

Multi SIDELED® Bright Green Die

LOG A671, LSG A671



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:** Lambertischer Strahler (120°)
- **Technologie:** GaAIP
- **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:** GaAIP
- **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.)

Typ	Emissions- farbe	Farbe der Lichtaustritts- fläche	Lichtstärke		Bestellnummer
Type	Color of Emission	Color of the Light Emitting Area	Luminous Intensity $I_F = 10 \text{ mA}$ I_V (mcd)		Ordering Code
			color 1	color 2	
LOG A671	orange / green	colorless clear	4.5 ... 18.0	7.1 ... 28.0	Q62703-Q4322
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	Q62703-Q4323
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 $\pm 11 \%$.

*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 Reverse voltage	V_R	5	V
Leistungsaufnahme Power consumption	P_{tot}	95	mW
Wärmewiderstand Thermal resistance Sperrschicht/Umgebung Junction/air	$R_{th JA}$	430	K/W
Sperrschicht/Löt看 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

Bezeichnung Parameter	Symbol Symbol	Werte Values			Einheit Unit
		LS	LO	LG	
Wellenlänge des emittierten Lichtes Wavelength at peak emission $I_F = 10 \text{ mA}$	(typ.) λ_{peak}	635	610	572	nm
Dominantwellenlänge ¹⁾ Dominant wavelength $I_F = 10 \text{ mA}$	(typ.) λ_{dom}	628 ± 6	606 ± 6	570 ± 6	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ Spectral bandwidth at 50 % $I_{\text{rel max}}$ $I_F = 10 \text{ mA}$	(typ.) $\Delta\lambda$	45	40	25	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V	(typ.) 2ϕ	120	120	120	Grad deg.
Durchlassspannung ²⁾ Forward voltage $I_F = 10 \text{ mA}$	(typ.) V_F (max.) V_F	2.0 2.5	2.0 2.5	2.0 2.5	V V
Sperrstrom Reverse current $V_R = 5 \text{ V}$	(typ.) I_R (max.) I_R	0.01 10	0.01 10	0.01 10	μA μA
Temperaturkoeffizient von λ_{peak} Temperature coefficient of λ_{peak} $I_F = 10 \text{ mA}; -10^\circ\text{C} \leq T \leq 100^\circ\text{C}$	(typ.) $TC_{\lambda_{\text{peak}}}$	0.11	0.12	0.11	nm/K
Temperaturkoeffizient von λ_{dom} Temperature coefficient of λ_{dom} $I_F = 10 \text{ mA}; -10^\circ\text{C} \leq T \leq 100^\circ\text{C}$	(typ.) $TC_{\lambda_{\text{dom}}}$	0.07	0.07	0.07	nm/K
Temperaturkoeffizient von V_F Temperature coefficient of V_F $I_F = 10 \text{ mA}; -10^\circ\text{C} \leq T \leq 100^\circ\text{C}$	(typ.) TC_V	-1.9	-1.9	-1.4	mV/K
Optischer Wirkungsgrad Optical efficiency $I_F = 10 \text{ mA}$	(typ.) η_{opt}	1.5	1.5	2.5	lm/W

¹⁾ Wellenlängen werden mit einer Stromeinprägungsdauer 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 $\pm 1 \text{ nm}$.

