

3 mm (T1) LED, Non Diffused

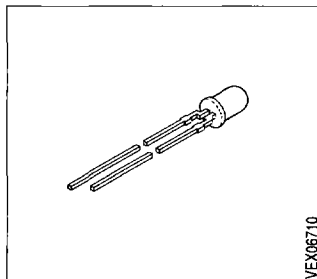
**LS 3340, LO 3340, LY 3340
LG 3330, LP 3340**

Besondere Merkmale

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

Features

- colored, clear package
- 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	Lichtstärke Luminous Intensity $I_F = 10 \text{ mA}$ $I_V (\text{mcd})$	Bestellnummer Ordering Code
LS 3340-KN	super-red	red clear	6.3 ... 50.0	Q62703-Q1701
LS 3340-L			10.0 ... 20.0	Q62703-Q1702
LS 3340-M			16.0 ... 32.0	Q62703-Q1704
LS 3340-N			25.0 ... 50.0	Q62703-Q2320
LS 3340-LP			10.0 ... 80.0	Q62703-Q3223
LO 3340-KN	orange	orange clear	6.3 ... 50.0	Q62703-Q1886
LO 3340-L			10.0 ... 20.0	Q62703-Q2256
LO 3340-M			16.0 ... 32.0	Q62703-Q2255
LO 3340-N			25.0 ... 50.0	Q62703-Q2473
LO 3340-LP			10.0 ... 80.0	Q62703-Q2628
LY 3340-JM	yellow	yellow clear	4.0 ... 32.0	Q62703-Q1789
LY 3340-L			10.0 ... 20.0	Q62703-Q1791
LY 3340-M			16.0 ... 32.0	Q62703-Q1999
LY 3340-N			25.0 ... 50.0	Q62703-Q2652
LY 3340-LP			10.0 ... 80.0	Q62703-Q1792
LG 3330-KN	green	colorless clear	6.3 ... 50.0	Q62703-Q1698
LG 3330-L			10.0 ... 20.0	Q62703-Q1699
LG 3330-M			16.0 ... 32.0	Q62703-Q1700
LG 3330-N			25.0 ... 50.0	Q62703-Q2010
LG 3330-LP			10.0 ... 80.0	Q62703-Q2011
LP 3340-JL	pure green	green clear	4.0 ... 20.0	Q62703-Q2749
LP 3340-K			6.3 ... 12.5	Q62703-Q2982
LP 3340-L			10.0 ... 20.0	Q62703-Q2980
LP 3340-KM			6.3 ... 32.0	Q62703-Q3211

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
		LS, LO, LY, LG	LP	
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	30	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	100	mW
Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air	$R_{th JA}$	400		K/W

Kennwerte ($T_A = 25^\circ\text{C}$)

Characteristics

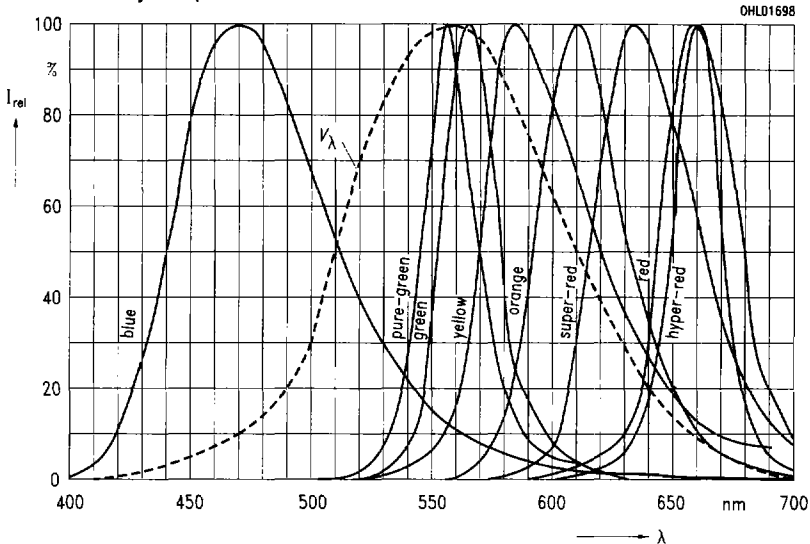
Bezeichnung Parameter	Symbol Symbol	Werte Values					Einheit Unit
		LS	LO	LY	LG	LP	
Wellenlänge des emittierten Lichtes Wavelength at peak emission $I_F = 20\text{ mA}$	(typ.) (typ.) λ_{peak}	635	610	586	565	557	nm
Dominantwellenlänge Dominant wavelength $I_F = 20\text{ mA}$	(typ.) (typ.) λ_{dom}	628	605	590	570	560	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ Spectral bandwidth at 50 % $I_{\text{rel max}}$ $I_F = 20\text{ mA}$	(typ.) (typ.) $\Delta\lambda$	45	40	45	25	22	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V	2ϕ	50	50	50	50	50	Grad deg.
Durchlaßspannung Forward voltage $I_F = 10\text{ mA}$	(typ.) (max.) V_F V_F	2.0 2.6	2.0 2.6	2.0 2.6	2.0 2.6	2.0 2.6	V V
Sperrstrom Reverse current $V_R = 5\text{ V}$	(typ.) (max.) I_R I_R	0.01 10	0.01 10	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	8	10	15	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.) (typ.) t_r t_f	300 150	300 150	300 150	450 200	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

