

Multi SIDELED® Bright Green Die

LOG A671, LSG A671



LOG A671 nicht für Neuentwicklung
LOG A671 not for new design

Besondere Merkmale

- **Gehäusotyp:** weißes SMT Gehäuse
- **Besonderheit des Bauteils:** Abstrahlung parallel zur Platine, deshalb ideal zur Einkopplung in Lichtleiter
- **Wellenlänge:** 628 nm (super-rot), 606 nm (orange), 570 nm (grün)
- **Abstrahlwinkel:** Lambertscher Strahler (120°)
- **Technologie:** GaAlP
- **optischer Wirkungsgrad:** 1,5 lm/W (super-rot, orange), 2,5 lm/W (grün)
- **Gruppierungsparameter:** Lichtstärke
- **Verarbeitungsmethode:** für alle SMT-Bestücktechniken geeignet
- **Lötmethode:** IR Reflow Löten und Wellenlöten (TTW)
- **Vorbehandlung:** nach JEDEC Level 2
- **Gurtung:** 12 mm Gurt mit 2000/Rolle, ø330 mm

Anwendungen

- Hinterleuchtung (LCD, Schalter, Tasten, Displays, Werbebeleuchtung, Allgemeinbeleuchtung)
- Einkopplung in Lichtleiter
- Innenbeleuchtung im Automobilbereich (z.B. Instrumentenbeleuchtung, u.ä.)

Features

- **package:** white SMT package
- **feature of the device:** radiation direction parallel to PCB, so an ideal LED for coupling in light guides
- **wavelength:** 628 nm (super-red), 606 nm (orange), 570 nm (green)
- **viewing angle:** Lambertian Emitter (120°)
- **technology:** GaAlP
- **optical efficiency:** 1.5 lm/W (super-red, orange), 2.5 lm/W (green)
- **grouping parameter:** luminous intensity
- **assembly methods:** suitable for all SMT assembly methods
- **soldering methods:** IR reflow soldering and TTW soldering
- **preconditioning:** acc. to JEDEC Level 2
- **taping:** 12 mm tape with 2000/reel, ø330 mm

Applications

- backlighting (LCD, switches, keys, displays, illuminated advertising, general lighting)
- coupling into light guide
- interior automotive lighting (e.g. dashboard backlighting, etc.)

Type	Emissions- farbe	Farbe der Lichtaustritts- fläche	Lichtstärke		Bestellnumme r
Type	Color of Emission	Color of the Light Emitting Area	Luminous Intensity $I_F = 10 \text{ mA}$ $I_V \text{ (mcd)}$		Ordering Code
			color 1	color 2	
■ LOG A671	orange / green	colorless clear	4.5 ... 18.0	7.1 ... 28.0	Q62703Q4322
■ LOG A671-J+K			4.5 ... 7.1	7.1 ... 11.2	
■ LOG A671-J+L			4.5 ... 7.1	11.2 ... 18.0	
■ LOG A671-J+M			4.5 ... 7.1	18.0 ... 28.0	
■ LOG A671-K+K			7.1 ... 11.2	7.1 ... 11.2	
■ LOG A671-K+L			7.1 ... 11.2	11.2 ... 18.0	
■ LOG A671-K+M			7.1 ... 11.2	18.0 ... 28.0	
■ LOG A671-L+M			11.2 ... 18.0	18.0 ... 28.0	
LSG A671	super-red / green	colorless clear	4.5 ... 18.0	7.1 ... 28.0	Q62703Q4323
LSG A671-J+K			4.5 ... 7.1	7.1 ... 11.2	
LSG A671-J+L			4.5 ... 7.1	11.2 ... 18.0	
LSG A671-J+M			4.5 ... 7.1	18.0 ... 28.0	
LSG A671-K+K			7.1 ... 11.2	7.1 ... 11.2	
LSG A671-K+L			7.1 ... 11.2	11.2 ... 18.0	
LSG A671-K+M			7.1 ... 11.2	18.0 ... 28.0	
LSG A671-L+K			11.2 ... 18.0	7.1 ... 11.2	
LSG A671-L+L			11.2 ... 18.0	11.2 ... 18.0	
LSG A671-L+M			11.2 ... 18.0	18.0 ... 28.0	

Helligkeitswerte werden mit einer Stromeinprägedauer von 25 ms und einer Genauigkeit von $\pm 11 \%$ ermittelt.
Luminous intensity is tested at a current pulse duration of 25 ms and a tolerance of $\pm 11 \%$.

■ Nicht für Neuentwicklungen nach PD_078_02 / Not for new design acc. to PD_078_02.
Letzte Bestellung / Last Order: 30.09.2003
Letzte Lieferung / Last Delivery: 31.03.2004

*Anm.: Die Standardlieferform von Serientypen beinhaltet eine Familiengruppe. Einzelne Gruppen sind nicht erhältlich.
In einer Verpackungseinheit / Gurt ist immer nur eine Gruppe pro Farbe enthalten.*

*Note: The standard shipping format for serial types includes a family group. Individual groups are not available.
No packing unit / tape ever contains more than one luminous intensity group per color.*

Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Betriebstemperatur Operating temperature range	T_{op}	– 40 ... + 100	°C
Lagertemperatur Storage temperature range	T_{stg}	– 40 ... + 100	°C
Sperrschichttemperatur Junction temperature	T_j	+ 100	°C
Durchlassstrom Forward current	I_F	30	mA
Stoßstrom Surge current $t \leq 10 \mu s, D = 0.005$	I_{FM}	0.5	A
Sperrspannung ¹⁾ Reverse voltage	V_R	12	V
Leistungsaufnahme Power consumption	P_{tot}	95	mW
Wärmewiderstand Thermal resistance Sperrschicht/Umgebung Junction/air	$R_{th JA}$	430	K/W
Sperrschicht/Lötpad Junction/solder point Montage auf PC-Board FR 4 (Padgröße $\geq 16 \text{ mm}^2$) mounted on PC board FR 4 (pad size $\geq 16 \text{ mm}^2$)	$R_{th JS}$	200	K/W

¹⁾ für kurzzeitigen Betrieb geeignet / suitable for short term application

Bezeichnung Parameter	Symbol Symbol	Werte Values			Einheit Unit
		LS	LO	LG	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission $I_F = 10 \text{ mA}$	λ_{peak}	635	610	572	nm
Dominantwellenlänge ¹⁾ (typ.) Dominant wavelength $I_F = 10 \text{ mA}$	λ_{dom}	628 ± 6	606 ± 6	570 ± 6	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.) Spectral bandwidth at 50 % $I_{\text{rel max}}$ $I_F = 10 \text{ mA}$	$\Delta\lambda$	45	40	25	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) (typ.) Viewing angle at 50 % I_V	2ϕ	120	120	120	Grad deg.
Durchlassspannung ²⁾ (typ.) Forward voltage (max.) $I_F = 10 \text{ mA}$	V_F V_F	2.0 2.5	2.0 2.5	2.0 2.5	V V
Sperrstrom (typ.) Reverse current (max.) $V_R = 12 \text{ V}$	I_R I_R	0.01 10	0.01 10	0.01 10	μA μA
Temperaturkoeffizient von λ_{peak} (typ.) Temperature coefficient of λ_{peak} $I_F = 10 \text{ mA}; -10^\circ\text{C} \leq T \leq 100^\circ\text{C}$	$TC_{\lambda_{\text{peak}}}$	0.11	0.12	0.11	nm/K
Temperaturkoeffizient von λ_{dom} (typ.) Temperature coefficient of λ_{dom} $I_F = 10 \text{ mA}; -10^\circ\text{C} \leq T \leq 100^\circ\text{C}$	$TC_{\lambda_{\text{dom}}}$	0.07	0.07	0.07	nm/K
Temperaturkoeffizient von V_F (typ.) Temperature coefficient of V_F $I_F = 10 \text{ mA}; -10^\circ\text{C} \leq T \leq 100^\circ\text{C}$	TC_V	- 1.9	- 1.9	- 1.4	mV/K
Optischer Wirkungsgrad (typ.) Optical efficiency $I_F = 10 \text{ mA}$	η_{opt}	1.5	1.5	2.5	lm/W

¹⁾ Wellenlängen werden mit einer Stromeinprägedauer von 25 ms und einer Genauigkeit von $\pm 1 \text{ nm}$ ermittelt.
Wavelengths are tested at a current pulse duration of 25 ms and a tolerance of $\pm 1 \text{ nm}$.

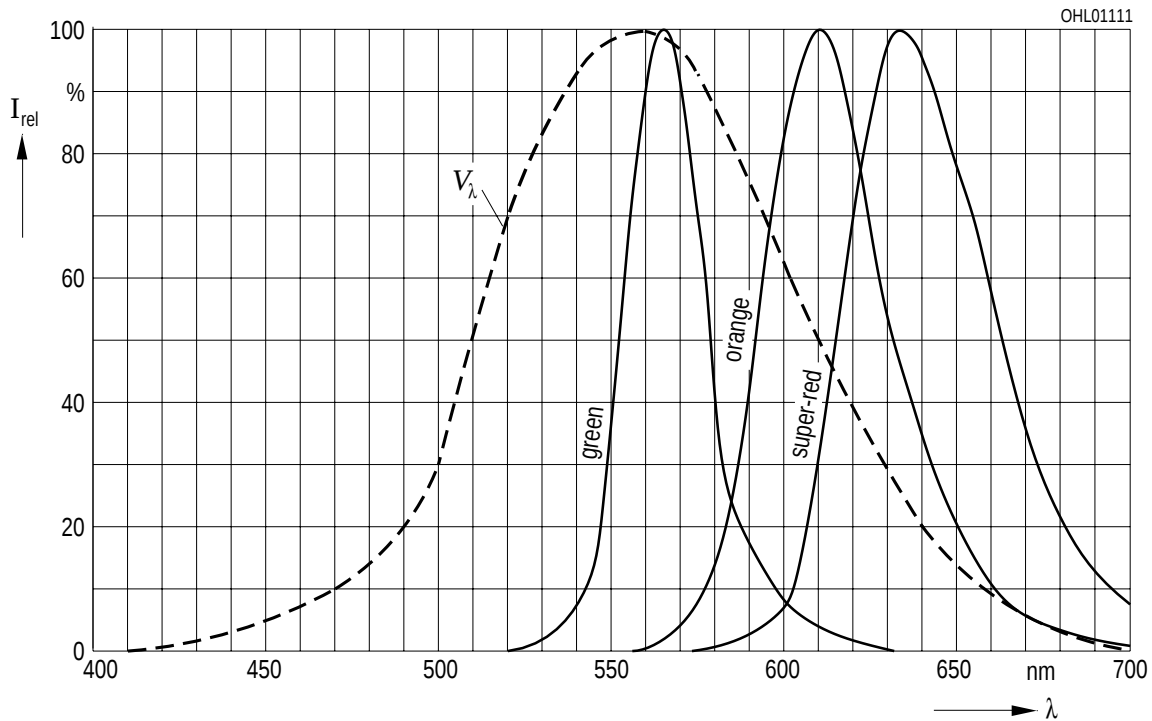
²⁾ Spannungswerte werden mit einer Stromeinprägedauer von 1 ms und einer Genauigkeit von $\pm 0,1 \text{ V}$ ermittelt.
Voltages are tested at a current pulse duration of 1 ms and a tolerance of $\pm 0.1 \text{ V}$.

