

**3 mm (T1) LED, Diffused**

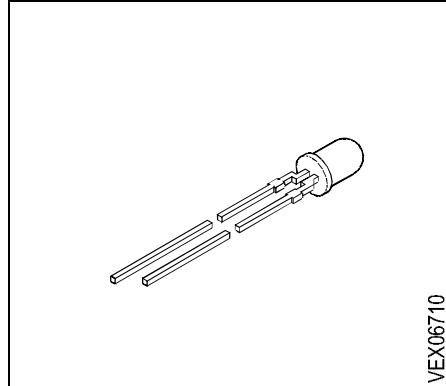
**LR 3360, LS 3360, LO 3360  
LY 3360, LG 3360, LP 3360**

### **Besondere Merkmale**

- eingefärbtes, diffuses Gehäuse
- als optischer Indikator einsetzbar
- Lötspieße mit Aufsetzebene
- gegurtet lieferbar
- Störimpulsfest nach DIN 40839

### **Features**

- colored, diffused package
- for use as optical indicator
- solder leads with stand-off
- available taped on reel
- load dump resistant acc. to DIN 40839



<b>Typ Type</b>	<b>Emissionsfarbe Color of Emission</b>	<b>Gehäusefarbe Color of Package</b>	<b>Lichtstärke Luminous Intensity <math>I_F = 10 \text{ mA}</math> <math>I_V (\text{mcd})</math></b>	<b>Bestellnummer Ordering Code</b>
LR 3360-DG	red	red diffused	0.4 ... 3.2	Q62703-Q1316
LR 3360-F			1.0 ... 2.0	Q62703-Q1317
LR 3360-G			1.6 ... 3.2	Q62703-Q1318
LR 3360-FJ			1.0 ... 8.0	Q62703-Q1319
LS 3360-HL	super-red	red diffused	2.5 ... 20.0	Q62703-Q1320
LS 3360-K			6.3 ... 12.5	Q62703-Q1321
LS 3360-L			10.0 ... 20.0	Q62703-Q1322
LS 3360-KN			6.3 ... 50.0	Q62703-Q1323
LO 3360-HL	orange	orange diffused	2.5 ... 20.0	Q62703-Q1887
LO 3360-K			6.3 ... 12.5	Q62703-Q2400
LO 3360-L			10.0 ... 20.0	Q62703-Q2596
LO 3360-JM			4.0 ... 32.0	Q62703-Q2410
LY 3360-HL	yellow	yellow diffused	2.5 ... 20.0	Q62703-Q1324
LY 3360-K			6.3 ... 12.5	Q62703-Q1325
LY 3360-L			10.0 ... 20.0	Q62703-Q1326
LY 3360-KN			6.3 ... 50.0	Q62703-Q1998
LG 3360-HL	green	green diffused	2.5 ... 20.0	Q62703-Q3818
LG 3360-J			4.0 ... 8.0	Q62703-Q1865
LG 3360-K			6.3 ... 12.5	Q62703-Q2008
LG 3360-L			10.0 ... 20.0	Q62703-Q3507
LG 3360-KN			6.3 ... 50.0	Q62703-Q3819
LP 3360-GK	pure green	green diffused	1.6 ... 12.5	Q62703-Q2467
LP 3360-H			2.5 ... 5.0	Q62703-Q2914
LP 3360-J			4.0 ... 8.0	Q62703-Q2915
LP 3360-HL			2.5 ... 20.0	Q62703-Q3213

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	LR	LP	
Betriebstemperatur Operating temperature range	$T_{op}$	– 55 ... + 100			°C
Lagertemperatur Storage temperature range	$T_{stg}$	– 55 ... + 100			°C
Sperrsichttemperatur Junction temperature	$T_j$	+ 100			°C
Durchlaßstrom Forward current	$I_F$	40	45	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 $T_A \leq 25 \text{ } ^\circ\text{C}$	$P_{tot}$	140	100	100	mW
Wärmewiderstand Thermal resistance Sperrsicht / Luft Junction / air	$R_{th JA}$	400			K/W

