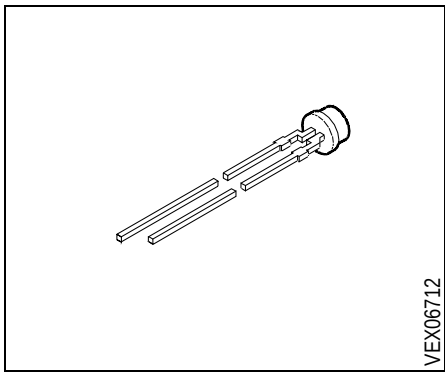
SIEMENS

Plane 3 mm (T1) LED, Non Diffused

LS P380, LO P380, LY P380
LG P380, LP P380



Besondere Merkmale

- farbloses, klares Gehäuse
- zur Einkopplung in Lichtleiter
- als optischer Indikator einsetzbar
- Lötspieße mit Aufsetzebene
- gegurtet lieferbar
- Störimpulsfest nach DIN 40839

Features

- colorless, clear package
- for optical coupling into light pipes
- for use as optical indicator
- solder leads with stand-off
- available taped on reel
- load dump resistant acc. to DIN 40839

Typ Type	Emissionsfarbe Color of Emission	Gehäusefarbe Color of Package	Lichtstrom Luminous Flux I_F = 15 mA Φ_V (mlm)	Bestellnummer Ordering Code
LS P380-MP	super-red	red clear	16 ... 80	Q62703-Q2466
LS P380-N			25 ... 50	Q62703-Q3227
LS P380-P			40 ... 80	Q62703-Q3228
LS P380-NQ			25 ... 125	Q62703-Q3229
LO P380-MP	orange	orange clear	16 ... 80	Q62703-Q2465
LO P380-N			25 ... 50	Q62703-Q3205
LO P380-P			40 ... 80	Q62703-Q3206
LO P380-NQ			25 ... 125	Q62703-Q3207
LY P380-MP	yellow	yellow clear	16 ... 80	Q62703-Q3237
LY P380-N			25 ... 50	Q62703-Q3238
LY P380-P			40 ... 80	Q62703-Q3239
LY P380-NQ			25 ... 125	Q62703-Q3240
LG P380-MP	green	green clear	16 ... 80	Q62703-Q2463
LG P380-N			25 ... 50	Q62703-Q3194
LG P380-P			40 ... 80	Q62703-Q3195
LG P380-NQ			25 ... 125	Q62703-Q3196
LP P380-LN	pure green	green clear	10 ... 50	Q62703-Q2464
LP P380-M			16 ... 32	Q62703-Q2519
LP P380-N			25 ... 50	Q62703-Q2520
LP P380-MP			16 ... 80	Q62703-Q3218

Streuung des Lichtstromes in einer Verpackungseinheit $\Phi_{V\,max}$ / $\Phi_{V\,min} \leq 2.0$.
Luminous flux ratio in one packaging unit $\Phi_{V\,max}$ / $\Phi_{V\,min} \leq 2.0$.