Relative spektrale Emission $I_{\text{rel}} = f(\lambda)$, $T_A = 25^\circ\text{C}$, $I_F = 10\text{ mA}$

Relative Spectral Emission

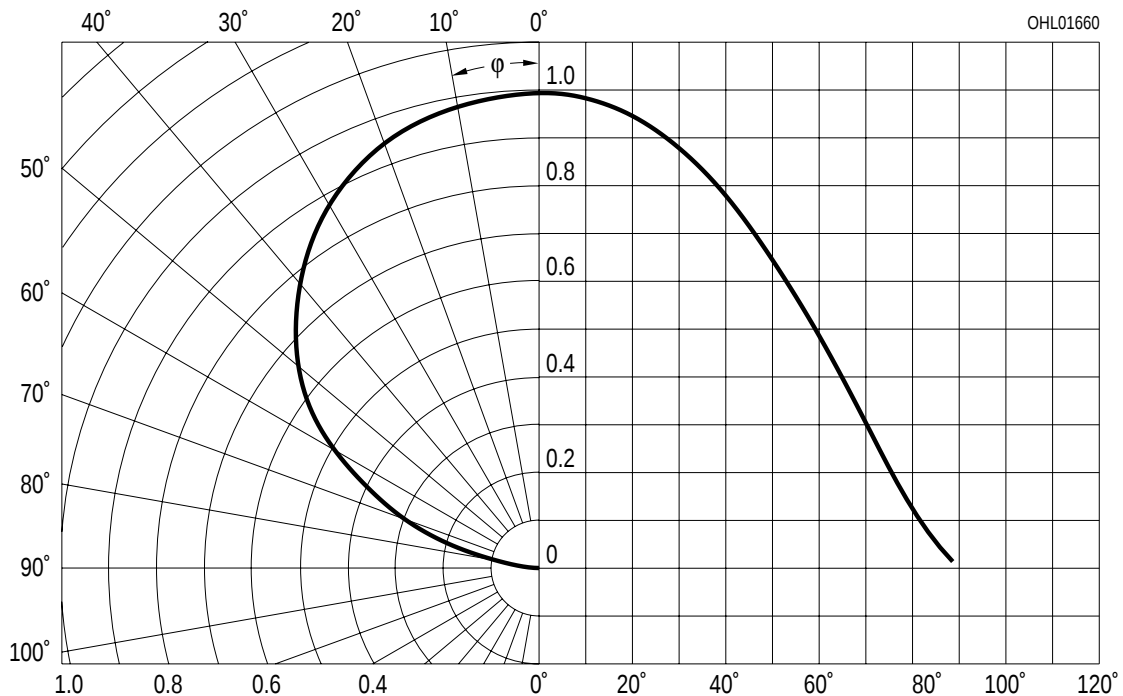
$V(\lambda)$ = spektrale Augenempfindlichkeit

Standard eye response curve



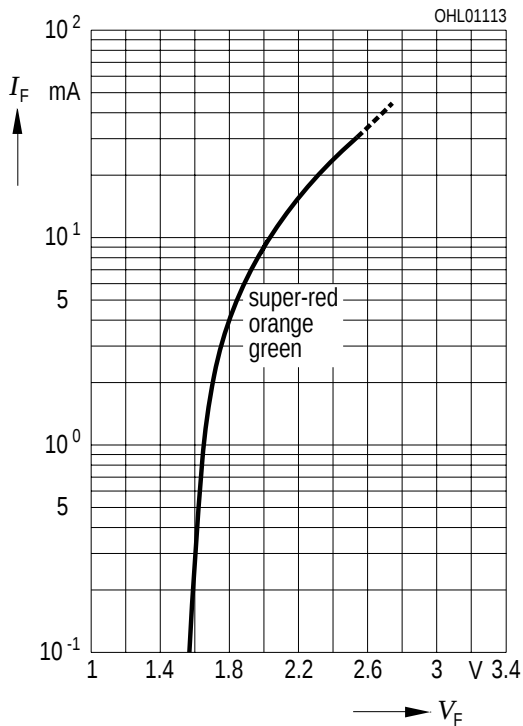
Abstrahlcharakteristik $I_{\text{rel}} = f(\varphi)$