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

## Characteristics

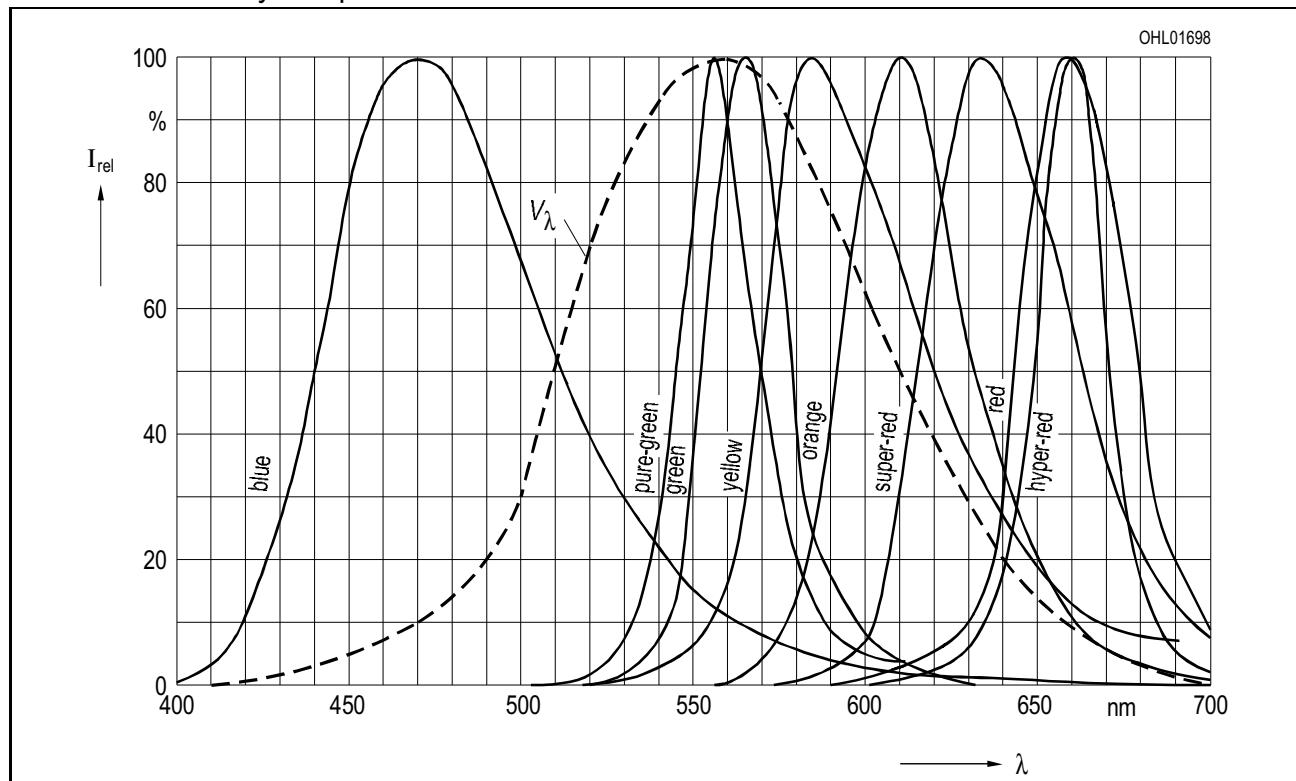
Bezeichnung Parameter	Symbol Symbol	Werte Values						Einheit Unit
		LR	LS	LO	LY	LG	LP	
Wellenlänge des emittierten Lichtes(typ.) Wavelength at peak emission(typ.) $I_F = 20 \text{ mA}$	$\lambda_{\text{peak}}$	660	635	610	586	565	557	nm
Dominantwellenlänge(typ.) Dominant wavelength(typ.) $I_F = 20 \text{ mA}$	$\lambda_{\text{dom}}$	645	628	605	590	570	560	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.) Spectral bandwidth at 50 % $I_{\text{rel max}}$ (typ.) $I_F = 20 \text{ mA}$	$\Delta\lambda$	35	45	40	45	25	22	nm
Abstrahlwinkel bei 50 % $I_V$ (Vollwinkel) Viewing angle at 50 % $I_V$	$2\phi$	70	70	70	70	70	70	Grad deg.
Durchlaßspannung(typ.) Forward voltage(max.) $I_F = 10 \text{ mA}$	$V_F$ $V_F$	1.6 2.0	2.0 2.6	2.0 2.6	2.0 2.6	2.0 2.6	2.0 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	0.01 10	0.01 10	0.01 10	$\mu\text{A}$ $\mu\text{A}$
Kapazität(typ.) Capacitance $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	$C_0$	25	12	8	10	15	15	pF
Schaltzeiten: Switching times: $I_V$ from 10 % to 90 % (typ.) $I_V$ from 90 % to 10 % (typ.) $I_F = 100 \text{ mA}, t_P = 10 \mu\text{s}, R_L = 50 \Omega$	$t_r$ $t_f$	120 50	300 150	300 150	300 150	450 200	450 200	ns ns