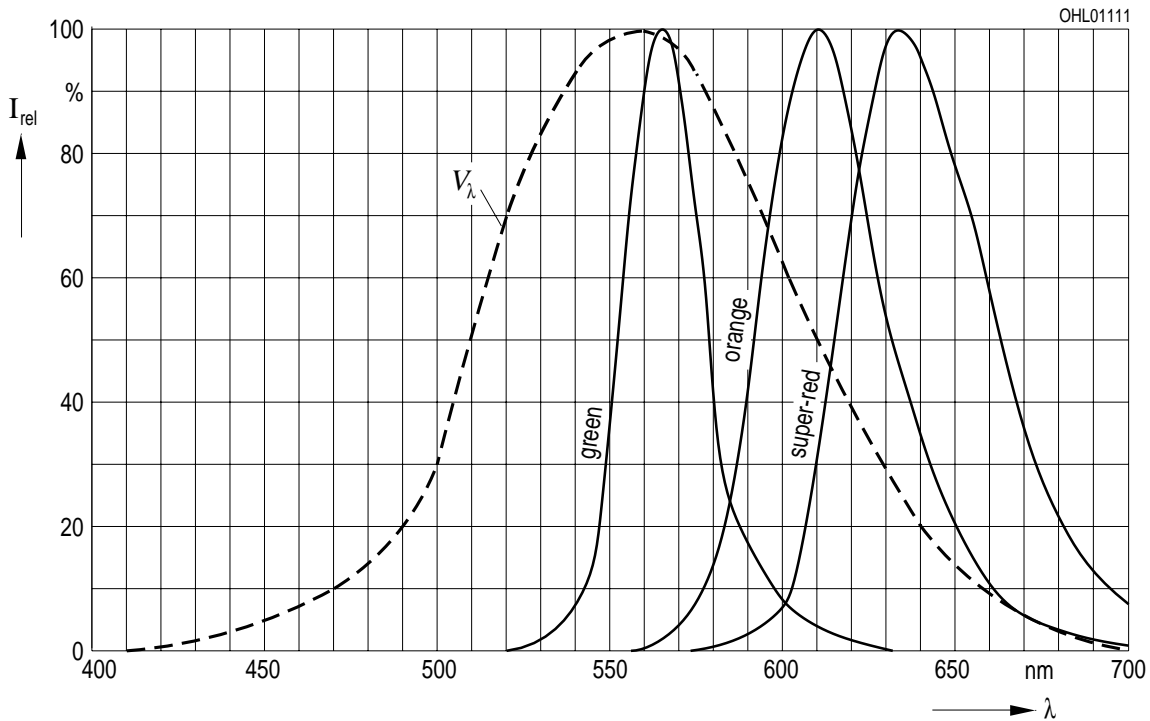
²⁾ Spannungswerte werden mit einer Stromeinprägungsdauer von 1 ms und einer Genauigkeit von $\pm 0,1 \text{ V}$ ermittelt.
Voltages are tested at a current pulse duration of 1 ms and a tolerance of $\pm 0.1 \text{ V}$.

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

Relative Spectral Emission

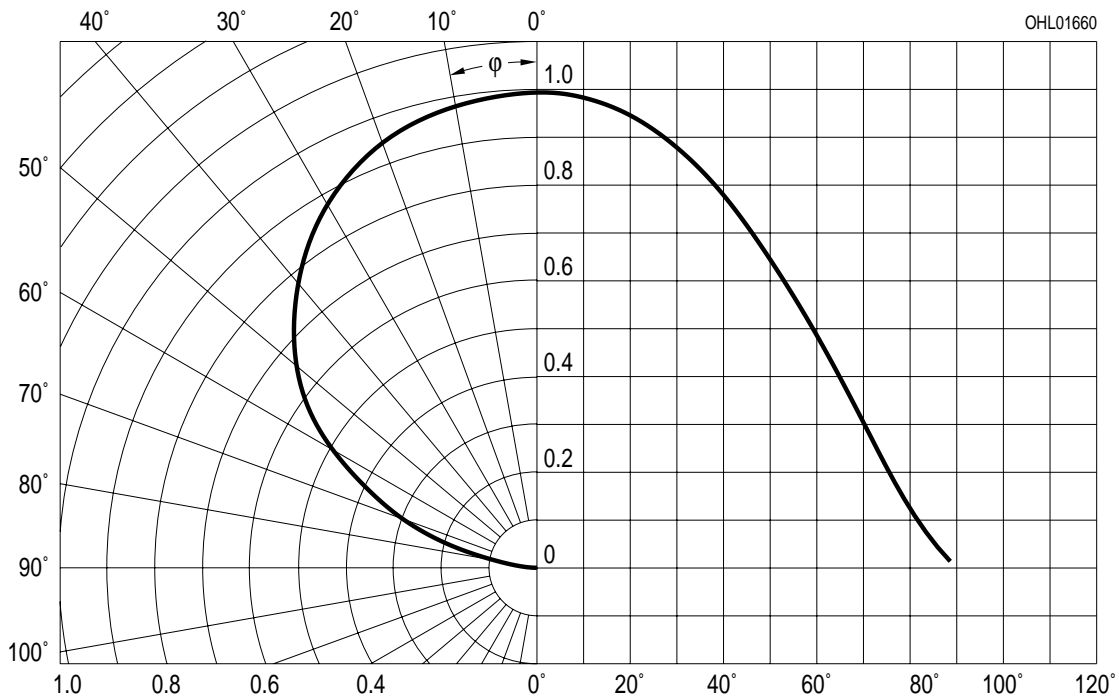
$V(\lambda)$ = spektrale Augenempfindlichkeit

