

CHIPLED

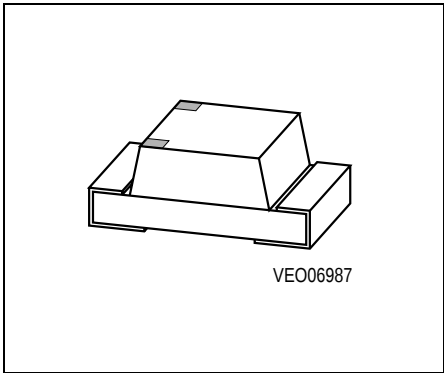
LY R970, LO R970, LS R970

Besondere Merkmale

- Gehäusebauform: 0805
- Industriestandard bzgl. Lötpadraster
- geringe Bauteilhöhe
- für IR-Lötung geeignet
- für Hinterleuchtungen und als opt. Indikator einsetzbar
- gegurtet (8-mm-Filmgurt)

Features

- 0805 package
- Industry standard footprint
- low profile
- suitable for IR reflow soldering process
- for use as optical indicator and backlighting
- available taped on reel (8 mm tape)



Typ	Emissions- farbe	Farbe der Lichtaustritts- fläche	Lichtstärke	Lichtstrom	Bestellnummer
Type	Color of Emission	Color of the Light Emitting Area	Luminous Intensity $I_F = 20 \text{ mA}$ $I_V \text{ (mcd)}$	Luminous Flux $I_F = 20 \text{ mA}$ $\Phi_V \text{ (mlm)}$	Ordering Code
LY R970-JO	yellow	colorless clear	$\geq 4.0 \text{ (7 typ.)}$	60 (typ.)	Q62702-P5104
LO R970-JO	orange		$\geq 4.0 \text{ (7 typ.)}$	60 (typ.)	Q62702-P5100
LS R970-JO	super-red		$\geq 4.0 \text{ (7 typ.)}$	60 (typ.)	Q62702-P5102

Grenzwerte Maximum Ratings

Bezeichnung Parameter	Symbol Symbol	Werte Values	Einheit Unit
Betriebstemperatur Operating temperature range	T_{op}	– 30 ... + 85	°C
Lagertemperatur Storage temperature range	T_{stg}	– 40 ... + 85	°C
Sperrschichttemperatur Junction temperature	T_j	+ 95	°C
Durchlaßstrom Forward current	I_F	25	mA
Stoßstrom Surge current $t \leq 10 \mu s, D = 0.005$	I_{FM}	0.1	A
Sperrspannung Reverse voltage	V_R	5	V
Verlustleistung, $T_A = 25 \text{ °C}$ Power dissipation, $T_A = 25 \text{ °C}$	P_{tot}	75	mW
Wärmewiderstand Sperrschicht / Umgebung Thermal resistance Junction / air	$R_{th JA}$	610	K/W

Kennwerte ($T_A = 25\text{ °C}$)