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

### Relative spectral emission

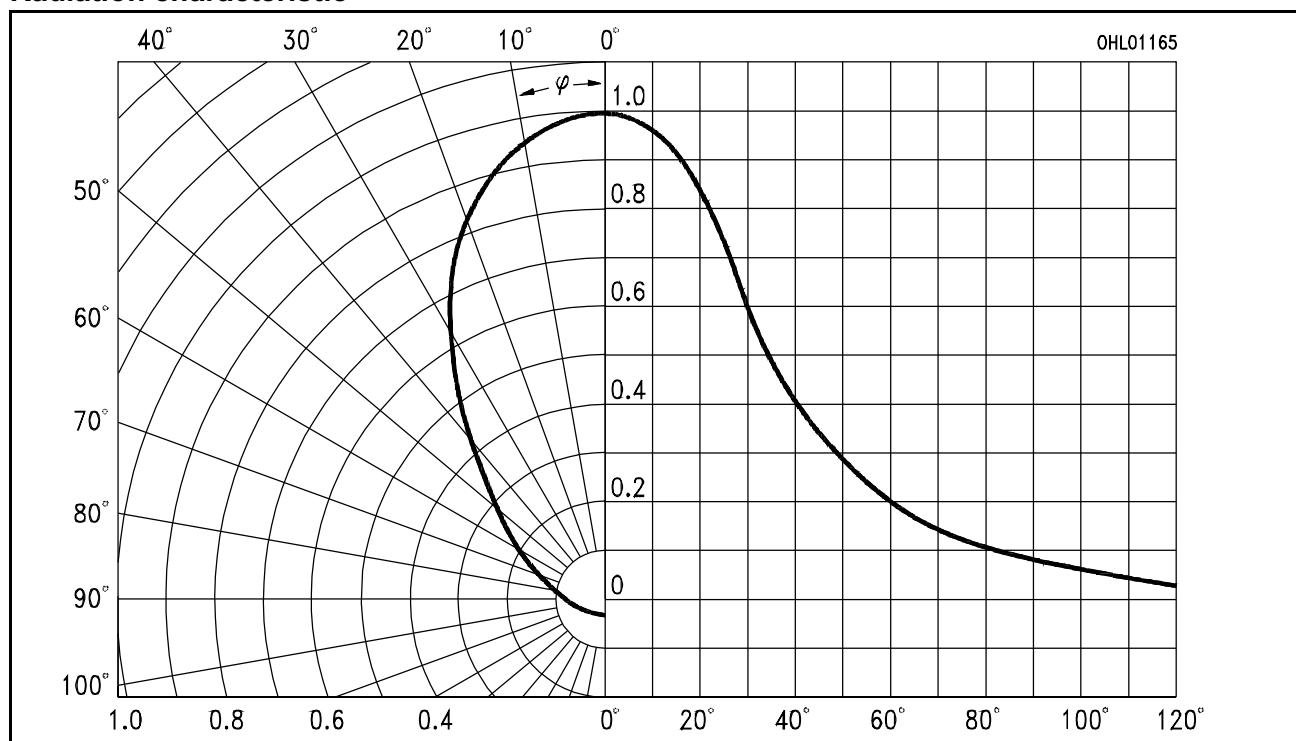
$V(\lambda)$  = spektrale Augenempfindlichkeit

