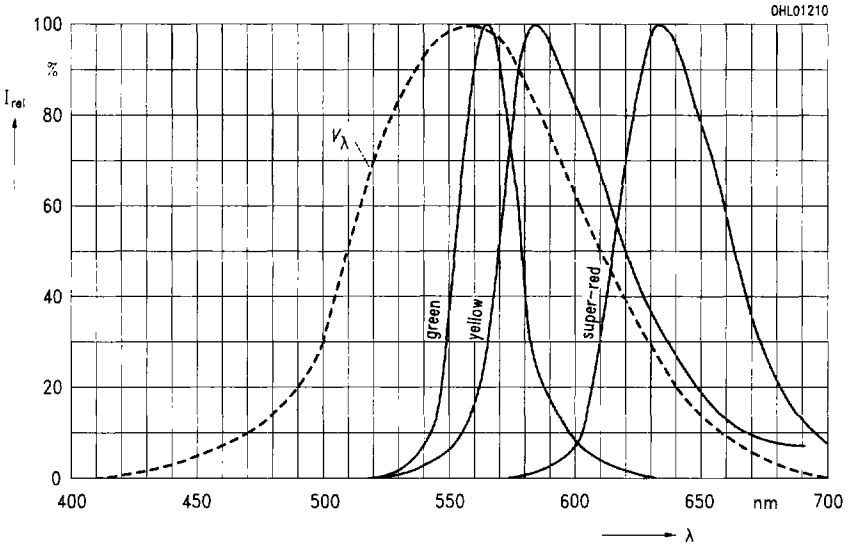
Characteristics

Bezeichnung Parameter	Symbol Symbol	Werte Values			Einheit Unit
		LS	LY	LG	
Wellenlänge des emittierten Lichtes Wavelength at peak emission $I_F = 20\text{ mA}$	(typ.) λ_{peak} (typ.)	635	586	565	nm
Dominantwellenlänge Dominant wavelength $I_F = 20\text{ mA}$	(typ.) λ_{dom} (typ.)	628	590	570	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ Spectral bandwidth at 50 % $I_{\text{rel max}}$ $I_F = 20\text{ mA}$	(typ.) $\Delta\lambda$ (typ.)	45	45	25	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V	2φ	140	140	140	Grad deg.
Durchlaßspannung Forward voltage $I_F = 10\text{ mA}$	(typ.) V_F (max.) V_F	2.0 2.6	2.0 2.6	2.0 2.6	V V
Sperrstrom Reverse current $V_R = 5\text{ V}$	(typ.) I_R (max.) I_R	0.01 10	0.01 10	0.01 10	μA μA
Kapazität Capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	(typ.) C_0	12	10	15	pF
Schaltzeiten: Switching times: I_V from 10 % to 90 % I_V from 90 % to 10 % $I_F = 100\text{ mA}, t_p = 10\text{ }\mu\text{s}, R_L = 50\text{ }\Omega$	(typ.) t_r (typ.) t_f	300 150	300 150	450 200	ns ns

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

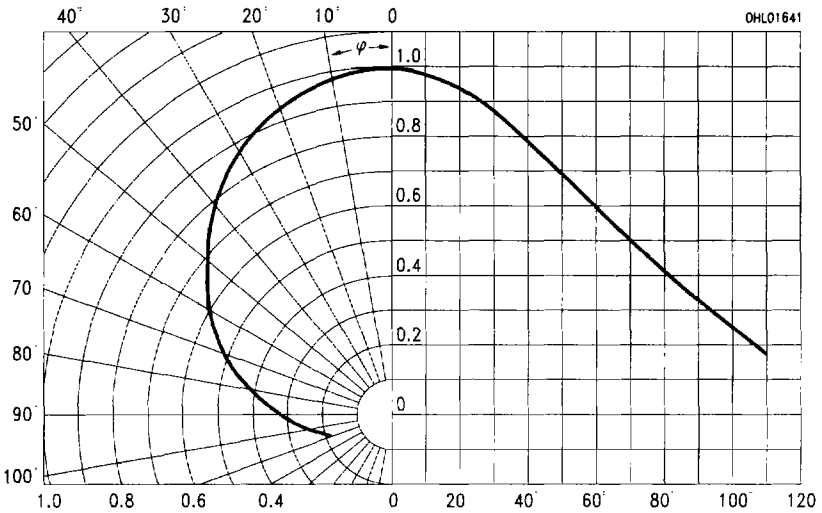
Relative spectral emission

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



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

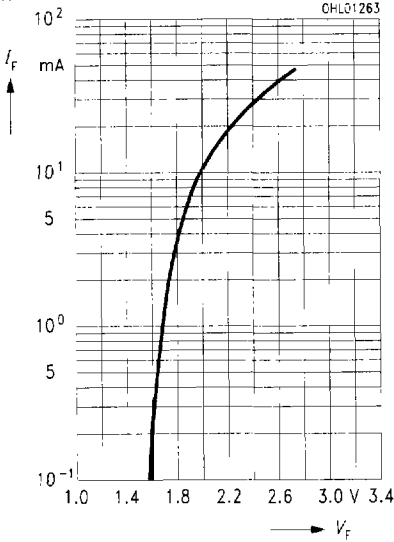
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