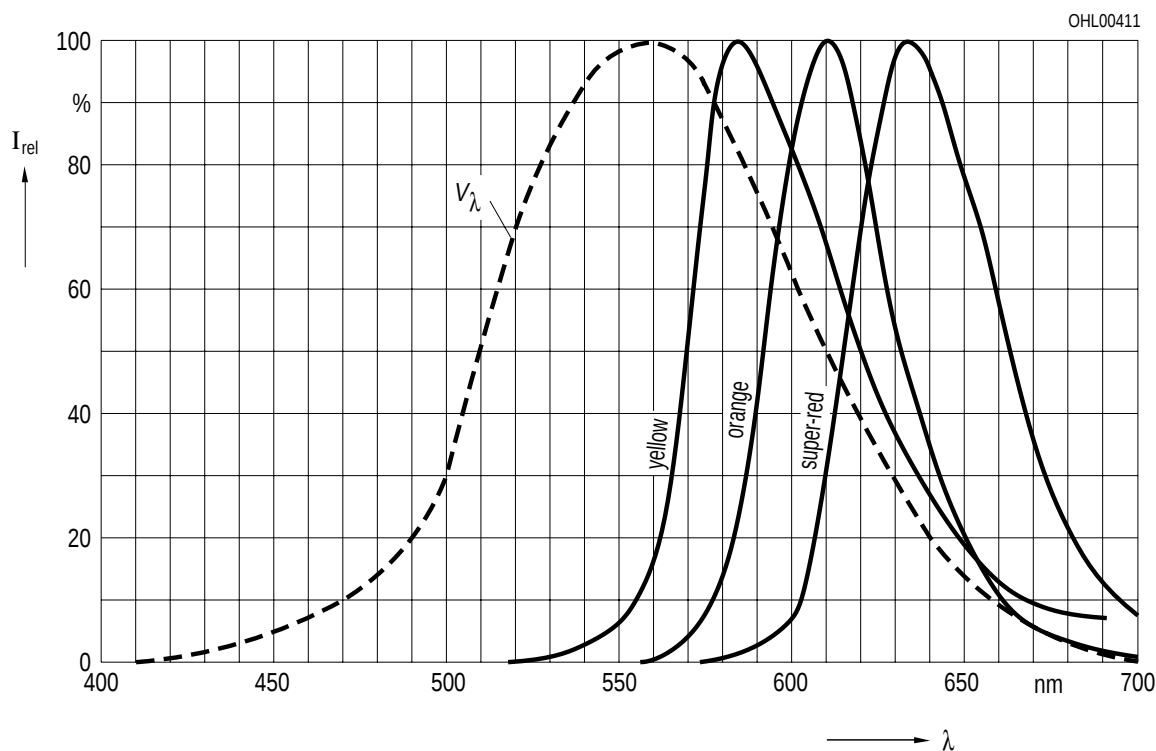
Characteristics

Bezeichnung Parameter	Symbol Symbol	Werte Values			Einheit Unit
		LY	LO	LS	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) $I_F = 20\text{ mA}$	λ_{peak}	586	610	635	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 20\text{ mA}$	λ_{dom}	590	605	628	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.) Spectral bandwidth at 50 % $I_{\text{rel max}}$ (typ.) $I_F = 20\text{ mA}$	$\Delta\lambda$	45	40	45	nm
Abstrahlwinkel bei 50 % I_v (Vollwinkel) Viewing angle at 50 % I_v	2ϕ	160	160	160	Grad deg.
Durchlaßspannung (typ.) Forward voltage (max.) $I_F = 20\text{ mA}$	V_F V_F	2.3 2.9	2.3 2.9	2.3 2.9	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
Temperaturkoeffizient von λ_{peak} (typ.) ($I_F = 20\text{ mA}$) Temperature coefficient of λ_{peak} (typ.) ($I_F = 20\text{ mA}$)	$TC_{\lambda_{\text{peak}}}$	0.1	0.1	0.1	nm/K
Temperaturkoeffizient von λ_{dom} , $I_F = 20\text{ mA}$ (typ.) Temperature coefficient of λ_{dom} , $I_F = 20\text{ mA}$ (typ.)	$TC_{\lambda_{\text{dom}}}$	0.08	0.08	0.08	nm/K
Temperaturkoeffizient von V_F , $I_F = 20\text{ mA}$ (typ.) Temperature coefficient of V_F , $I_F = 20\text{ mA}$ (typ.)	TC_{V_F}	- 1.9	- 1.9	- 1.9	mV/K