Standard eye response curve



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

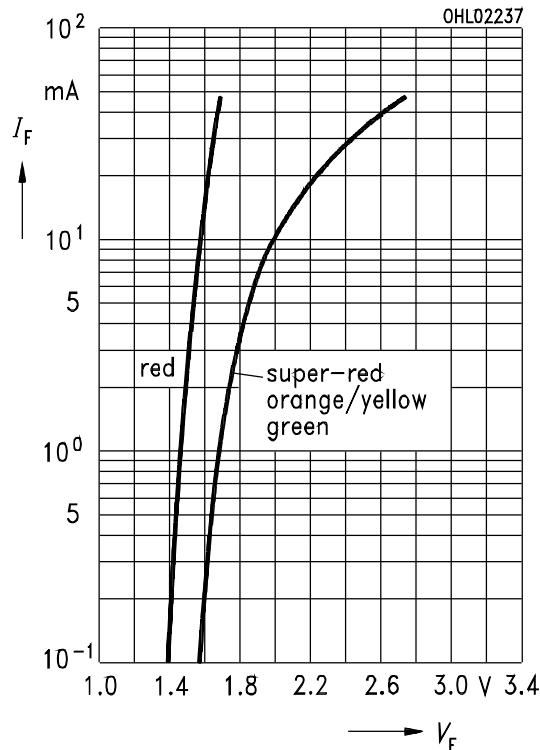
Radiation characteristic



**Durchlaßstrom  $I_F = f(V_F)$**

**Forward current**

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

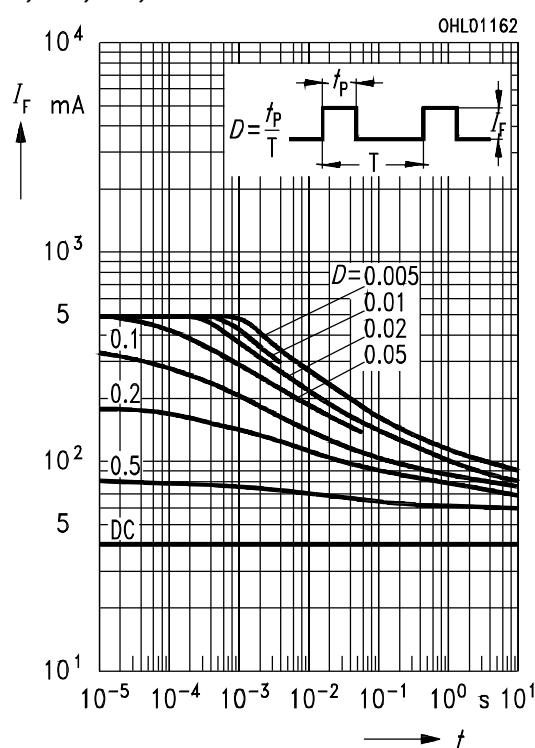


**Zulässige Impulsbelastbarkeit  $I_F = f(t_P)$**

**Permissible pulse handling capability**

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

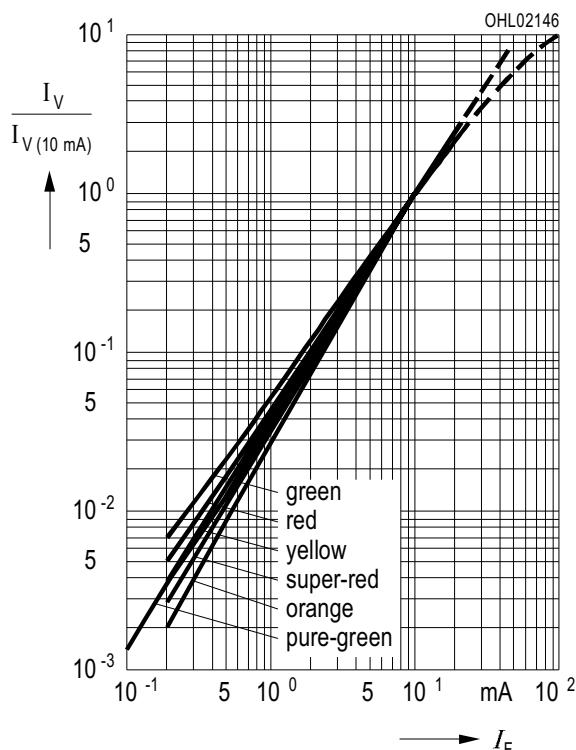