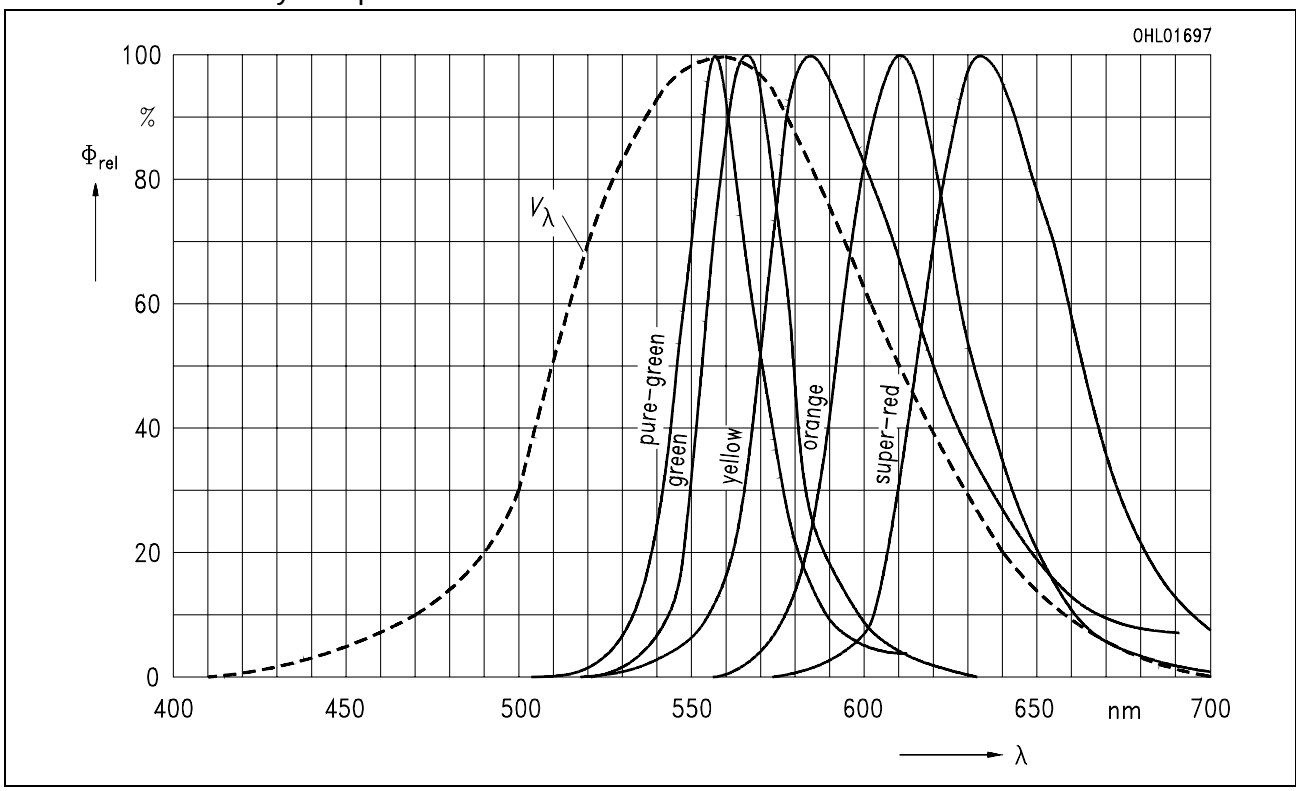
Grenzwerte
Maximum Ratings

Bezeichnung **Parameter**	**Symbol** **Symbol**	**Werte** **Values**		**Einheit** **Unit**
		LS, LO, LY, LG	**LP**	
Betriebstemperatur Operating temperature range	T_{op}	– 55 ... + 100	– 55 ... + 100	°C
Lagertemperatur Storage temperature range	T_{stg}	– 55 ... + 100	– 55 ... + 100	°C
Sperrschichttemperatur Junction temperature	T_j	+ 100	+ 100	°C
Durchlaßstrom Forward current	I_F	40	30	mA
Stoßstrom Surge current $t \leq 10$ µs, D = 0.005	I_{FM}	0.5	0.5	A
Sperrspannung Reverse voltage	V_R	5	5	V
Verlustleistung Power dissipation $T_A \leq 25$ °C	P_{tot}	140	100	mW
Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air	$R_{th\ JA}$	400	400	K/W