Radiation Characteristic

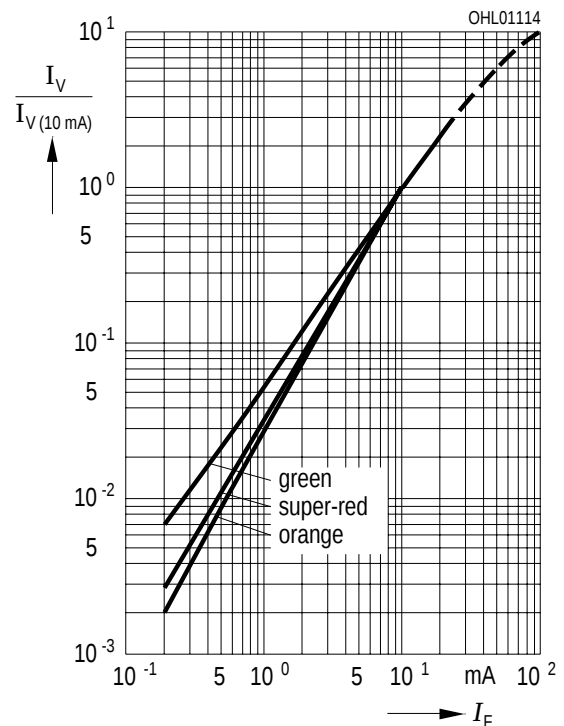


Durchlassstrom $I_F = f(V_F)$

Forward Current

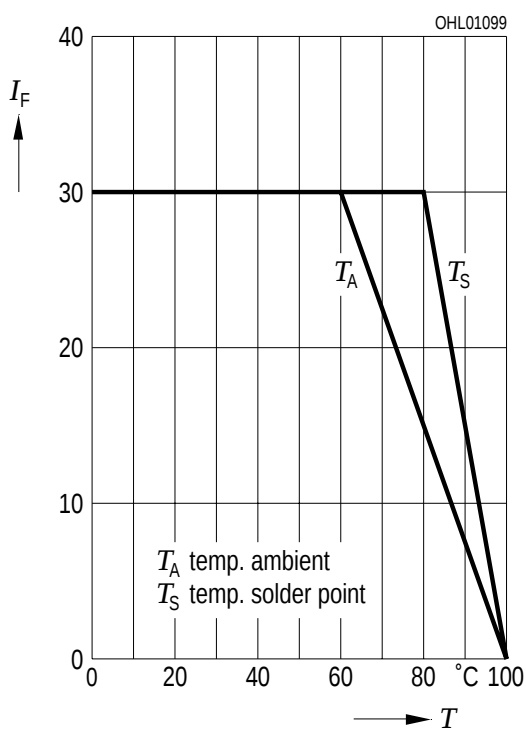
 $T_A = 25\text{ }^{\circ}\text{C}$ Relative Lichtstärke $I_V/I_{V(10\text{ mA})} = f(I_F)$

Relative Luminous Intensity

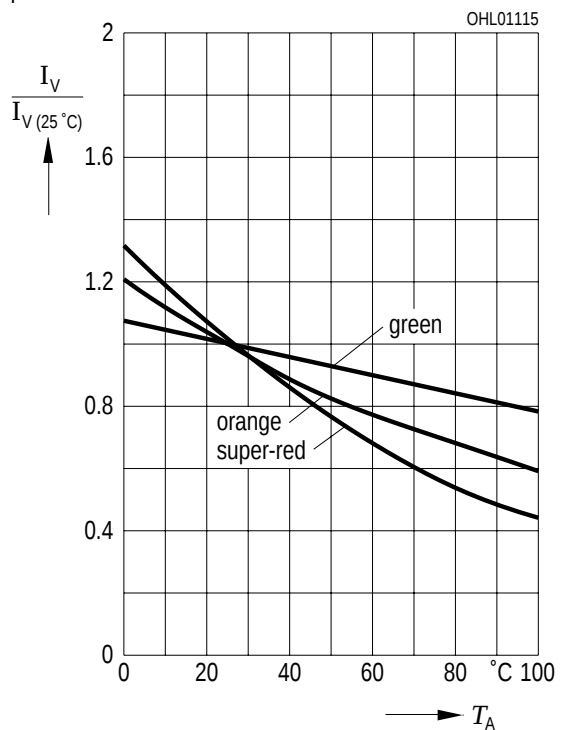
 $T_A = 25\text{ }^{\circ}\text{C}$ Maximal zulässiger Durchlassstrom $I_F = f(T)$