**LS, LO, LY, LG**



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

**Relative luminous intensity**

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

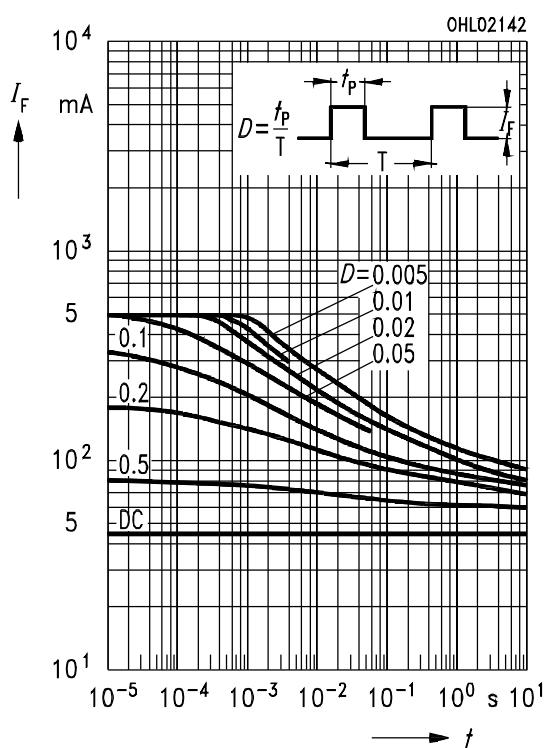


**Zulässige Impulsbelastbarkeit  $I_F = f(t_P)$**

**Permissible pulse handling capability**

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

**LR**

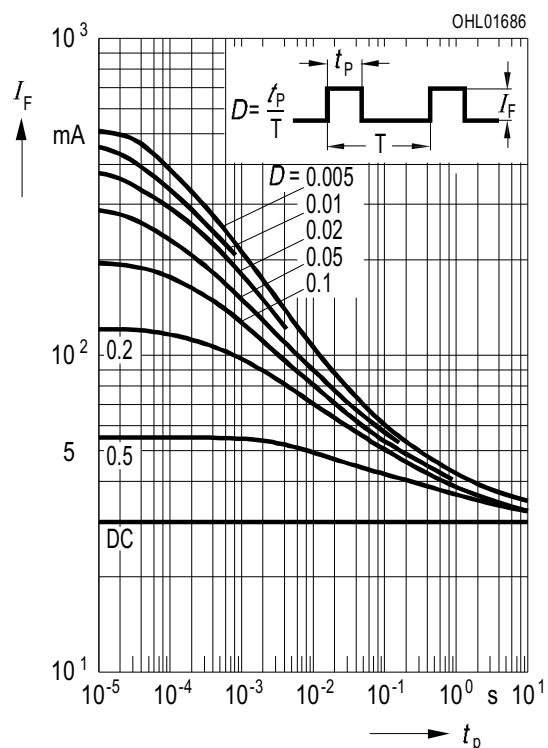