Forward current

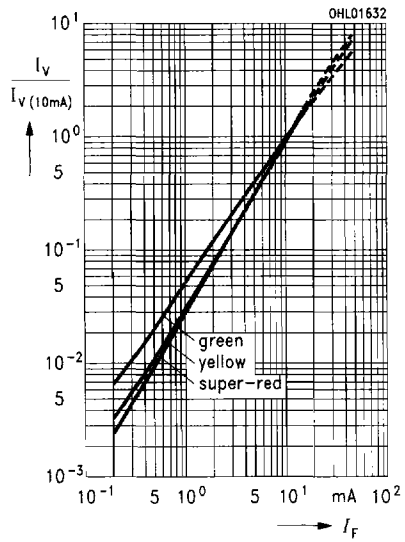
$T_A = 25^\circ\text{C}$



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

Relative luminous intensity

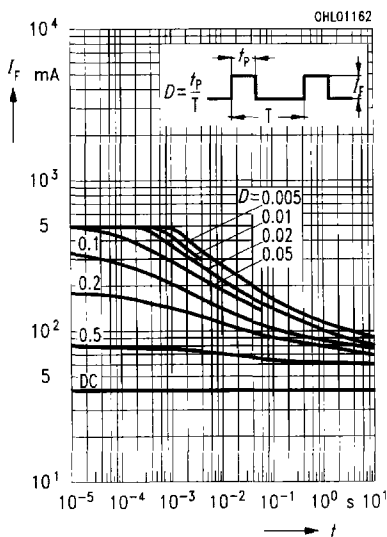
$T_A = 25^\circ\text{C}$



Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

Permissible pulse handling capability

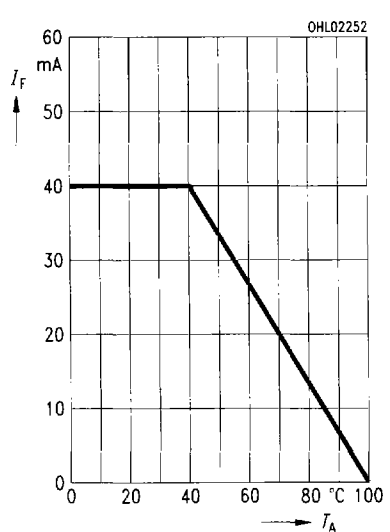
Duty cycle $D =$ parameter, $T_A = 25^\circ\text{C}$



Maximal zulässiger Durchlaßstrom

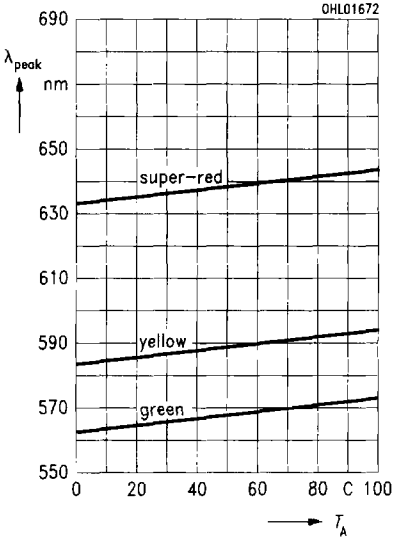
Max. permissible forward current

$I_F = f(T_A)$



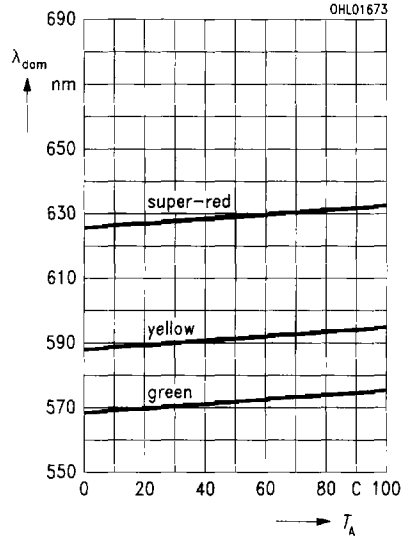
Wellenlänge der Strahlung $\lambda_{\text{peak}} = f(T_A)$
Wavelength at peak emission

$I_F = 20 \text{ mA}$



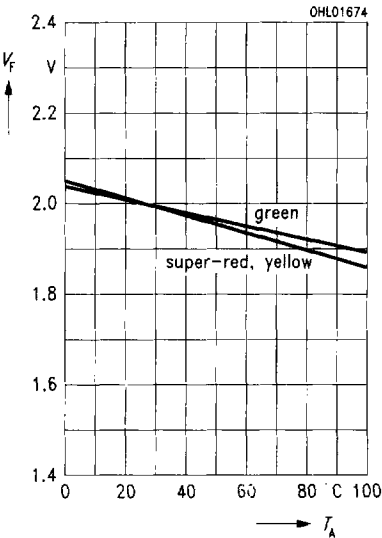
Dominantwellenlänge $\lambda_{\text{dom}} = f(T_A)$
Dominant wavelength

$I_F = 20 \text{ mA}$



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

$I_F = 10 \text{ mA}$