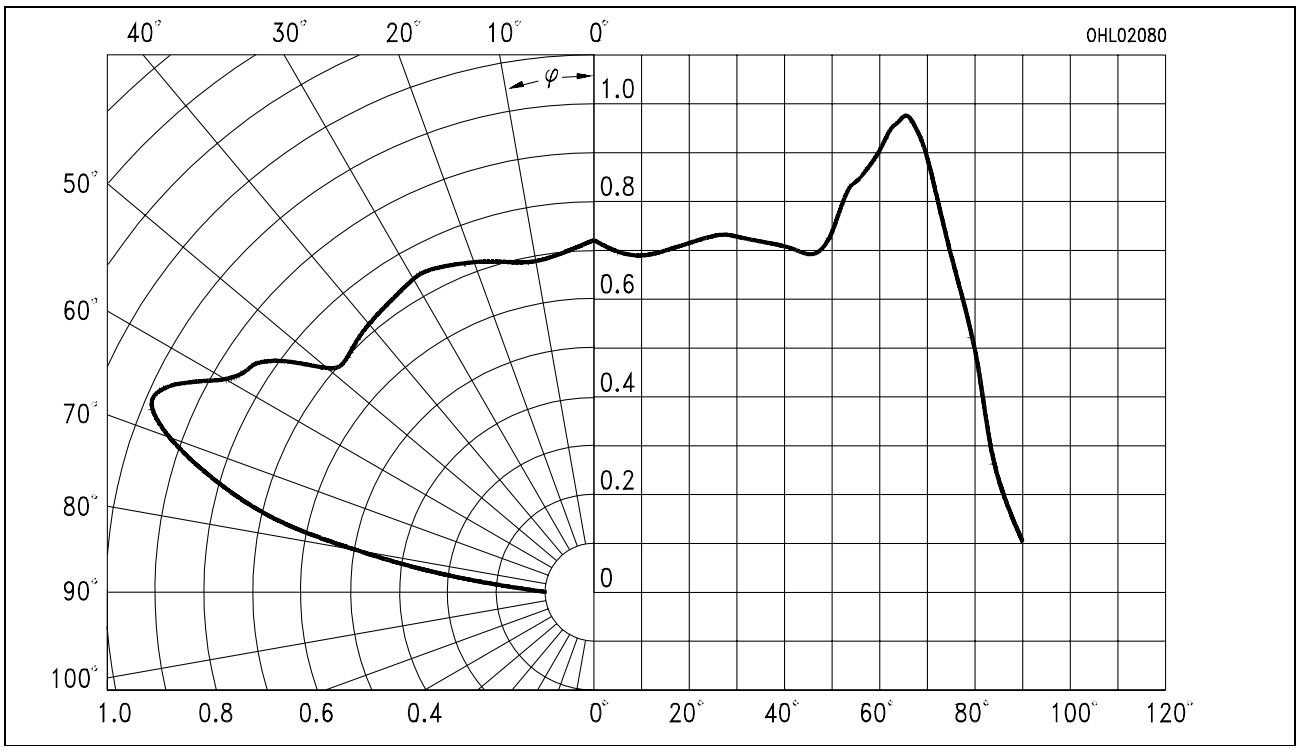
Kennwerte (T_A = 25 °C)
Characteristics

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 = 20 mA	λ_{peak}	635	610	586	565	557	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) I_F = 20 mA	λ_{dom}	628	605	590	570	560	nm
Spektrale Bandbreite bei 50 % $\Phi_{rel\ max}$ (typ.) spectral bandwidth at 50 % $\Phi_{rel\ max}$ (typ.) I_F = 20 mA	$\Delta\lambda$	45	40	45	25	22	nm
Durchlaßspannung (typ.) Forward voltage (max.) I_F = 15 mA	V_F V_F	2.1 2.6	2.1 2.6	2.1 2.6	2.1 2.6	2.1 2.6	V V
Sperrstrom (typ.) Reverse current (max.) V_R = 5 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 V, f = 1 MHz	C_0	12	8	10	15	32	pF
Schaltzeiten: Switching times: I_V from 10 % to 90 % (typ.) I_V from 90 % to 10 % (typ.) I_F = 100 mA, t_p = 10 µs, R_L = 50 Ω	 t_r t_r	 300 150	 300 150	 300 150	 450 200	 450 200	 ns ns