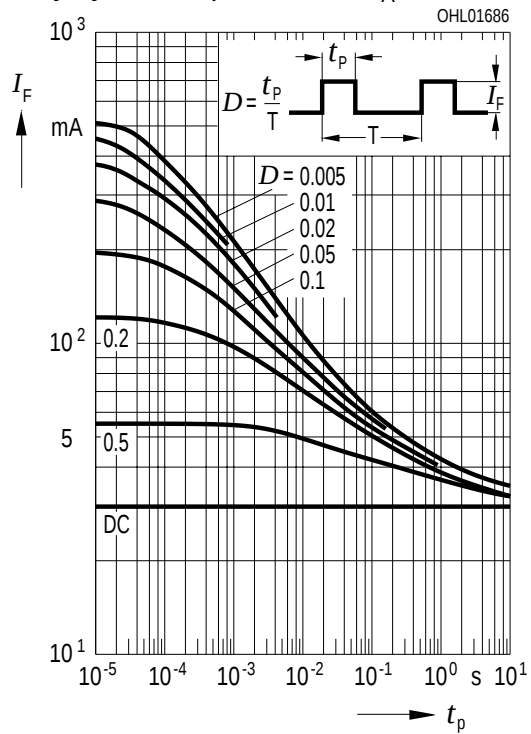
Max. Permissible Forward Current

LOG

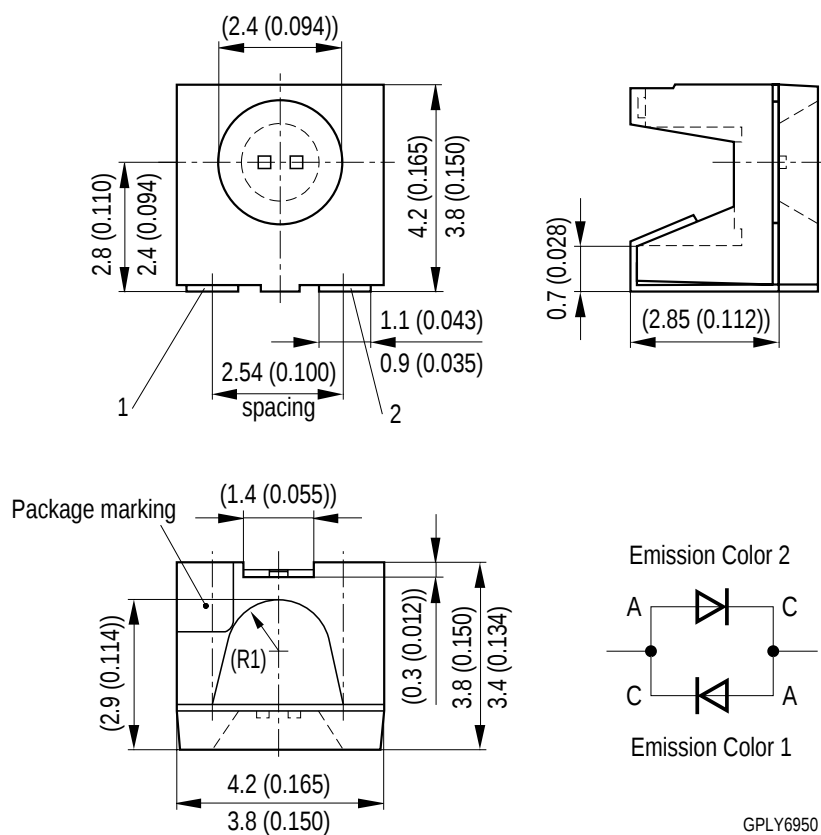
Relative Lichtstärke $I_V/I_{V(25\text{ }^{\circ}\text{C})} = f(T_A)$

Relative Luminous Intensity

 $I_F = 10\text{ mA}$ 

Zulässige Impulsbelastbarkeit $I_F = f(t_p)$ **Permissible Pulse Handling Capability**Duty cycle D = parameter, $T_A = 25\text{ °C}$ 

Maßzeichnung Package Outlines



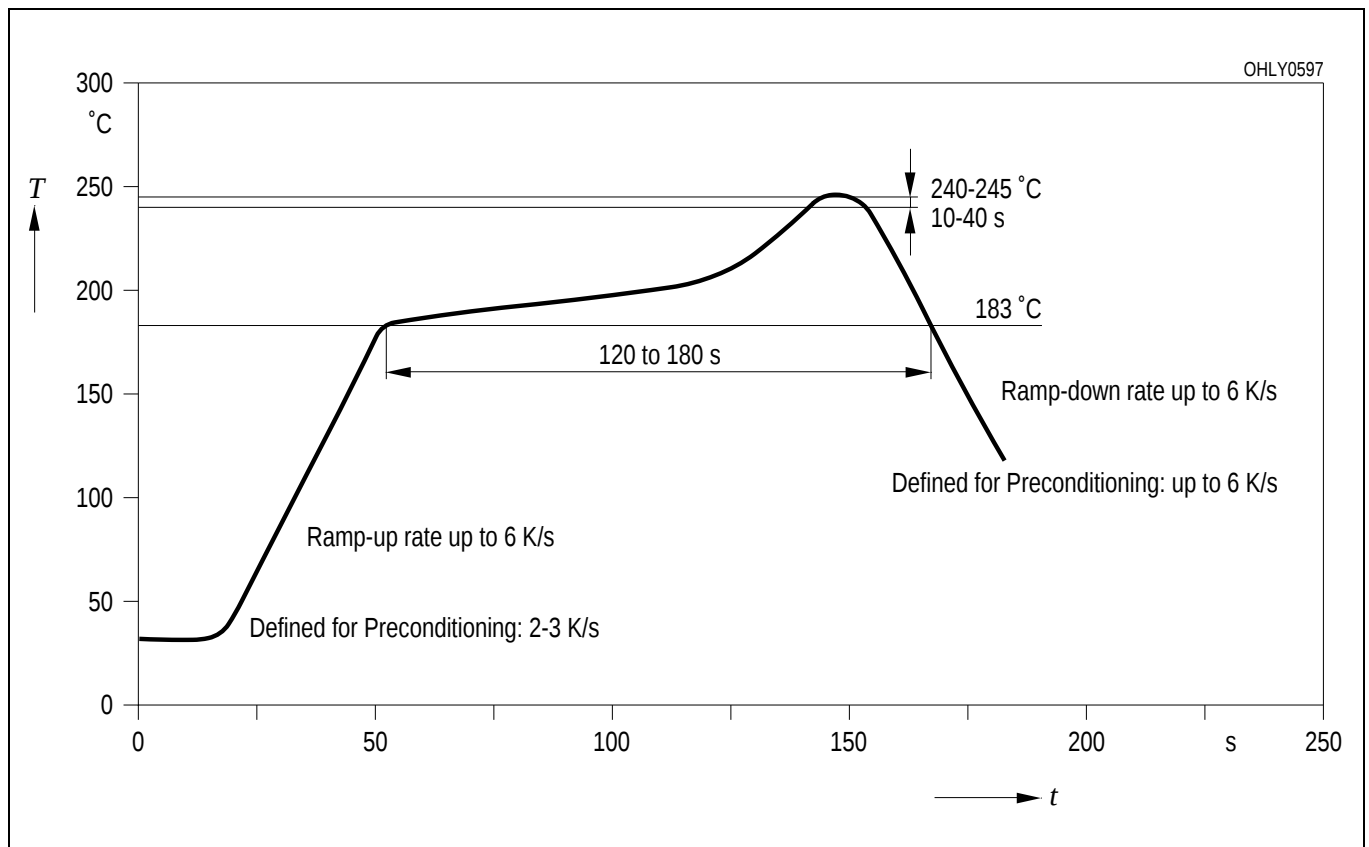
L	O / S	G	A671
LED	Emission color 1	Emission color 2	Package
	Cathode: pin 1	Cathode: pin 2	

Maße werden wie folgt angegeben: mm (inch) / Dimensions are specified as follows: mm (inch).