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

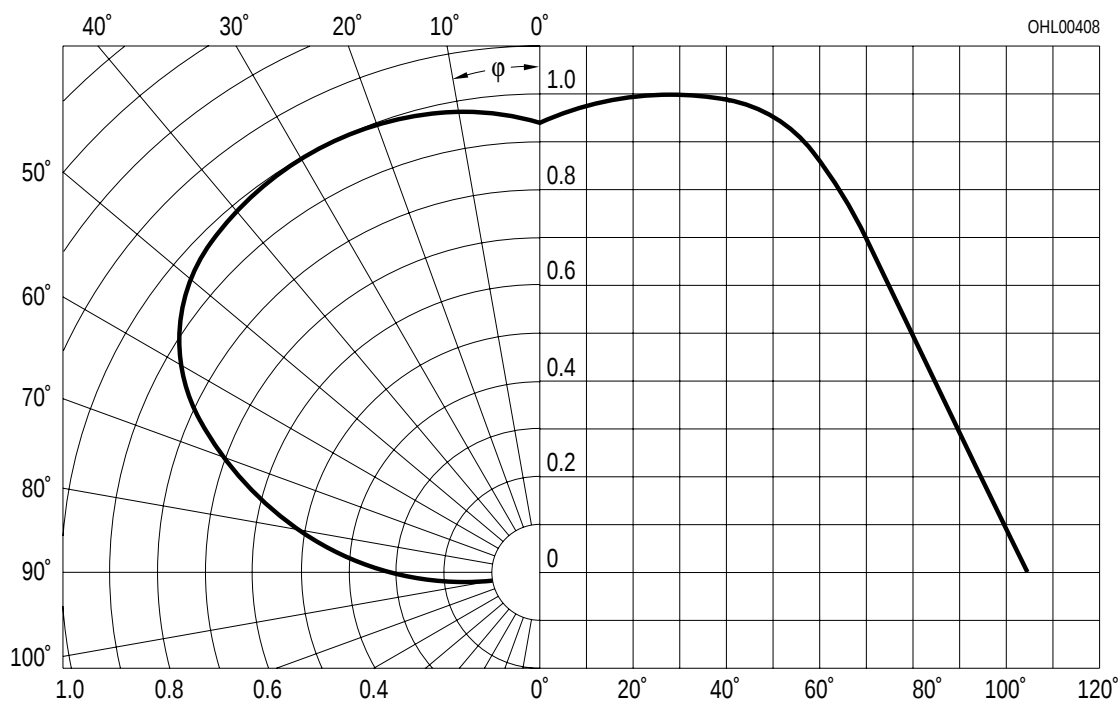
Relative spectral emission

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



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

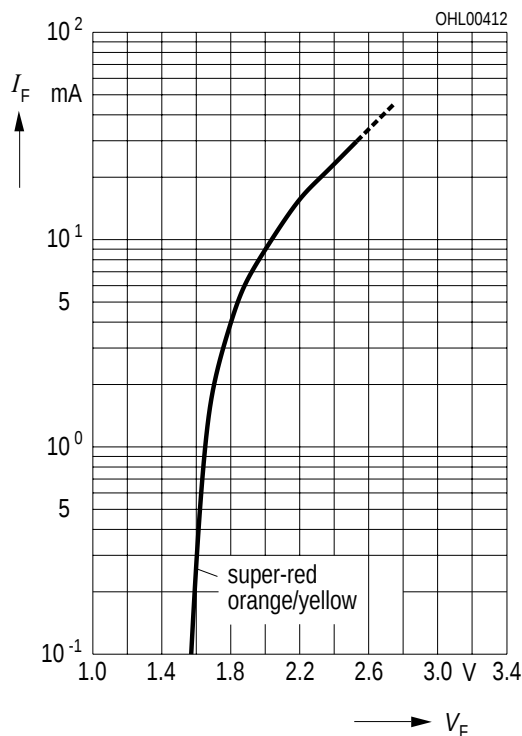
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