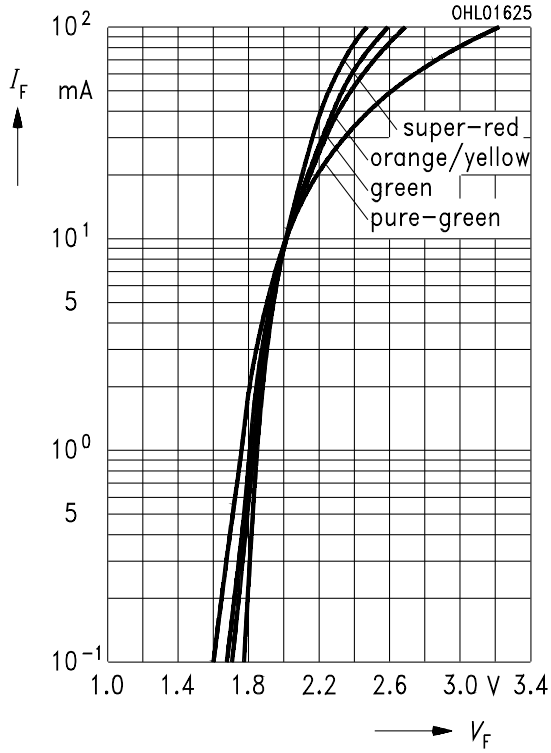
Relative spektrale Emission $\Phi_{rel} = f(\lambda)$, T_A = 25 °C, I_F = 20 mA
Relative spectral emission
V (λ) = spektrale Augenempfindlichkeit
Standard eye response curve



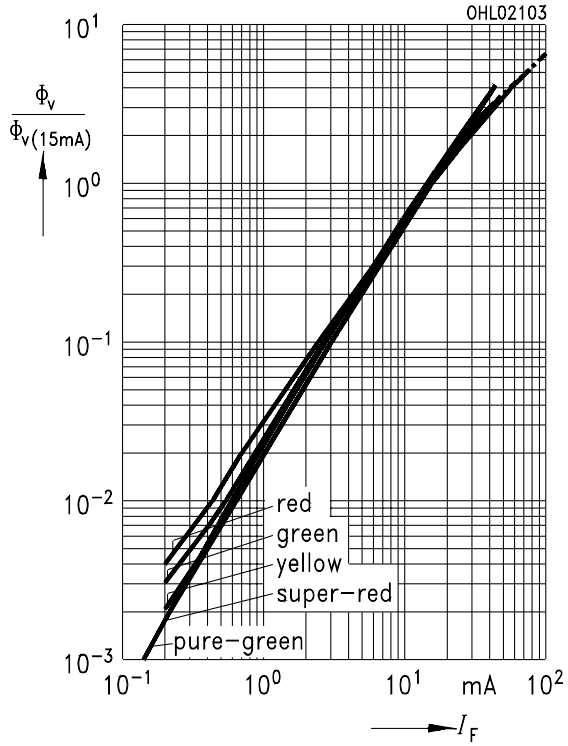
Abstrahlcharakteristik $\Phi_{rel} = f(\varphi)$
Radiation characteristic



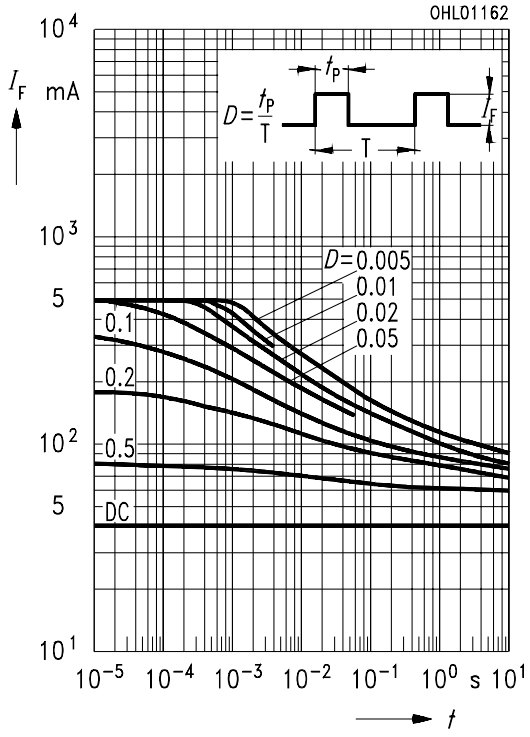
Durchlaßstrom $I_F = f(V_F)$
Forward current
T_A = 25 °C



