3 mm (T1) LED, Non Diffused
Super-Bright LED

LS 3341, LY 3341, LG 3341, LP 3341

Besondere Merkmale

- **Gehäusetyp:** eingefärbtes, klares 3 mm (T1) Gehäuse
- **Besonderheit des Bauteils:** Lötspieße mit Aufsetzebene
- **Wellenlänge:** 628 nm (super-rot), 590 nm (gelb), 570 nm (grün), 560 nm (pure green)
- **Abstrahlwinkel:** 40°
- **Technologie:** GaAlP (super-rot, gelb, grün), GaP (pure green)
- **optischer Wirkungsgrad:** 1,5 lm/W (super-rot, gelb), 2,5 lm/W (grün), 0,6 lm/W (pure green)
- **Gruppierungsparameter:** Lichtstärke
- **Lötmethode:** Wellenlöten (TTW)
- **Verpackung:** Schüttgut, gegurtet lieferbar

Anwendungen

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

Features

- **package:** colored, clear 3 mm (T1) package
- **feature of the device:** solder leads with stand-off
- **wavelength:** 628 nm (super-red), 590 nm (yellow), 570 nm (green), 560 nm (pure green)
- **viewing angle:** 40°
- **technology:** GaAlP (super-red, yellow, green), GaP (pure green)
- **optical efficiency:** 1.5 lm/W (super-red, yellow), 2.5 lm/W (green), 0.6 lm/W (pure green)
- **grouping parameter:** luminous intensity
- **soldering methods:** TTW soldering
- **packing:** bulk, available taped on reel

Applications

- optical indicators
- coupling into light guides
- backlighting (LCD, switches, keys, displays)
- interior automotive lighting (e.g. dashboard backlighting, etc.)

Typ Type	Emissions-farbe Color of Emission	Gehäuse-farbe Color of Package	Lichtstärke Luminous Intensity I_F = 10 mA I_V (mcd)	Lichtstrom Luminous Flux I_F = 10 mA Φ_V (mlm)	Bestellnummer Ordering Code
LS 3341-LP	super-red	red clear	11.2 ... 71.0	35 (typ.)	Q62703-Q3911
LS 3341-M			18.0 ... 28.0	20 (typ.)	Q62703-Q2146
LS 3341-N			28.0 ... 45.0	30 (typ.)	Q62703-Q2147
LS 3341-P			45.0 ... 71.0	50 (typ.)	Q62703-Q3445
LS 3341-MQ			18.0 ... 112.0	55 (typ.)	Q62703-Q2148
LY 3341-LP	yellow	yellow clear	11.2 ... 71.0	35 (typ.)	Q62703-Q2152
LY 3341-M			18.0 ... 28.0	20 (typ.)	Q62703-Q2151
LY 3341-N			28.0 ... 45.0	30 (typ.)	Q62703-Q2398
LY 3341-P			45.0 ... 71.0	50 (typ.)	Q62703-Q3234
LY 3341-MQ			18.0 ... 112.0	55 (typ.)	Q62703-Q2149
LG 3341-KN	green	green clear	7.1 ... 45.0	25 (typ.)	Q62703-Q2153
LG 3341-M			18.0 ... 28.0	20 (typ.)	Q62703-Q2155
LG 3341-N			28.0 ... 45.0	30 (typ.)	Q62703-Q3187
LG 3341-MQ			18.0 ... 112.0	60 (typ.)	Q62703-Q2156
LP 3341-JM	pure green	green clear	4.5 ... 28.0	14 (typ.)	Q62703-Q3815
LP 3341-K			7.1 ... 11.2	7 (typ.)	Q62703-Q3816
LP 3341-L			11.2 ... 18.0	12 (typ.)	Q62703-Q2986
LP 3341-M			18.0 ... 28.0	20 (typ.)	Q62703-Q2919
LP 3341-KN			7.1 ... 45.0	22 (typ.)	Q62703-Q2750