Standard eye response curve



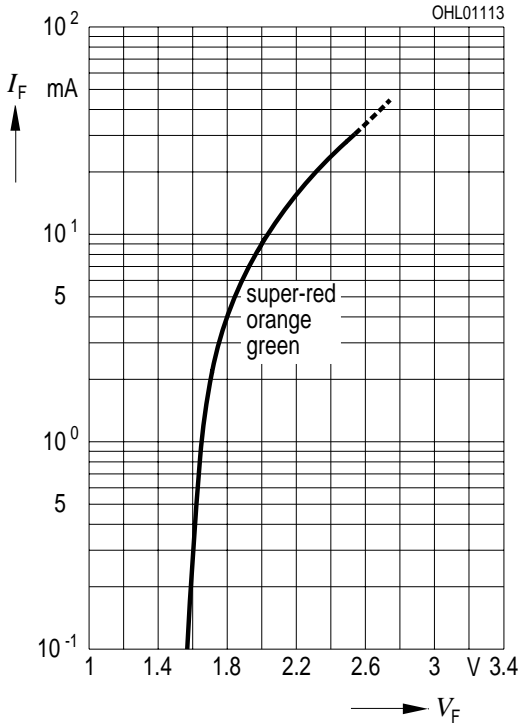
Abstrahlcharakteristik $I_{rel} = f(\varphi)$

Radiation Characteristic



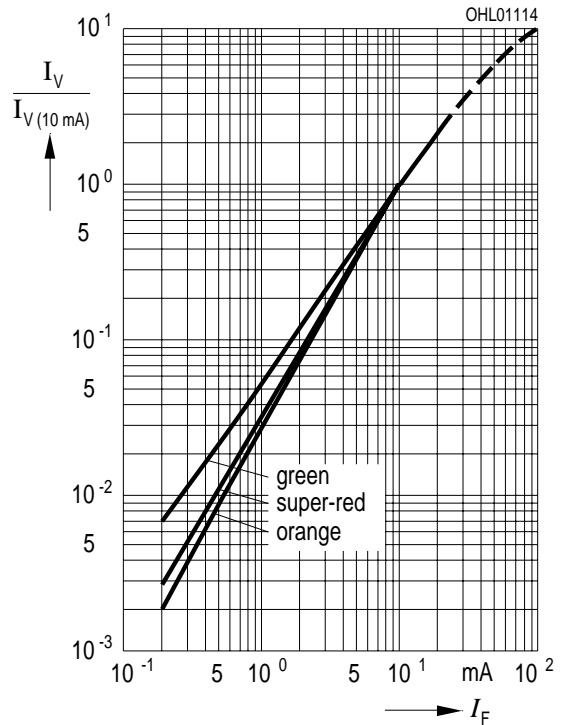
Durchlassstrom $I_F = f(V_F)$
Forward Current

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

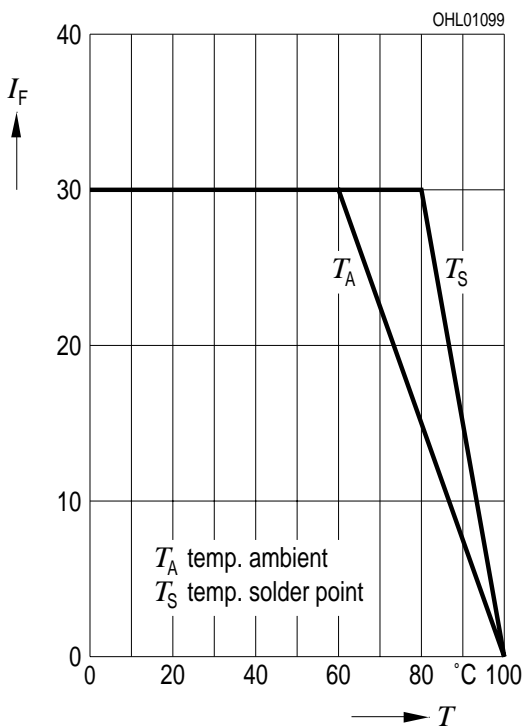


Relative Lichtstärke $I_V/I_{V(10\text{ mA})} = f(I_F)$
Relative Luminous Intensity

