

CHIPLED

LSG F971

Vorläufige Daten / Preliminary Data

Besondere Merkmale

- Farbe: super-rot (628 nm) und grün (572 nm)
- Farbmischung möglich
- Chips getrennt ansteuerbar
- Industriestandard bzgl. Lötpadraster
- für alle SMT Bestück- und IR-Löttechniken geeignet
- geringe Bauteilhöhe
- gegurtet (8-mm-Filmgurt)

Features

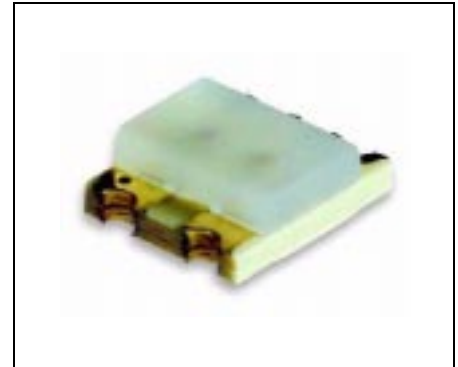
- colors: super-red (628 nm) and green (572 nm)
- color mixing is possible
- each chip can be controlled separately
- industry standard footprint
- suitable for all SMT assembly and IR soldering methods
- low profile
- available taped on reel (8 mm tape)

Anwendungen

- Handy-Hinterleuchtung
- Einkopplung in Lichtleiter
- LCD-Hinterleuchtung
- Schalter-Hinterleuchtung
- Spielsachen
- Armbanduhren
- Taschenrechner

Applications

- hand phone back lighting
- coupling in any light pipe
- LCD back lighting
- switch back lighting
- toys
- watches
- pocket calculators



Typ	Emissionsfarbe	Farbe der Lichtaustrittsfläche	Lichtstärke		Bestellnummer
Type	Color of Emission	Color of the Light Emitting Area	Luminous Intensity $I_F = 20 \text{ mA}$ $I_V \text{ (mcd)}$		Ordering Code
			min.	typ.	
LSG F971	super-red green	colorless diffused	6.3 10	11 21	Q62703-Q4728

Grenzwerte
Maximum Ratings

Bezeichnung Parameter	Symbol Symbol	Wert Value	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 $t_p = 10 \mu\text{s}$, $D = 0.1$	I_{FM}	t.b.d.	A
Sperrspannung Reverse voltage	V_R	5	V
Verlustleistung Power dissipation	P_{tot}	65	mW
Wärmewiderstand ¹⁾ Sperrschicht / Umgebung Thermal resistance ¹⁾ Junction / air	$R_{th JA}$	750	K/W