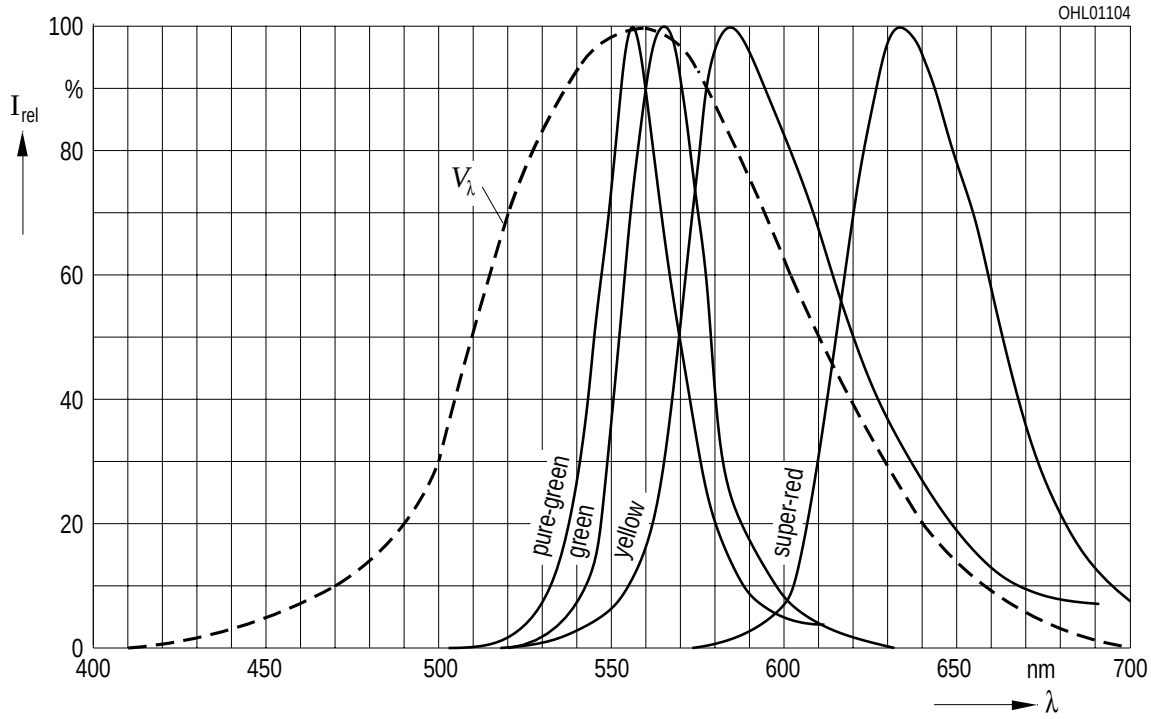
Helligkeitswerte werden mit einer Stromeinprägedauer von 25 ms und einer Genauigkeit von ±11 % ermittelt.

Luminous intensity is tested at a current pulse duration of 25 ms and an accuracy of ±11 %.