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

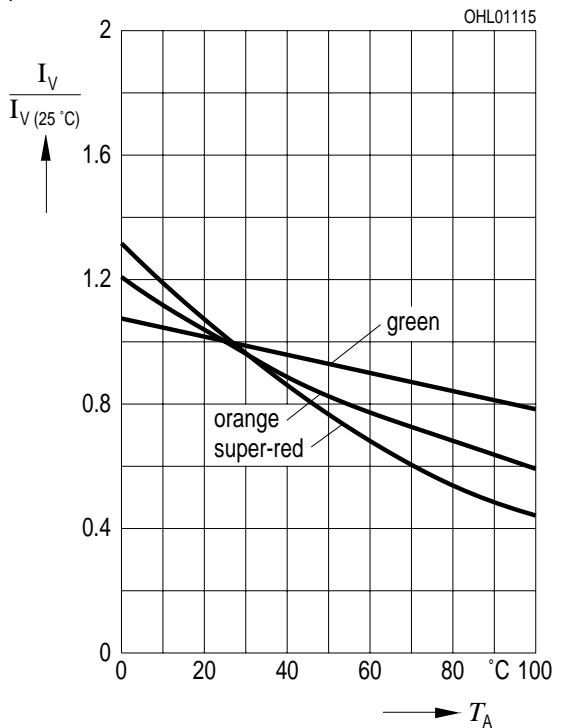


Maximal zulässiger Durchlassstrom $I_F = f(T)$
Max. Permissible Forward Current
LOG



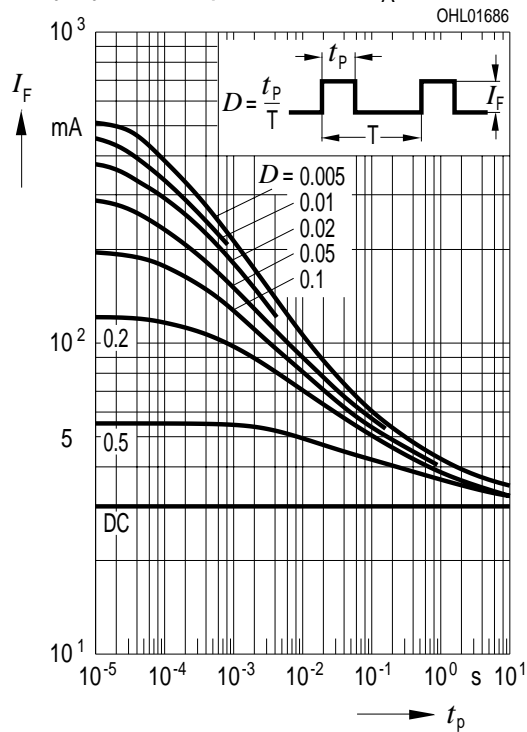
Relative Lichtstärke $I_V/I_{V(25\text{ }^\circ\text{C})} = f(T_A)$
Relative Luminous Intensity