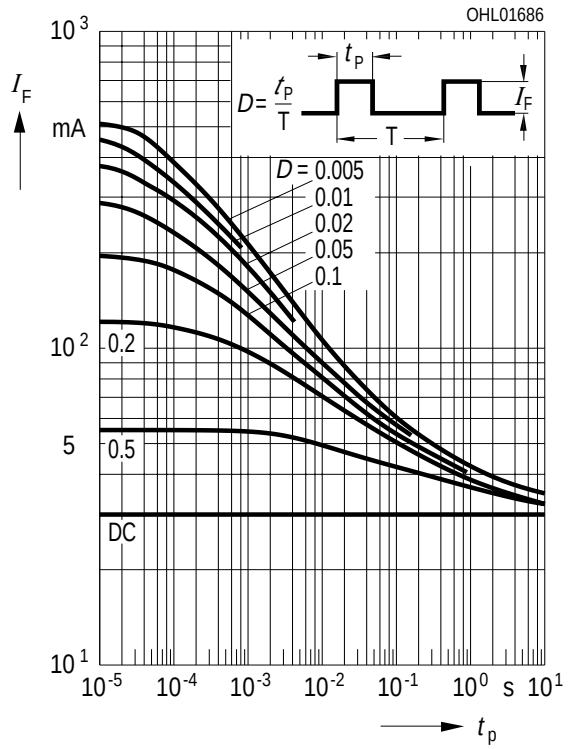
Relativer Lichtstrom $\Phi_V / \Phi_{V(15\ mA)} = f(I_F)$
Relative luminous flux
T_A = 25 °C



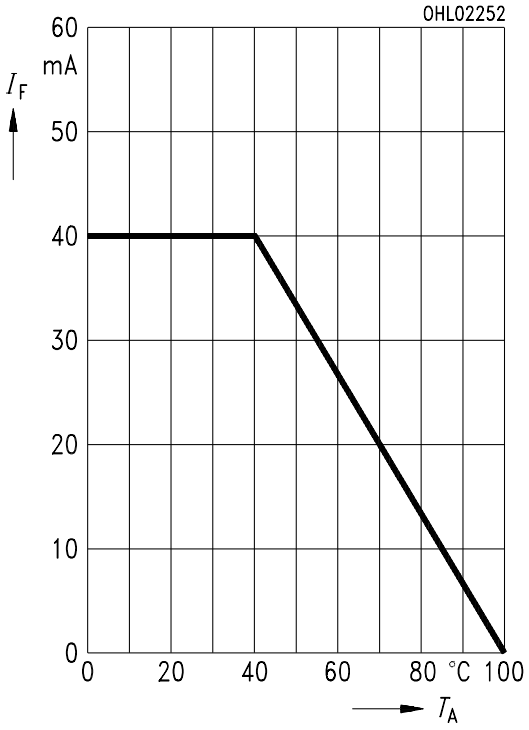
Zulässige Impulsbelastbarkeit $I_F = f(t_p)$
Permissible pulse handling capability
Duty cycle D = parameter, T_A = 25 °C
LS, LO, LY, LG



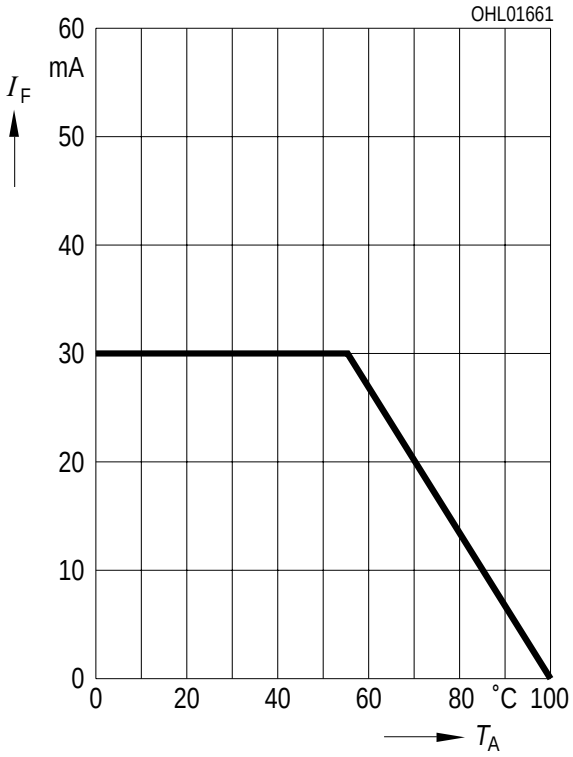
Zulässige Impulsbelastbarkeit $I_F = f(t_P)$
Permissible pulse handling capacity
Duty cycle D = parameter, T_A = 25 °C
LP