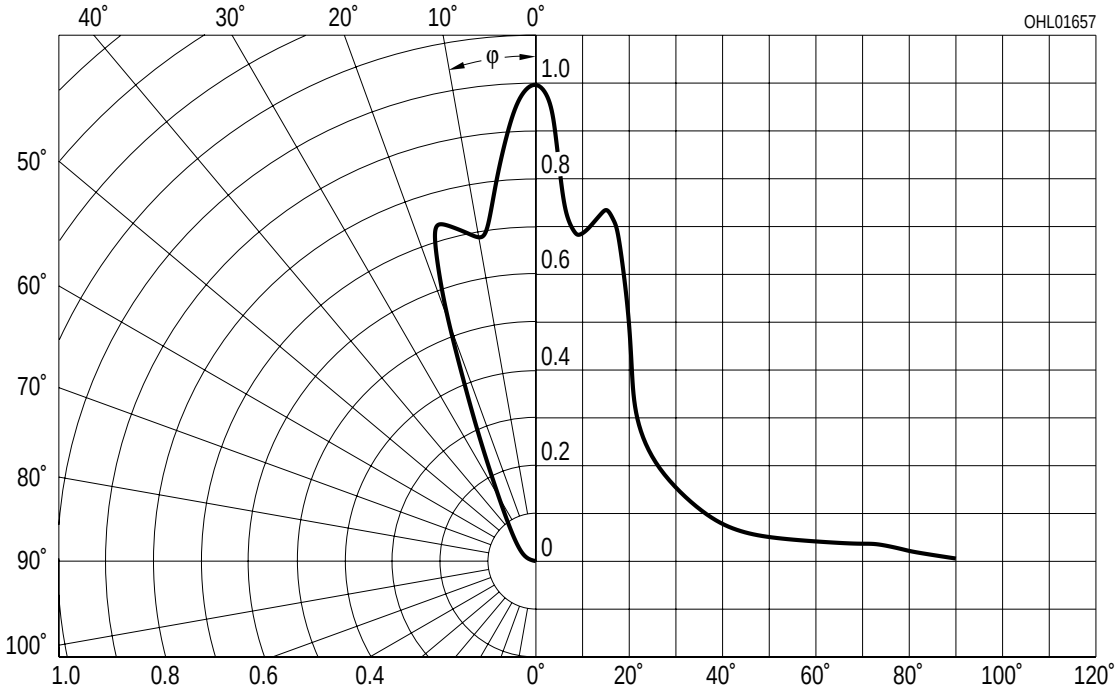
Bezeichnung Parameter	Symbol Symbol	Werte Values		Einheit Unit
		LS, LY, LG	LP	
Betriebstemperatur Operating temperature range	T_{op}	– 55 … + 100		°C
Lagertemperatur Storage temperature range	T_{stg}	– 55 … + 100		°C
Sperrschichttemperatur Junction temperature	T_j	+ 100		°C
Durchlaßstrom Forward current	I_F	40	30	mA
Stoßstrom Surge current $t \leq 10$ µs, $D = 0.005$	I_{FM}	0.5		A
Sperrspannung Reverse voltage	V_R	5		V
Leistungsaufnahme Power dissipation $T_A \leq 25$ °C	P_{tot}	130	90	mW
Wärmewiderstand Thermal resistance Sperrschicht/Umgebung Junction/ambient Montage auf PC-Board FR 4 (Padgröße ≥ 16 mm^2) mounted on PC board FR 4 (pad size ≥ 16 mm^2)	$R_{th\ JA}$	400		K/W
Sperrschicht/Lötpad Junction/solder point Minimale Beinchenlänge Minimum lead length	$R_{th\ JS}$	180		K/W

Bezeichnung Parameter		Symbol Symbol	Werte Values				Einheit Unit
			LS	LY	LG	LP	
Wellenlänge des emittierten Lichtes Wavelength at peak emission I_F = 10 mA	(typ.)	λ_{peak}	635	586	565	557	nm
Dominantwellenlänge Dominant wavelength I_F = 10 mA	(typ.)	λ_{dom}	628	590	570	560	nm
Spektrale Bandbreite bei 50 % $I_{rel\ max}$ Spectral bandwidth at 50 % $I_{rel\ max}$ I_F = 10 mA	(typ.)	$\Delta\lambda$	45	45	25	22	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V	(typ.)	2φ	40	40	40	40	Grad deg.
Durchlaßspannung Forward voltage I_F = 10 mA	(typ.) (max.)	V_F V_F	2.0 2.6	2.0 2.6	2.0 2.6	2.0 2.6	V V
Sperrstrom Reverse current V_R = 5 V	(typ.) (max.)	I_R I_R	0.01 10	0.01 10	0.01 10	0.01 10	µA µA
Temperaturkoeffizient von λ_{peak} Temperature coefficient of λ_{peak} I_F = 10 mA	(typ.)	$TC_{\lambda peak}$	0.11	0.10	0.11	0.11	nm/K
Temperaturkoeffizient von λ_{dom} Temperature coefficient of λ_{dom} I_F = 10 mA	(typ.)	$TC_{\lambda dom}$	0.07	0.07	0.07	0.05	nm/K
Temperaturkoeffizient von V_F Temperature coefficient of V_F I_F = 10 mA	(typ.)	TC_V	– 1.9	– 1.9	– 1.4	– 2.1	mV/K
Optischer Wirkungsgrad Optical efficiency I_F = 10 mA	(typ.)	η_{opt}	1.5	1.5	2.5	0.6	lm/W