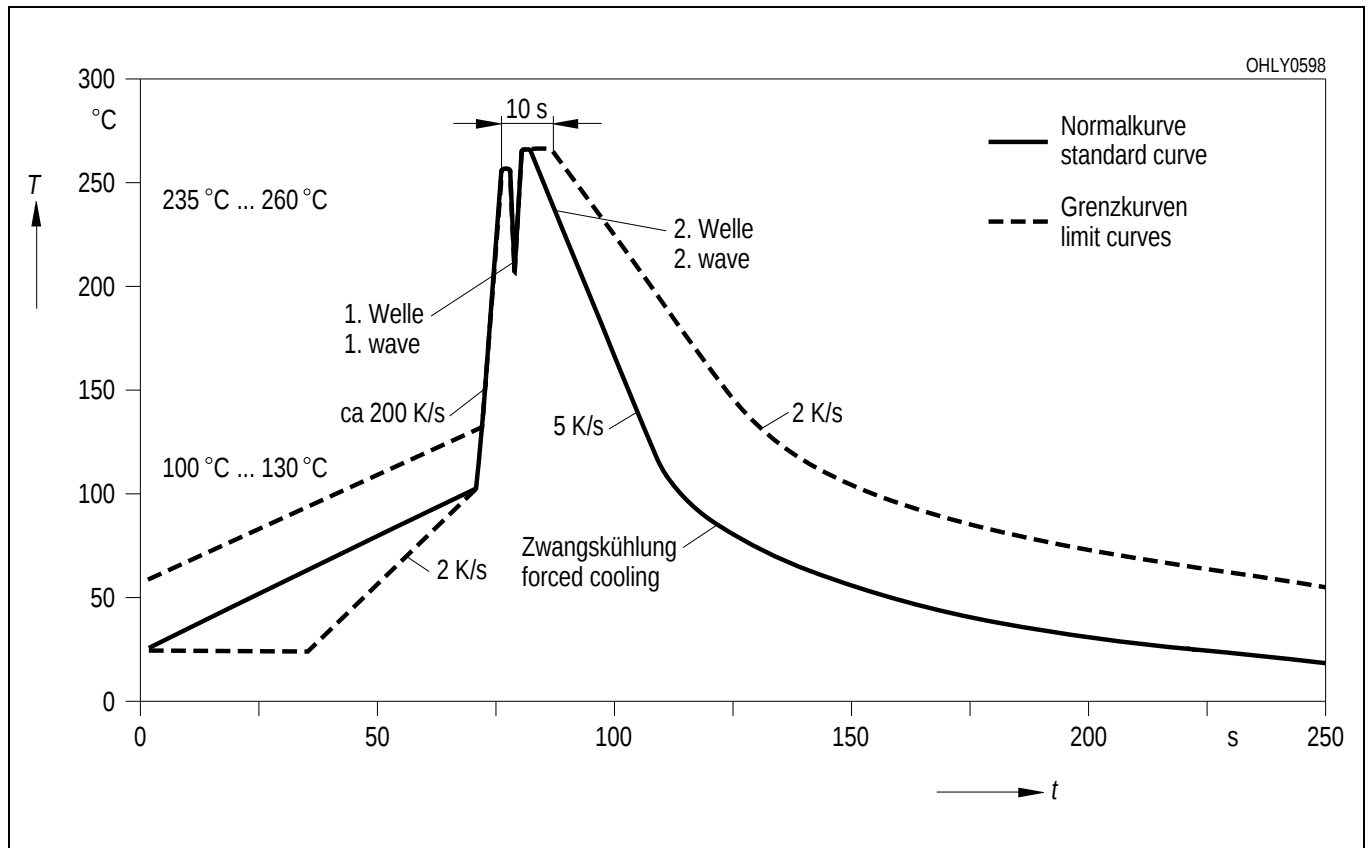
Gewicht / Approx. weight: 76 mg

Lötbedingungen Vorbehandlung nach JEDEC Level 2
Soldering Conditions Preconditioning acc. to JEDEC Level 2