$I_F = 10\text{ mA}$

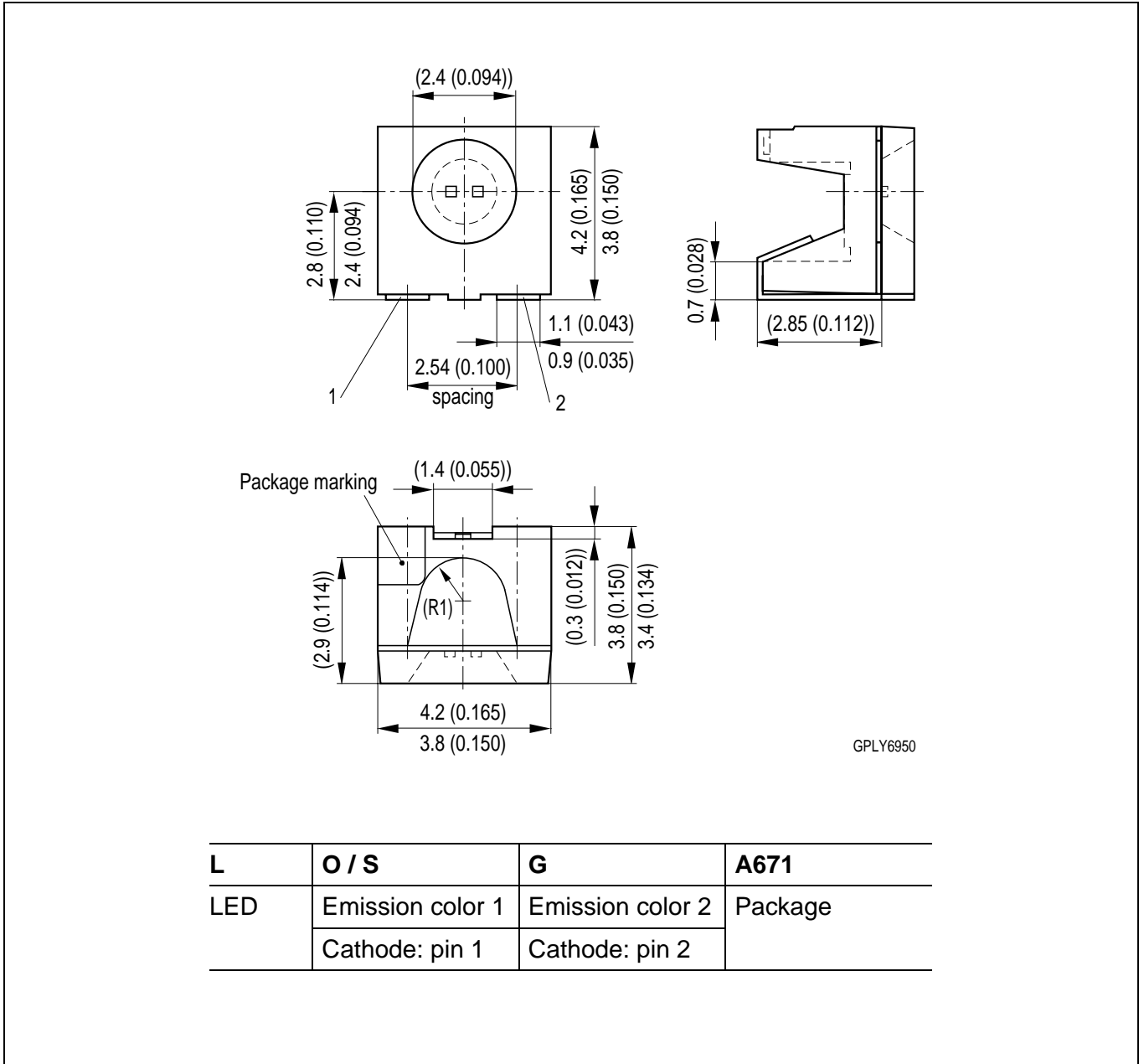


Zulässige Impulsbelastbarkeit $I_F = f(t_p)$
Permissible Pulse Handling Capability