¹⁾ nur ein Chip betrieben
one system only

Kennwerte ($T_A = 25\text{ °C}$)
Characteristics

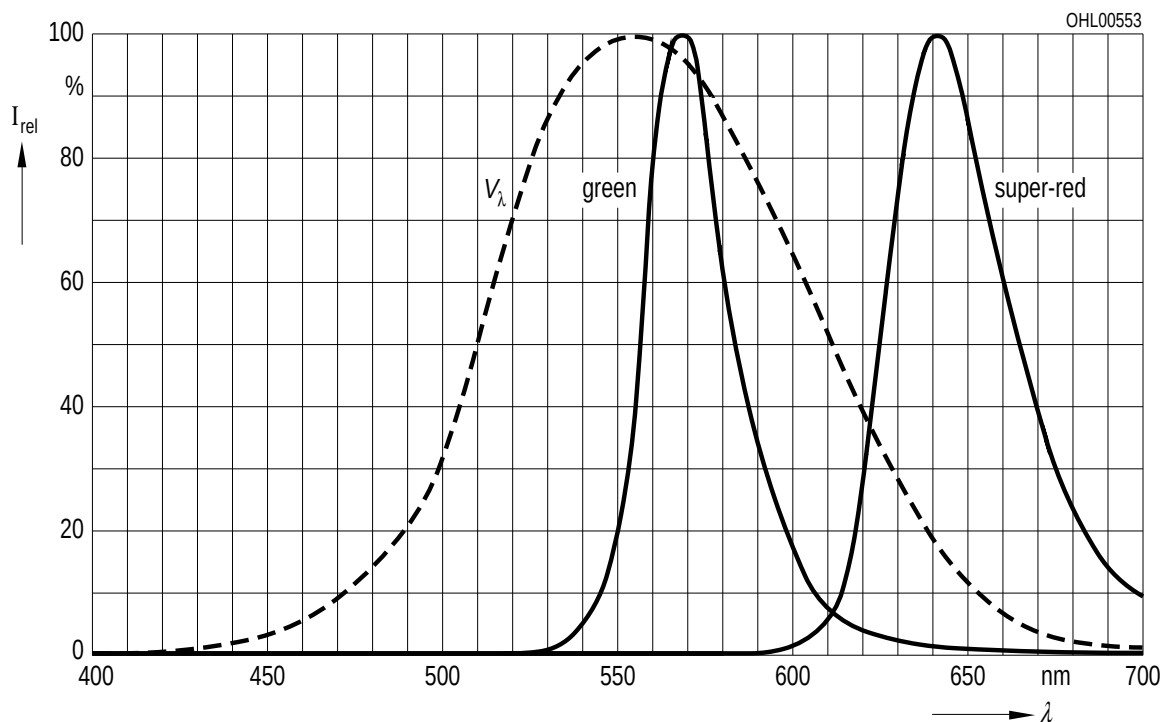
Bezeichnung Parameter	Symbol Symbol	Werte Values		Einheit Unit
		LS	LG	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission $I_F = 20\text{ mA}$	λ_{peak}	642	570	nm
Dominantwellenlänge (typ.) Dominant wavelength $I_F = 20\text{ mA}$	λ_{dom}	628	572	nm
Spektrale Bandbreite (typ.) Spectral bandwidth $I_F = 20\text{ mA}$	$\Delta\lambda$	40	30	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V	2ϕ	160	160	Grad deg.
Durchlaßspannung (typ.) Forward voltage (max.) $I_F = 20\text{ mA}$	V_F V_F	2.0 2.6	2.2 2.6	V V
Sperrstrom (typ.) Reverse current (max.) $V_R = 5\text{ V}$	I_R I_R	0.01 10	0.01 10	μA μA
Temperaturkoeffizient von λ_{dom} (typ.) Temperature coefficient of λ_{dom} $I_F = 20\text{ mA}$	$TC_{\lambda_{\text{dom}}}$	0.05	0.06	nm/K
Temperaturkoeffizient von λ_{peak} (typ.) Temperature coefficient of λ_{peak} $I_F = 20\text{ mA}$	$TC_{\lambda_{\text{peak}}}$	0.13	0.10	nm/K
Temperaturkoeffizient von V_F (typ.) Temperature coefficient of V_F $I_F = 20\text{ mA}$	TC_{V_F}	- 1.7	- 1.4	mV/K
Temperaturkoeffizient von I_V (typ.) Temperature coefficient of I_V $I_F = 20\text{ mA}$	TC_{I_V}	- 1.0	- 0.5	%/K