**Zulässige Impulsbelastbarkeit  $I_F = f(t_p)$**

**Permissible pulse handling capability**

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

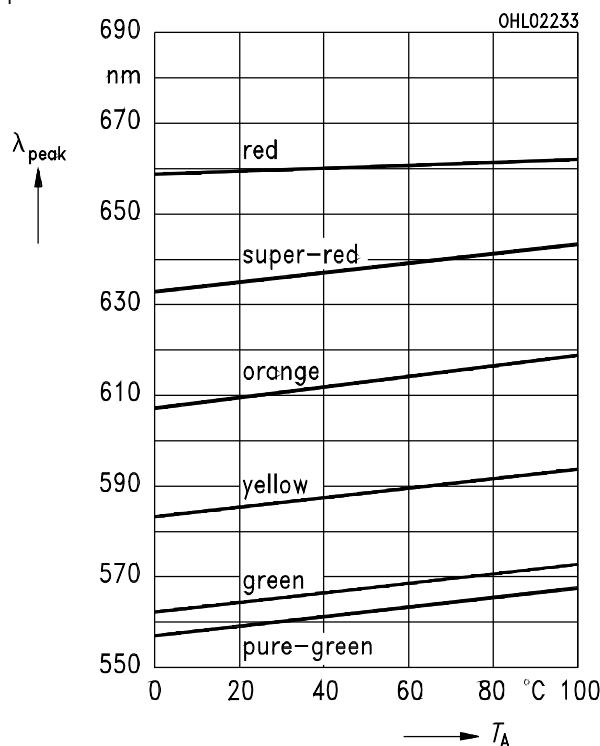
**LP**



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

**Wavelength at peak emission**

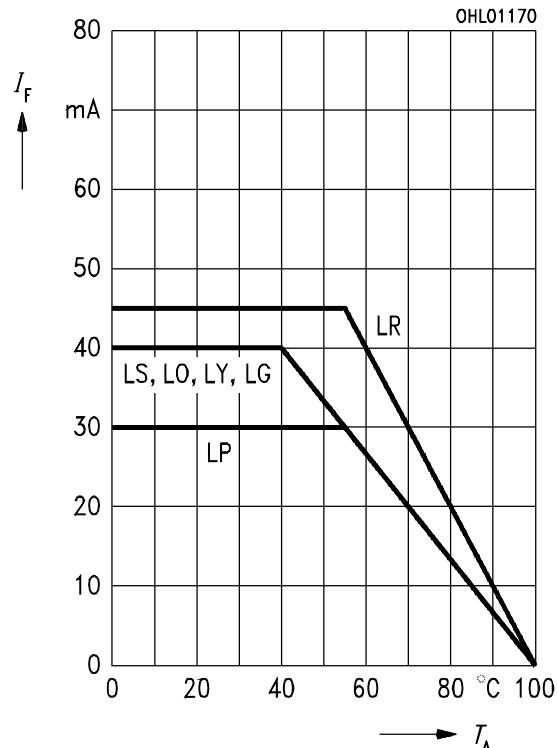
$I_F = 20$  mA



**Maximal zulässiger Durchlaßstrom**

**Max. permissible forward current**

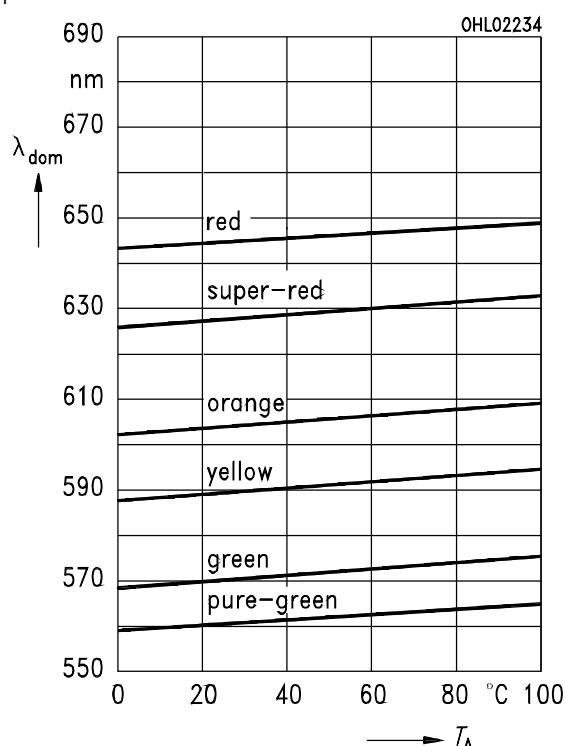
$I_F = f(T_A)$



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