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



Maßzeichnung
Package Outlines



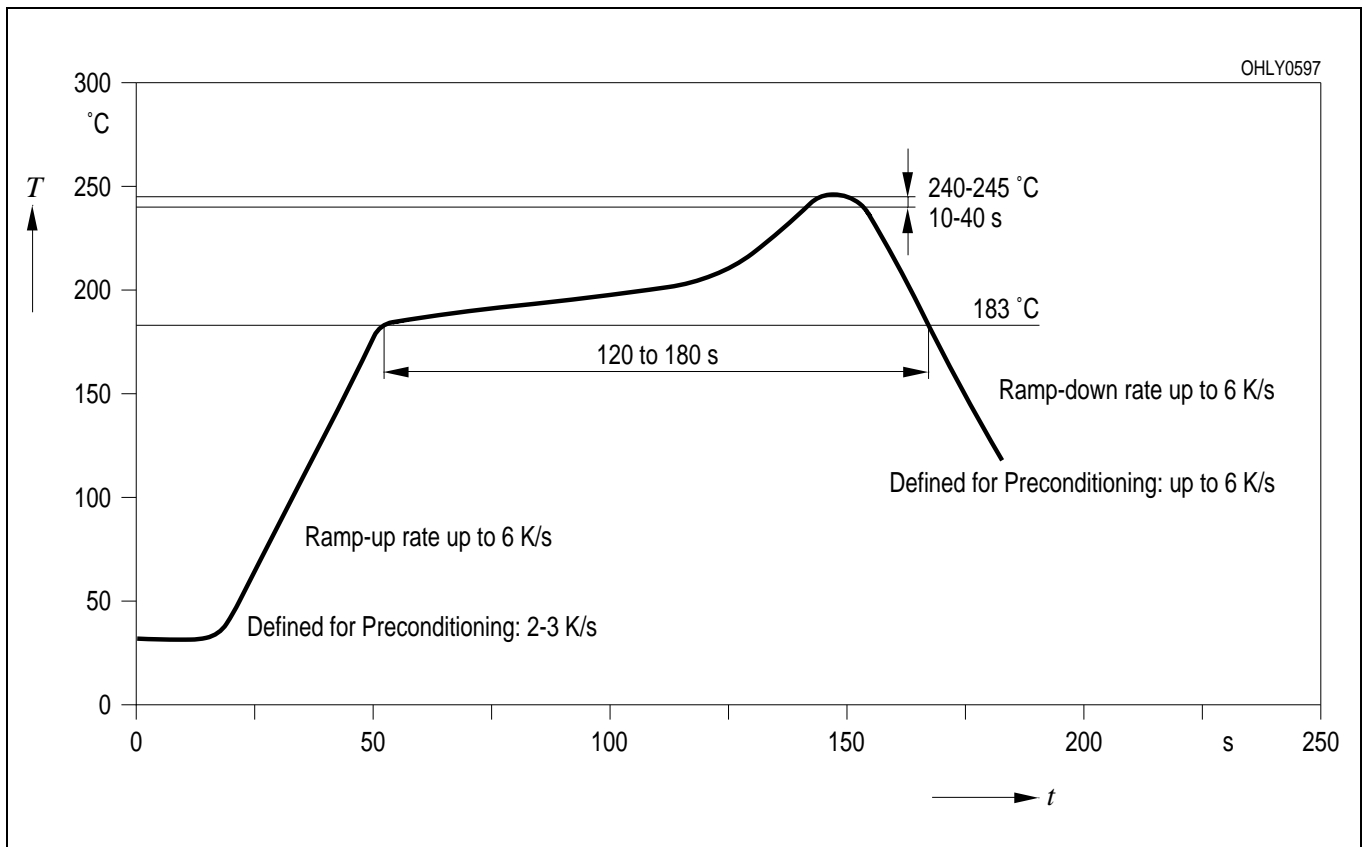
L	O / S	G	A671
LED	Emission color 1	Emission color 2	Package
	Cathode: pin 1	Cathode: pin 2	