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

Relative spectral emission

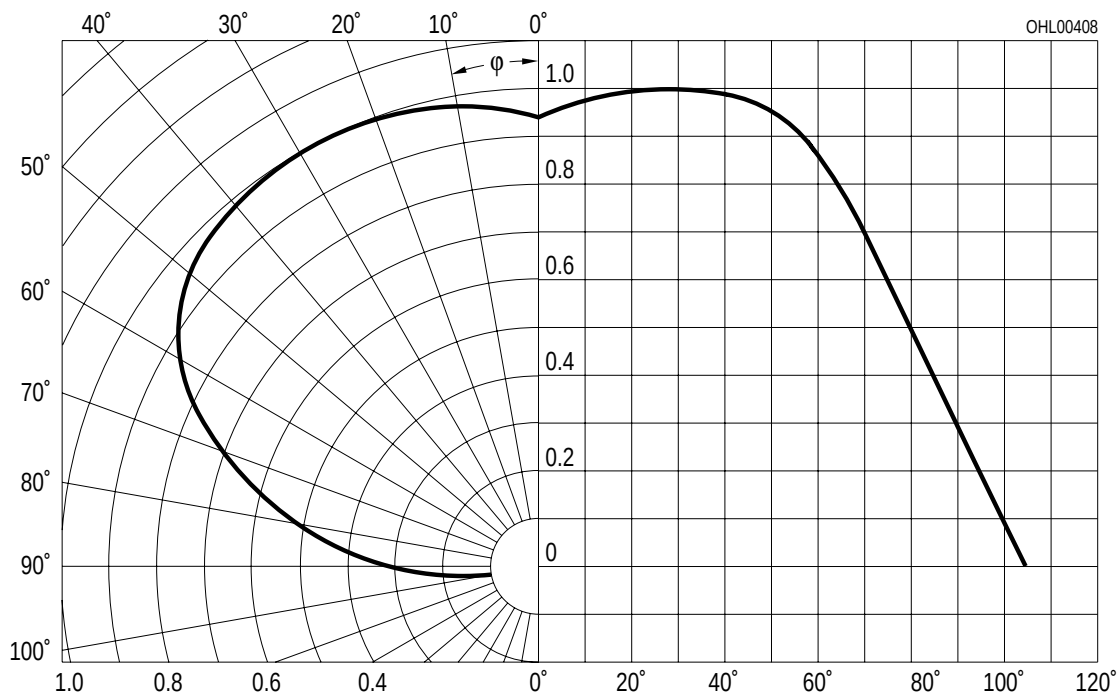
$V(\lambda)$ = spektrale Augenempfindlichkeit

standard eye response curve



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

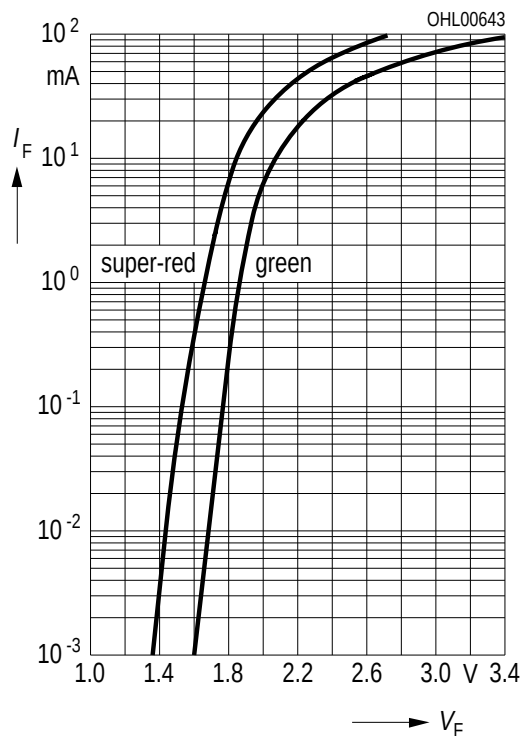
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