**Dominant wavelength**

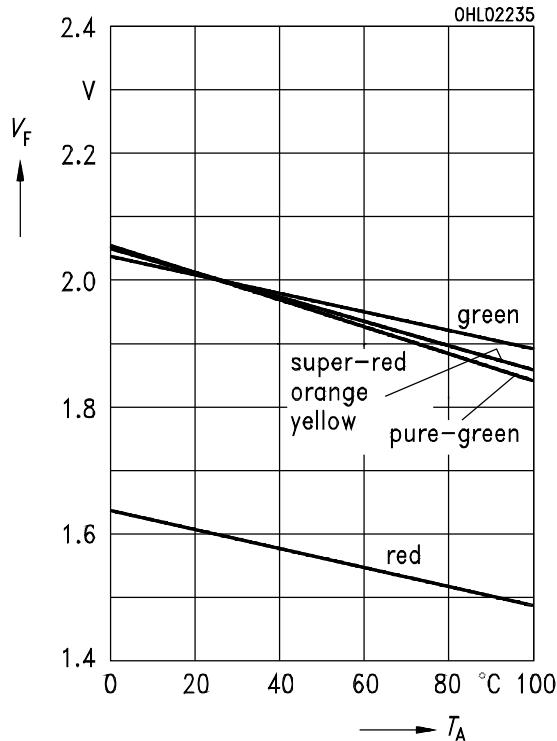
$I_F = 20$  mA



Durchlaßspannung  $V_F = f(T_A)$

Forward voltage

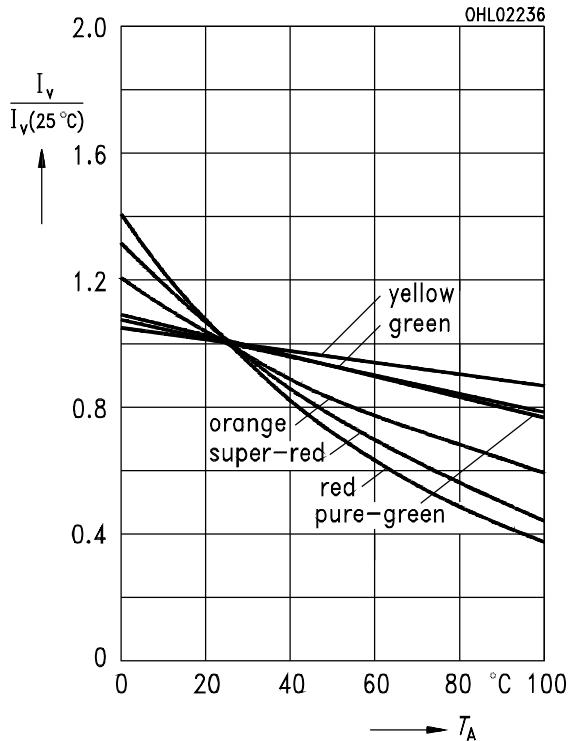
$I_F = 10 \text{ mA}$



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

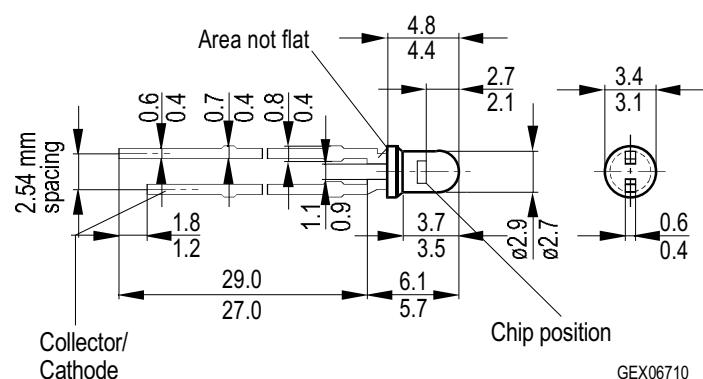
Relative luminous intensity

$I_F = 10 \text{ mA}$



Maßzeichnung  
Package Outlines

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



Kathodenkennzeichnung: Kürzerer Lötzieß  
Cathode mark: Short solder lead