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

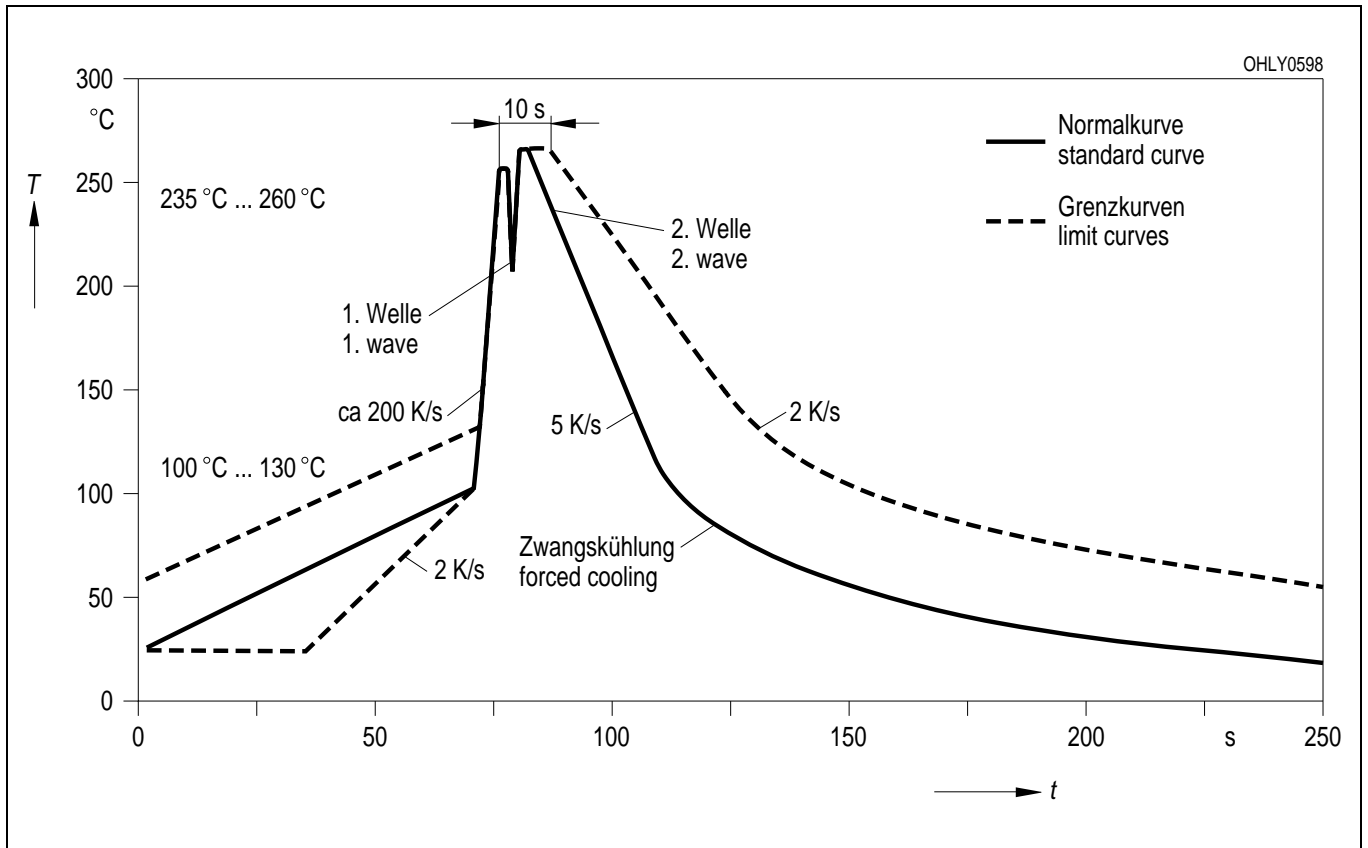
Gewicht / Approx. weight: 76 mg

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

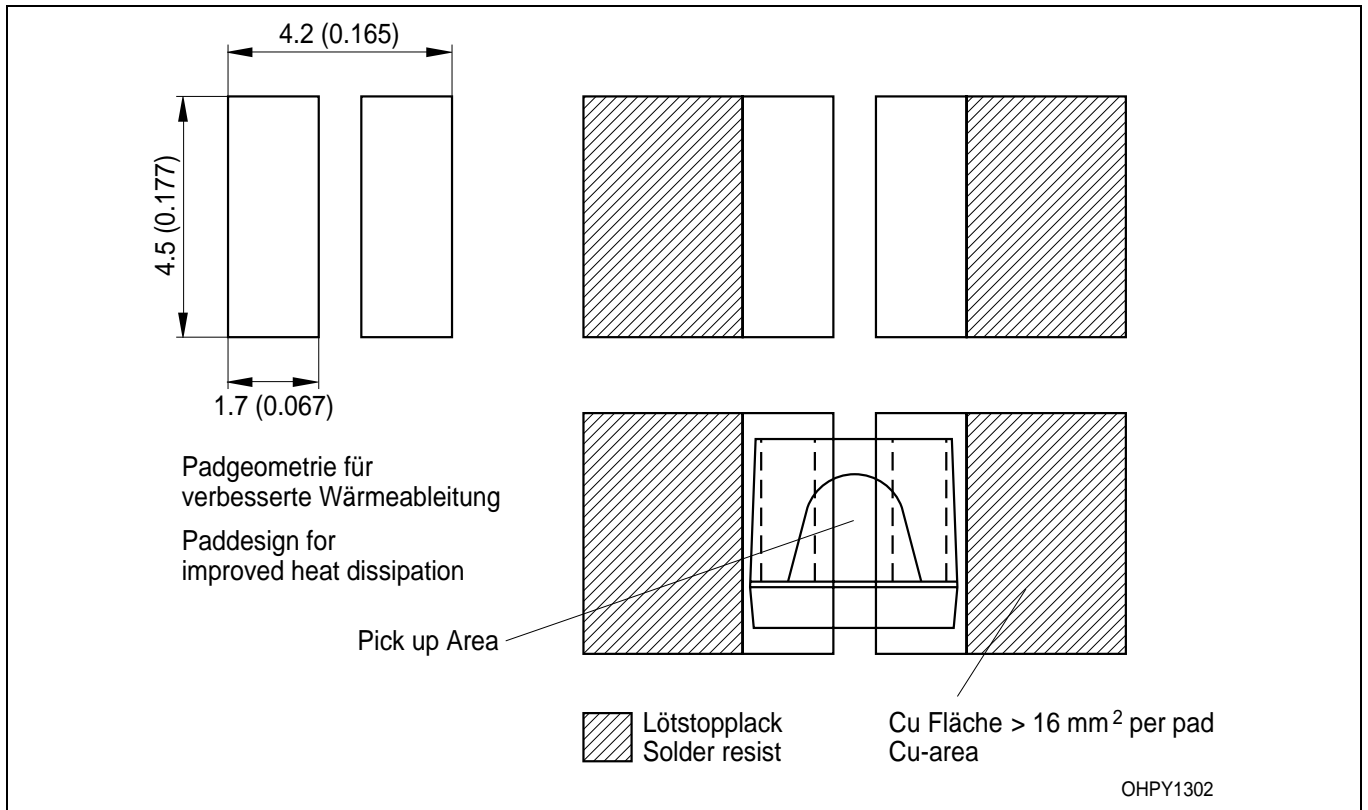
IR-Reflow Lötprofil (nach IPC 9501)
IR Reflow Soldering Profile (acc. to IPC 9501)