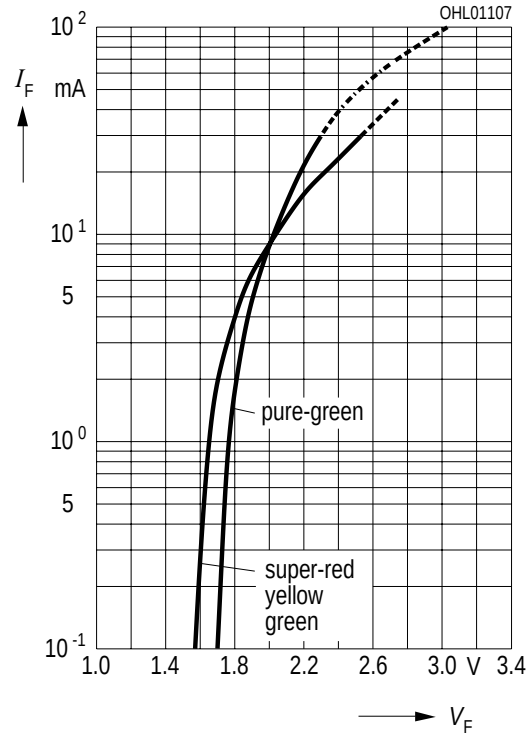
Relative spektrale Emission $I_{rel} = f(\lambda)$, T_A = 25 °C, I_F = 10 mA
Relative Spectral Emission
V(λ) = spektrale Augenempfindlichkeit
Standard eye response curve



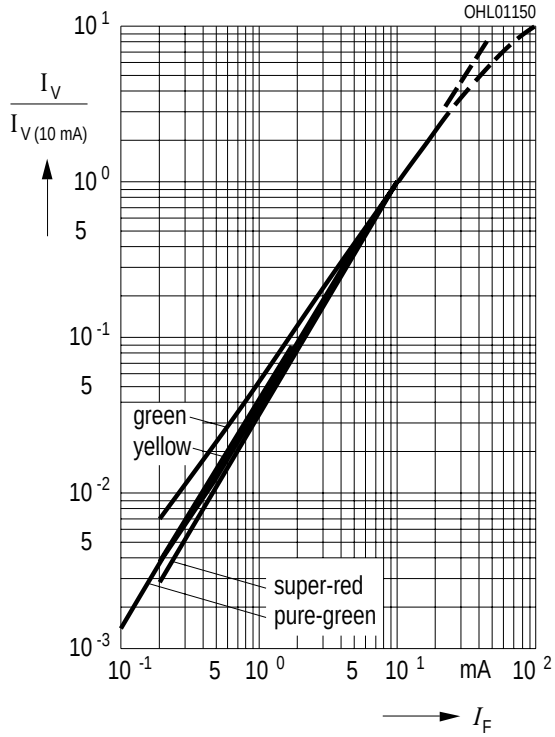
Abstrahlcharakteristik $I_{rel} = f(\varphi)$
Radiation Characteristic



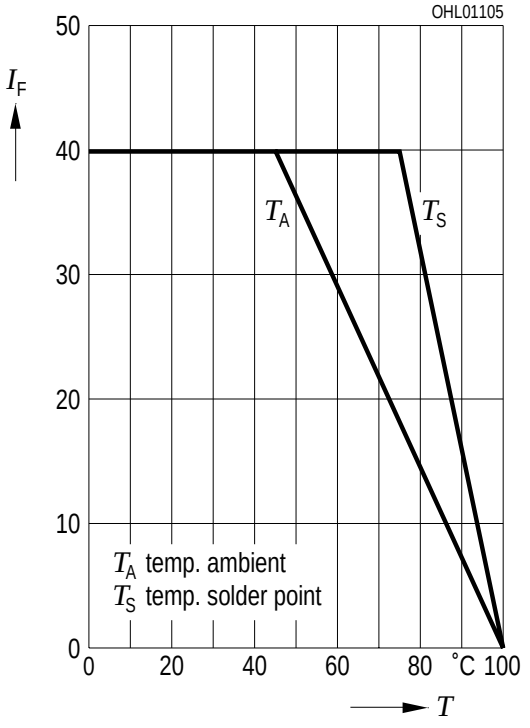
Durchlaßstrom $I_F = f(V_F)$
Forward Current
T_A = 25 °C