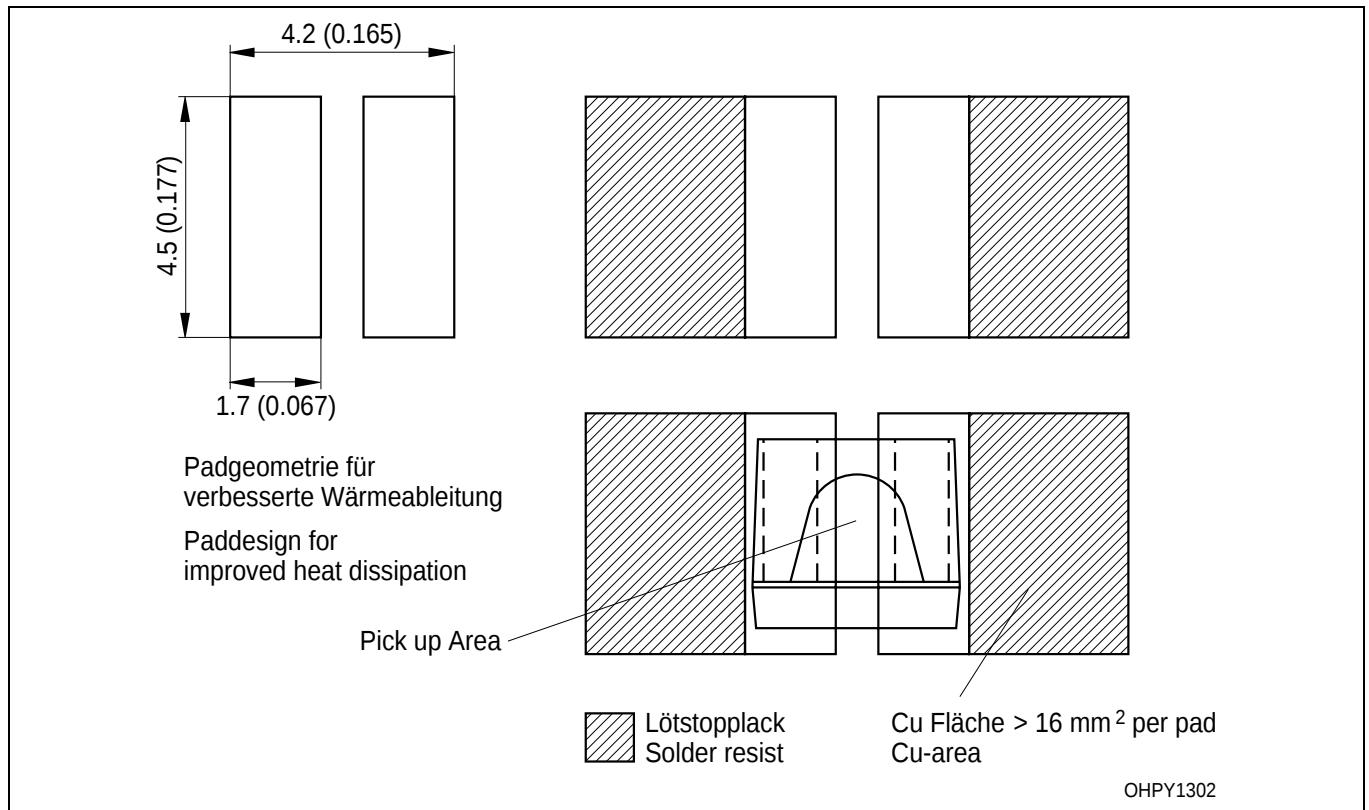
IR-Reflow Lötprofil (nach IPC 9501)
IR Reflow Soldering Profile (acc. to IPC 9501)



Wellenlöten (TTW) (nach CECC 00802)
TTW Soldering (acc. to CECC 00802)