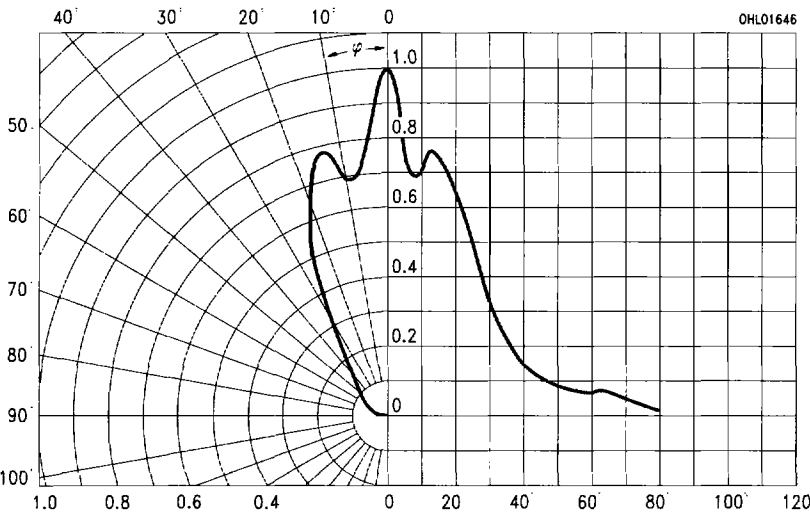
$V(\lambda)$ = spektrale Augenempfindlichkeit

Standard eye response curve



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

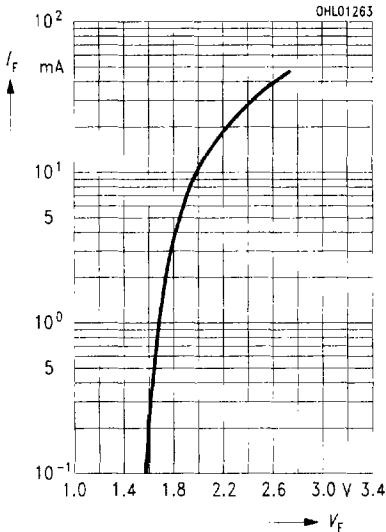
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