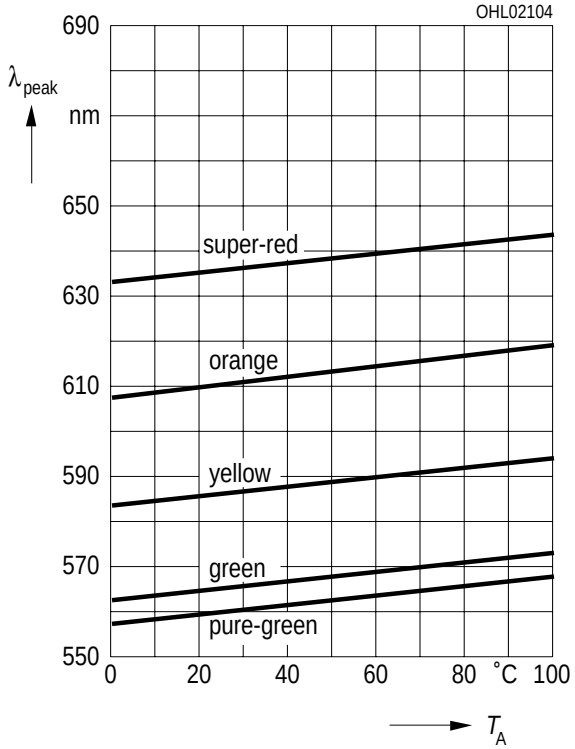
Maximal zulässiger Durchlaßstrom $I_F = f(T_A)$
Max. permissible forward current
LS, LO, LY, LG



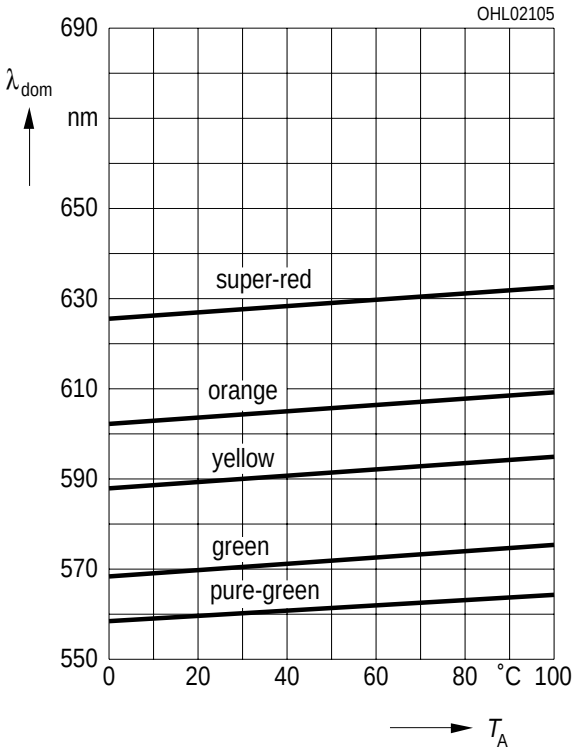
Maximal zulässiger Durchlaßstrom $I_F = f(T_A)$
Max. permissible forward current
LP