Forward current

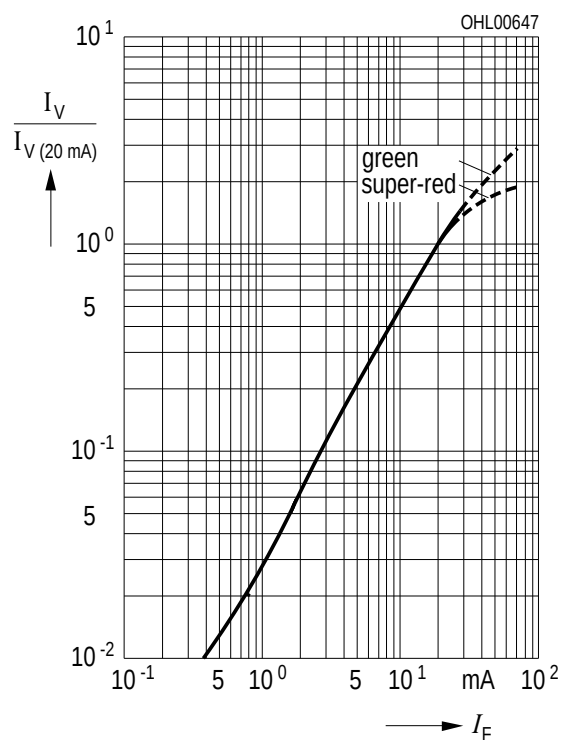
$T_A = 25^\circ\text{C}$



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

Relative luminous intensity

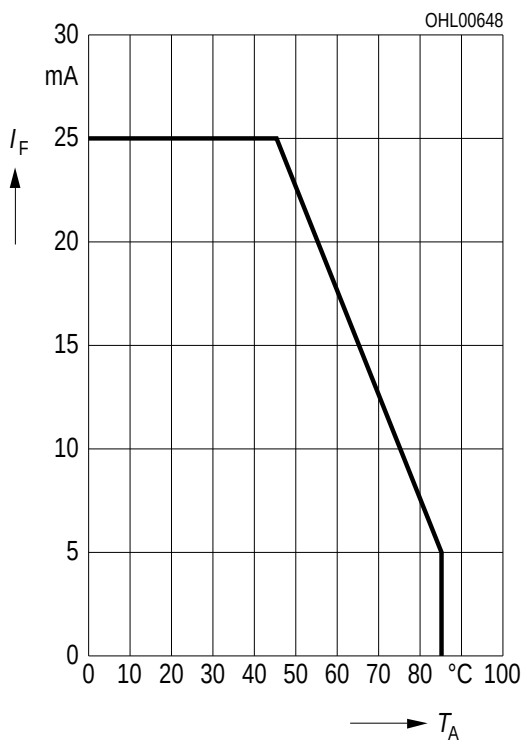
$T_A = 25^\circ\text{C}$



Maximal zulässiger Durchlaßstrom

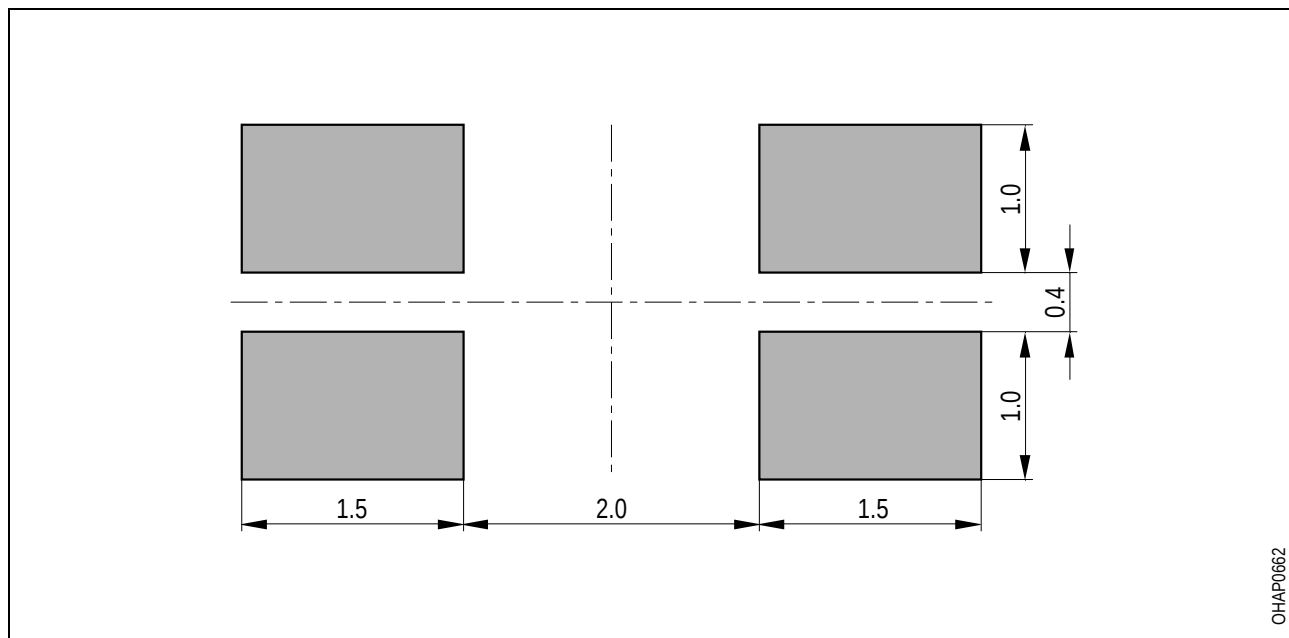
Max. permissible forward current