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

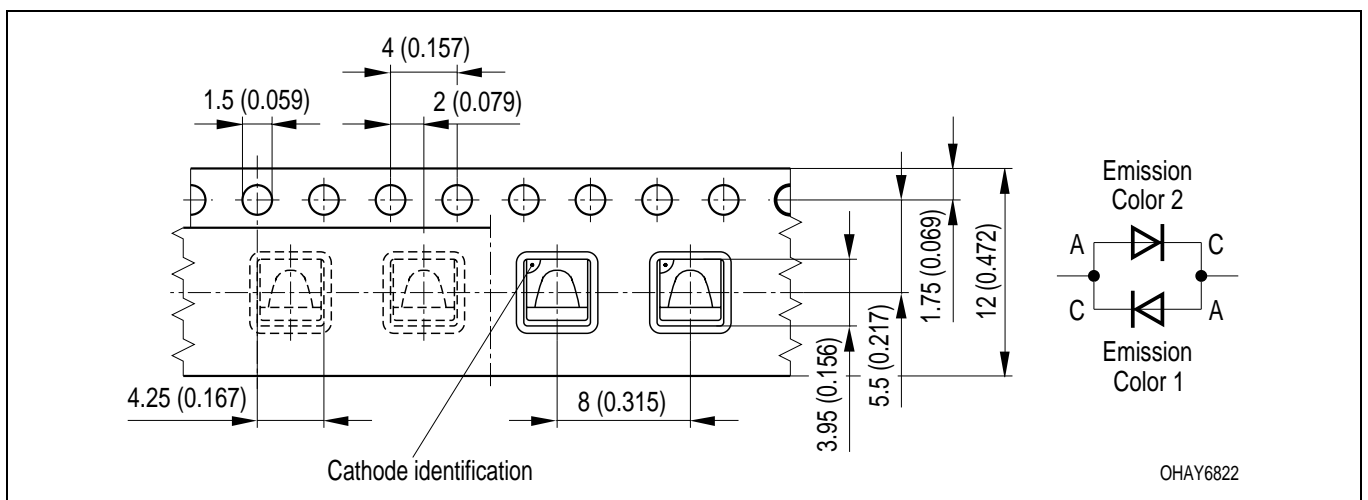


Empfohlenes Lötpad Design IR Reflow Lötten
Recommended Solder Pad IR Reflow Soldering



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: 2002-04-07

Previous Version: 2001-09-06

Page	Subjects (major changes since last revision)

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