Forward current

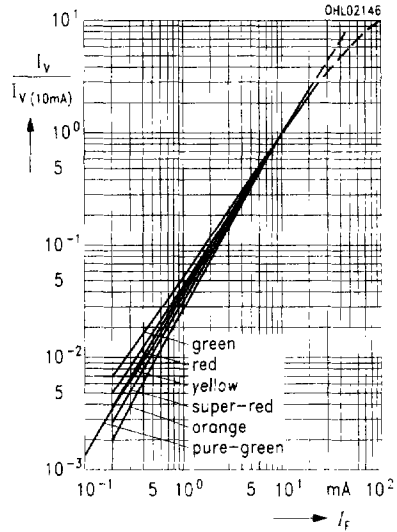
$T_A = 25^\circ\text{C}$



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

Relative luminous intensity

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

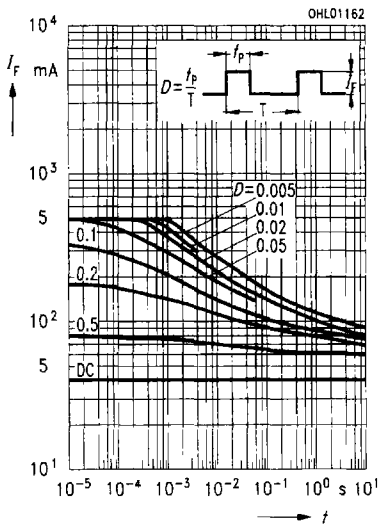


Zulässige Impulsbelastbarkeit $I_F = f(t_P)$

Permissible pulse handling capability

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

LS, LO, LY, LG

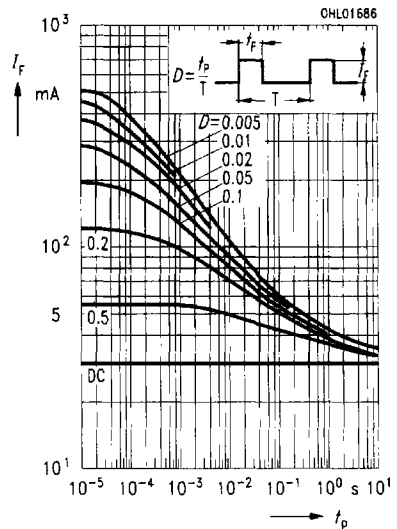


Zulässige Impulsbelastbarkeit $I_F = f(t_P)$

Permissible pulse handling capability

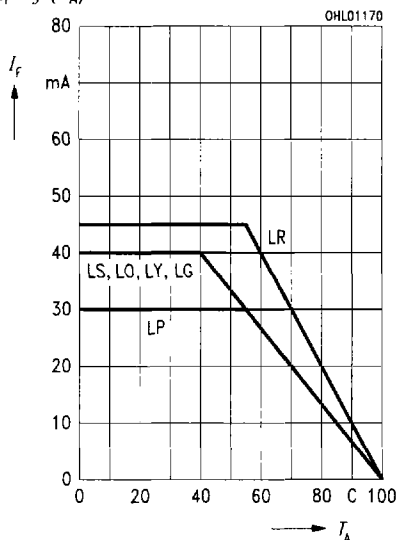
Duty cycle $D =$ parameter, $T_A = 25^\circ\text{C}$

LP



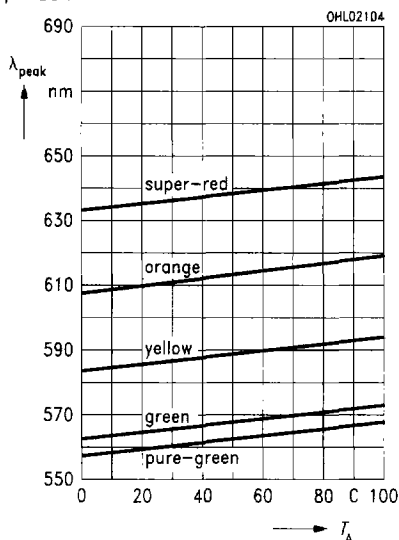
Maximal zulässiger Durchlaßstrom Max. permissible forward current

$$I_F = f(T_A)$$



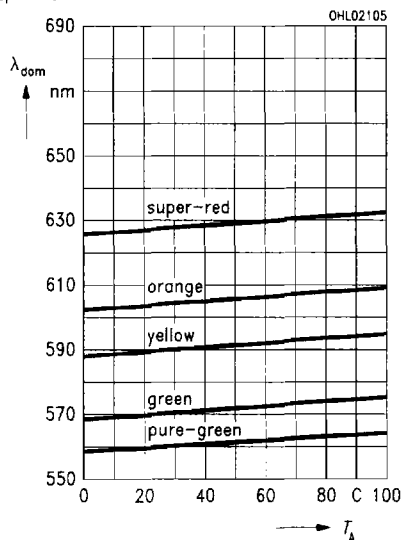
Wellenlänge der Strahlung $\lambda_{\text{peak}} = f(T_A)$ Wavelength at peak emission

$$I_F = 20 \text{ mA}$$



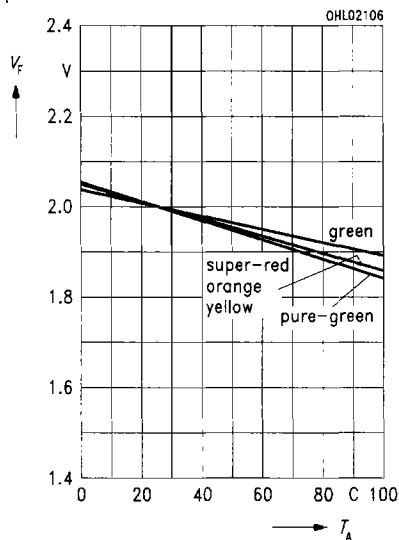
Dominantwellenlänge $\lambda_{\text{dom}} = f(T_A)$ Dominant wavelength

$$I_F = 20 \text{ mA}$$



Durchlaßspannung $V_F = f(T_A)$ Forward voltage

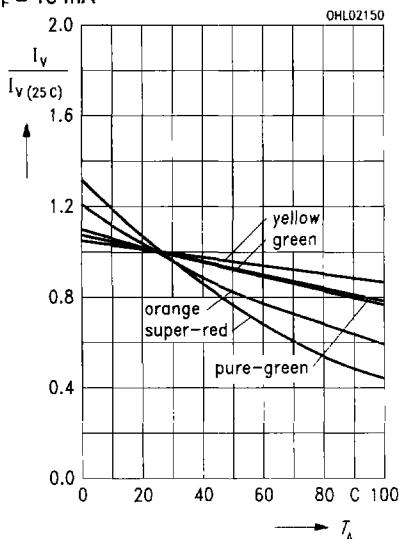
$$I_F = 10 \text{ mA}$$



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

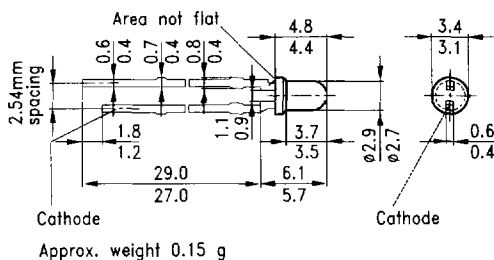
Relative luminous intensity

$I_F = 10 \text{ mA}$



Maßzeichnung
Package Outlines

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



Kathodenkennzeichnung: Kürzerer Lötspieß
Cathode mark: Short solder lead