$I_F = f(T_A)$



Empfehlung Lötpaddesign
Recommended Pad

Infrarot/Vapor-Phase Reflow-Lötung
Infrared Vapor-Phase Reflow-Soldering

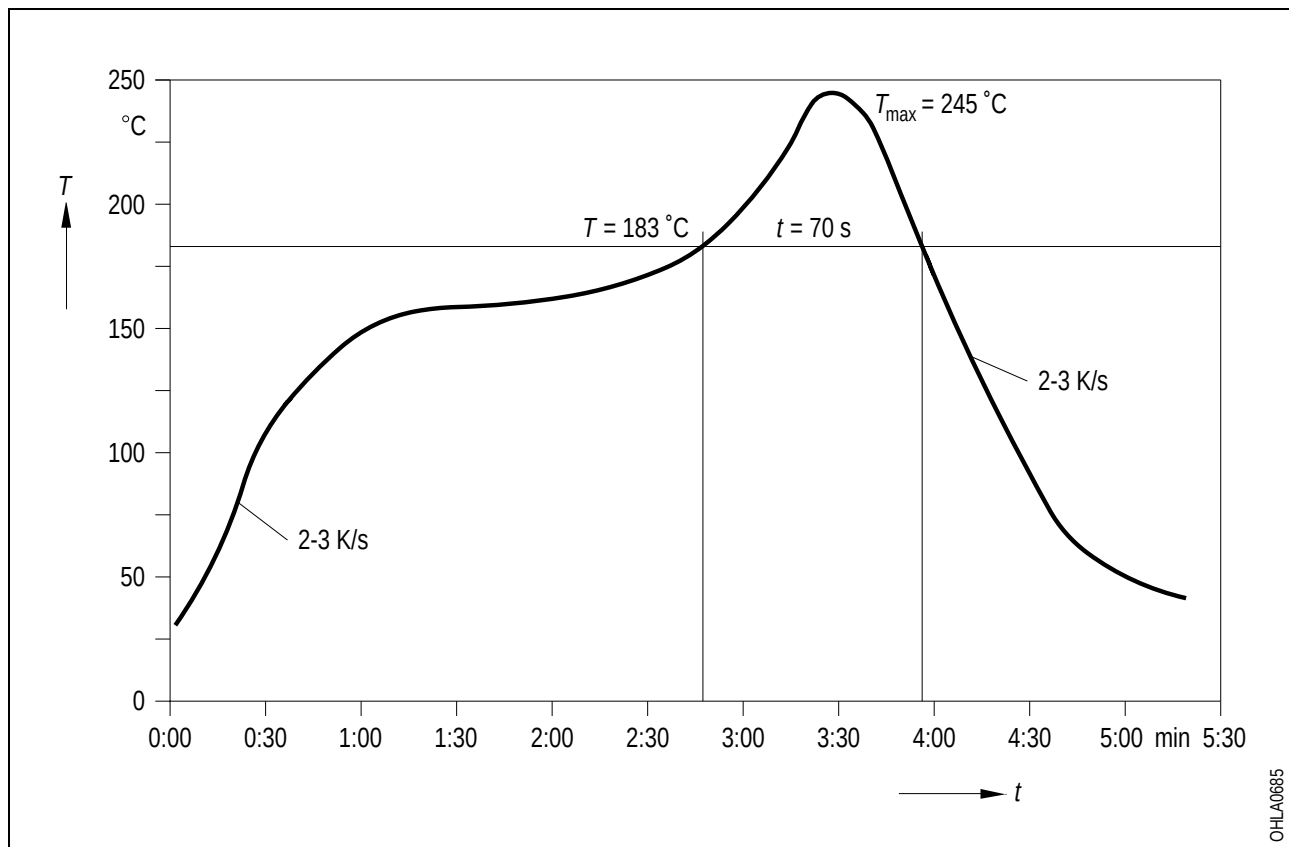


Empfohlenes Lötprofil

nach CECC 00802 für Infrarot/Vapor-Phase Reflow-Lötung

Recommended Soldering Profile

acc. to CECC 00802 for Infrared Vapor-Phase Reflow-Soldering