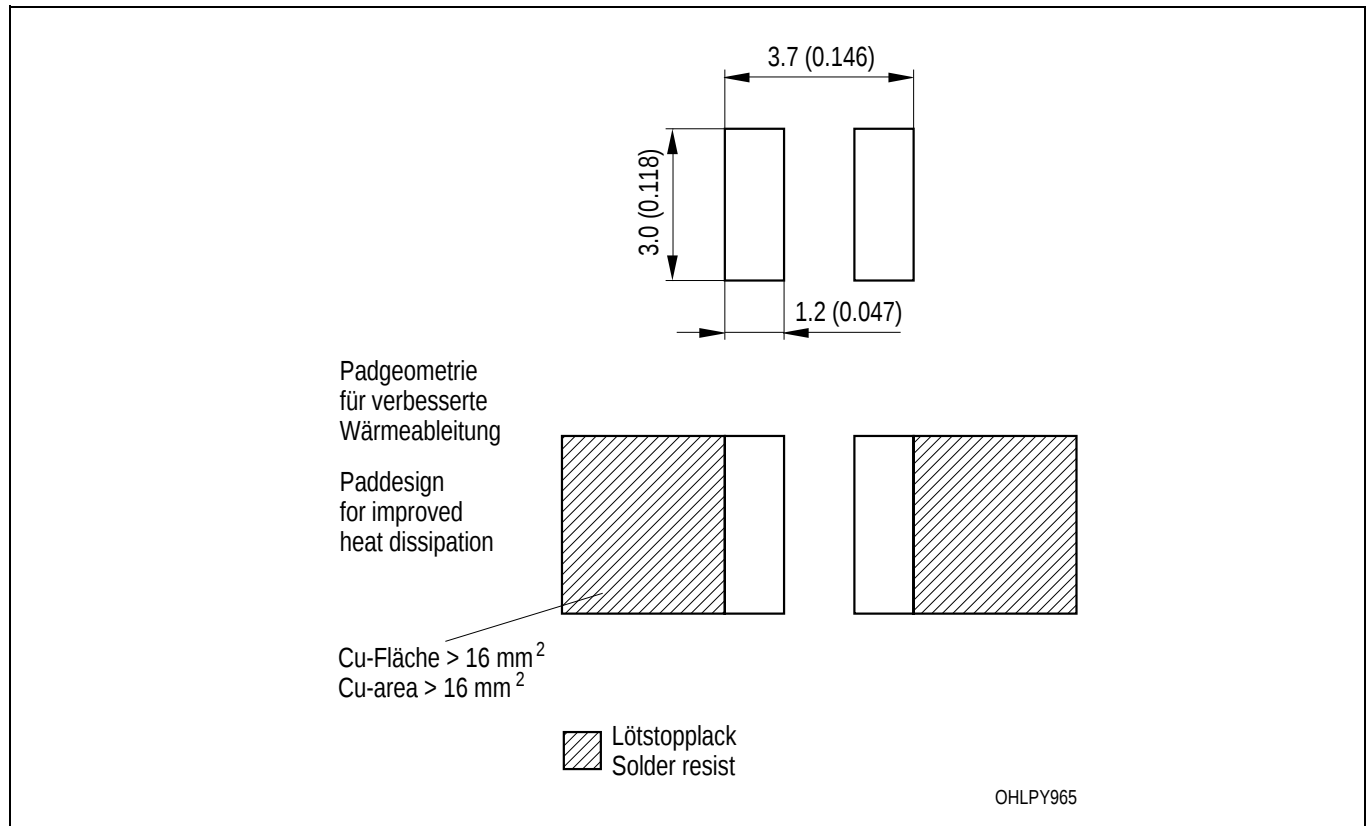


Empfohlenes Lötpad design Wellenlöten (TTW)
Recommended Solder Pad TTW Soldering



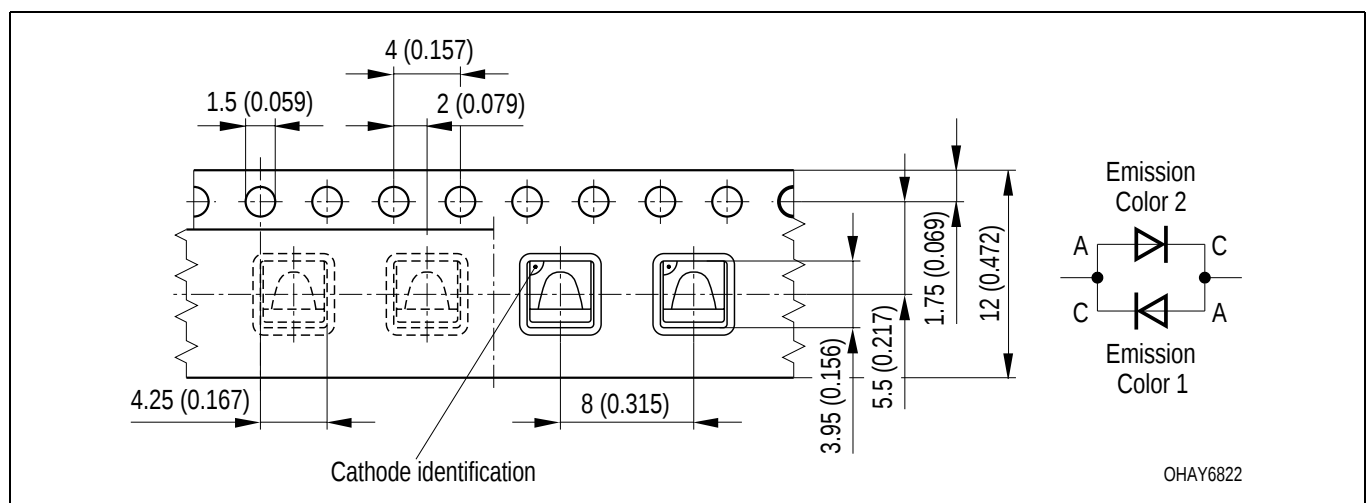
Maße werden wie folgt angegeben: mm (inch) / Dimensions are specified as follows: mm (inch).

Empfohlenes Lötpaddesign IR Reflow Löten
Recommended Solder Pad IR Reflow Soldering



Maße werden wie folgt angegeben: mm (inch) / Dimensions are specified as follows: mm (inch).

Gurtung / Polarität und Lage Verpackungseinheit 2000/Rolle, ø330 mm
Method of Taping / Polarity and Orientation Packing unit 2000/reel, ø330 mm



Maße werden wie folgt angegeben: mm (inch) / Dimensions are specified as follows: mm (inch).

Revision History: 2003-08-06		Date of change
Previous Version: 2002-09-18		
Page	Subjects (major changes since last revision)	
13	annotations	2002-07-23
12	recommended solder pad (IR reflow soldering)	2002-08-01
3, 4	value (reverse voltage from 5 V to 12 V)	2002-09-18
1,2	LOG not for new design	2003-08-06

Published by OSRAM Opto Semiconductors GmbH
Wernerwerkstrasse 2, D-93049 Regensburg

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Packing

Please use the recycling operators known to you. We can also help you – get in touch with your nearest sales office. By agreement we will take packing material back, if it is sorted. You must bear the costs of transport. For packing material that is returned to us unsorted or which we are not obliged to accept, we shall have to invoice you for any costs incurred.

Components used in life-support devices or systems must be expressly authorized for such purpose! Critical components ¹ may only be used in life-support devices or systems ² with the express written approval of OSRAM OS.

¹ A critical component is a component used in a life-support device or system whose failure can reasonably be expected to cause the failure of that life-support device or system, or to affect its safety or the effectiveness of that device or system.

² Life support devices or systems are intended (a) to be implanted in the human body, or (b) to support and/or maintain and sustain human life. If they fail, it is reasonable to assume that the health of the user may be endangered.