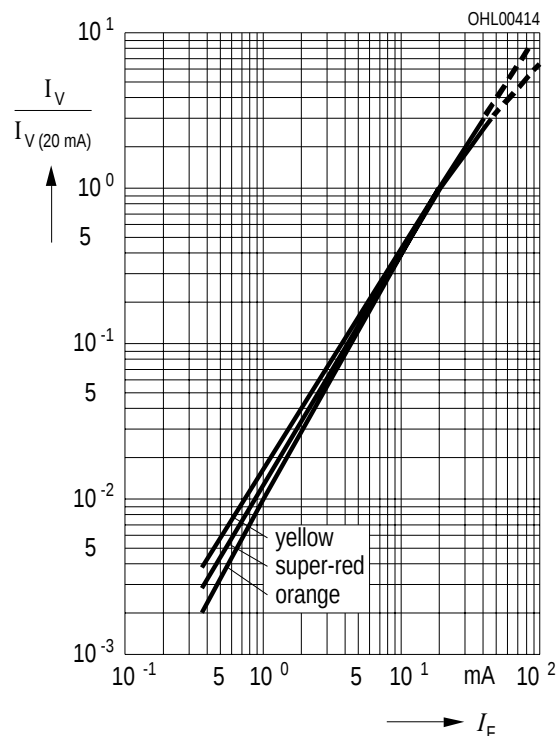
Forward current

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



Relative Lichtstärke $I_V/I_{V(20\text{ mA})} = f(I_F)$

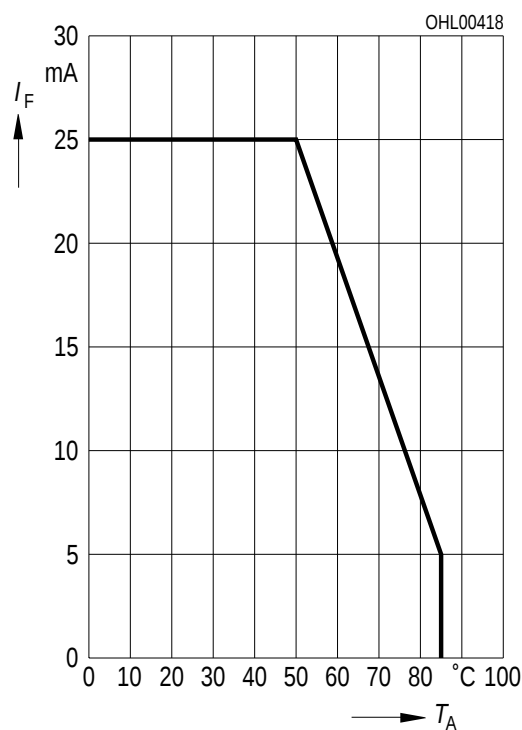
Relative luminous intensity $T_A = 25^\circ\text{C}$



Maximal zulässiger Durchlaßstrom

Max. permissible forward current

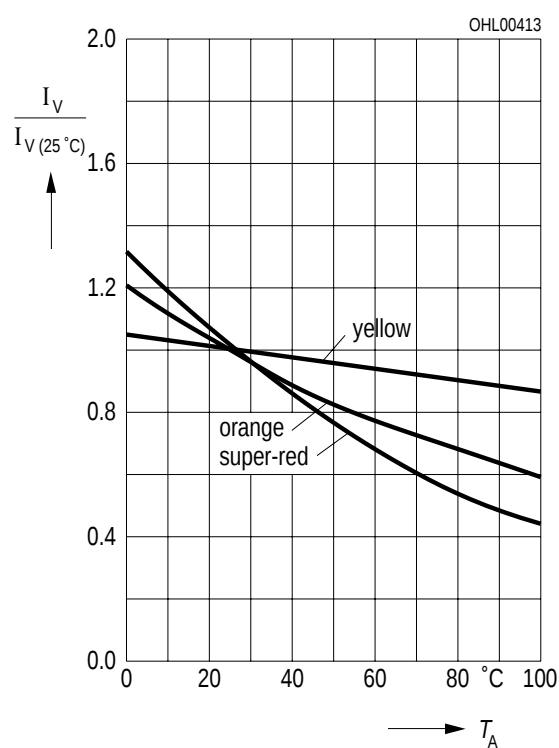
$I_F = f(T_A)$



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

Relative luminous intensity

$I_F = 20\text{ mA}$



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