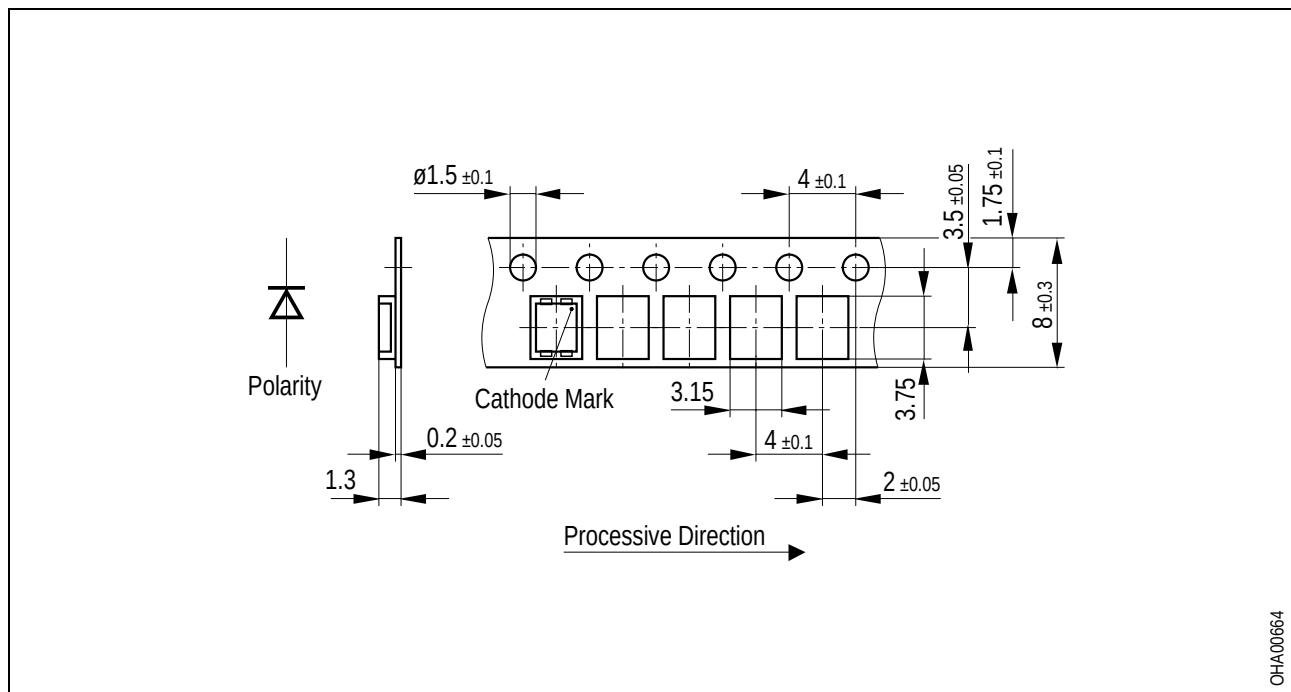


Gurtausführung / Polarität und Lage

Verpackungseinheit 3000/Rolle ø180 mm

Method of Taping / Polarity and Orientation

Packing unit 3000/Reel ø180 mm



Maßzeichnung

(Maße in mm, Toleranz ± 0.1 mm, wenn nicht anders angegeben)

Package Outlines

(Dimensions in mm, tolerance ± 0.1 mm unless otherwise specified)