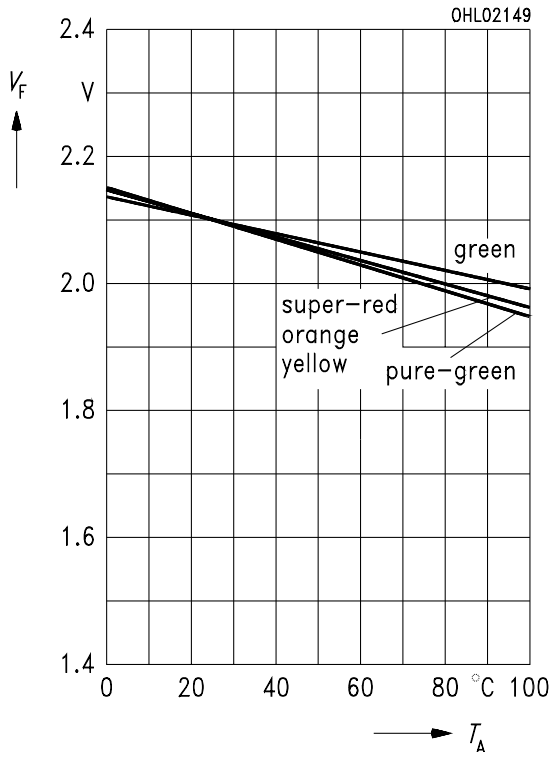
Wellenlänge der Stahlung $\lambda_{peak} = f(T_A)$
Wavelength at peak emission
I_F = 20 mA



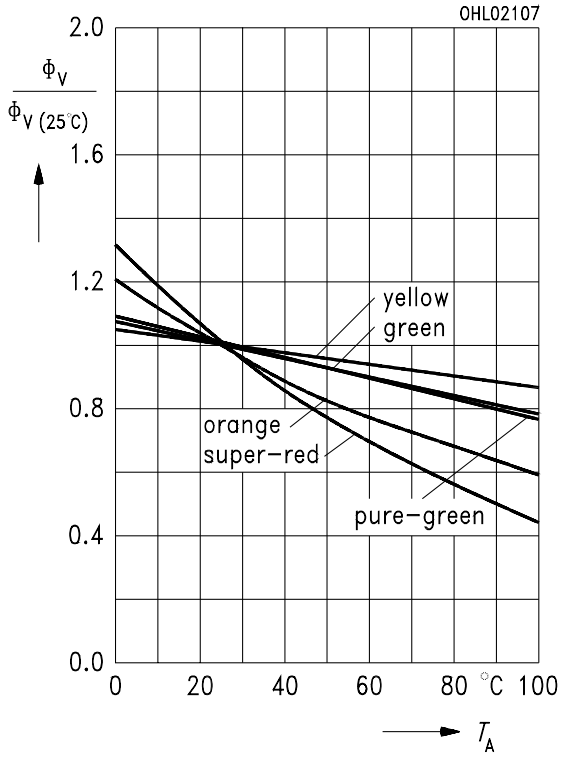
Dominantwellenlänge $\lambda_{dom} = f(T_A)$
Dominant wavelength
I_F = 20 mA



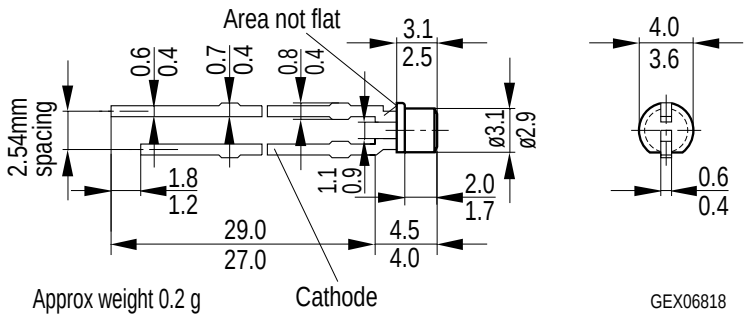
Durchlaßspannung $V_F = f(T_A)$
Forward voltage
I_F = 15 mA



Relativer Lichtstrom $\Phi_V / \Phi_{V(25\,°C)} = f(T_A)$
Relative luminous flux
I_F = 15 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