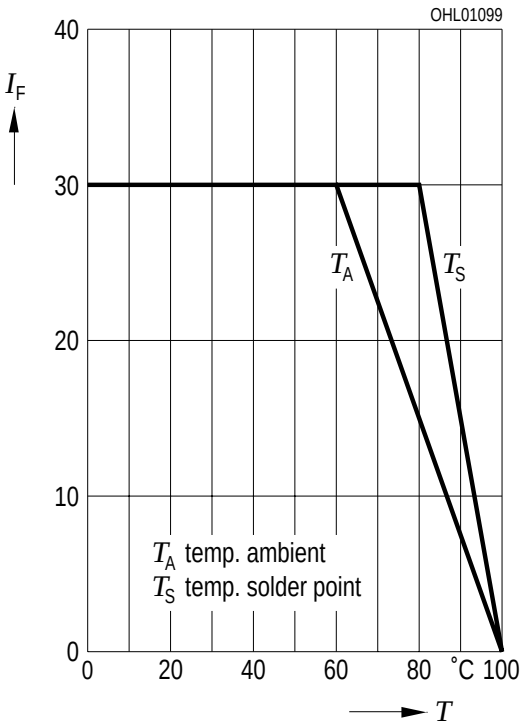
Relative Lichtstärke $I_V/I_{V(10\ mA)} = f(I_F)$
Relative Luminous Intensity
T_A = 25 °C



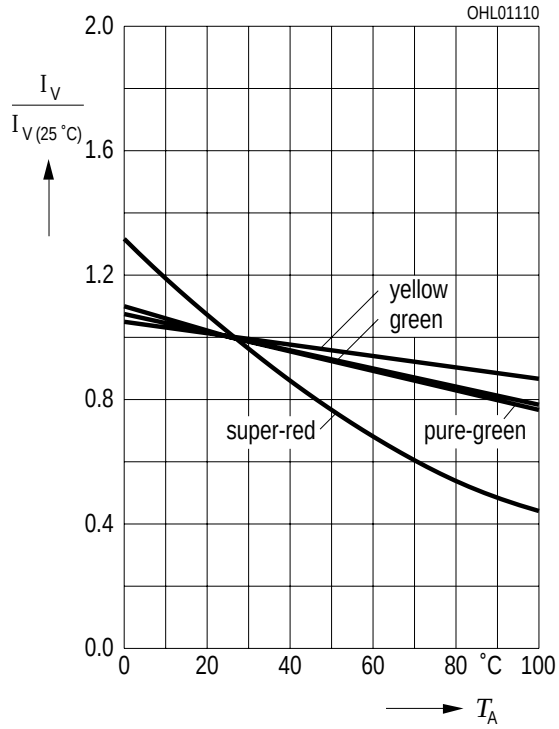
Maximal zulässiger Durchlaßstrom $I_F = f(T)$
Max. Permissible Forward Current
LS, LY, LG



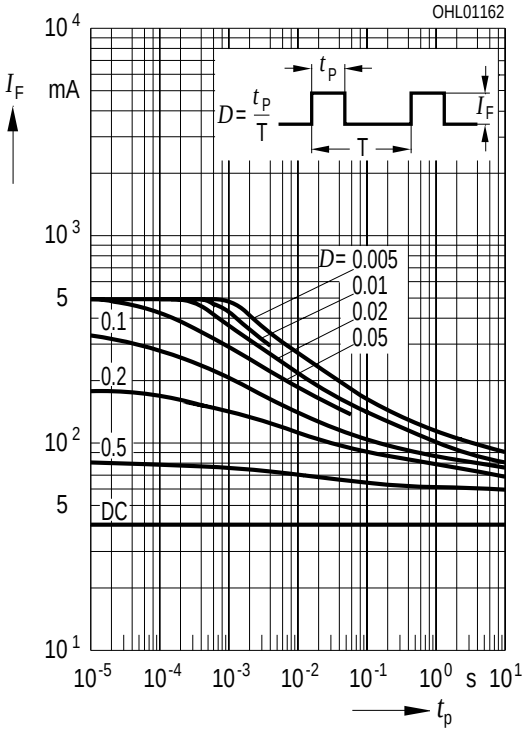
Maximal zulässiger Durchlaßstrom $I_F = f(T)$
Max. Permissible Forward Current
LP



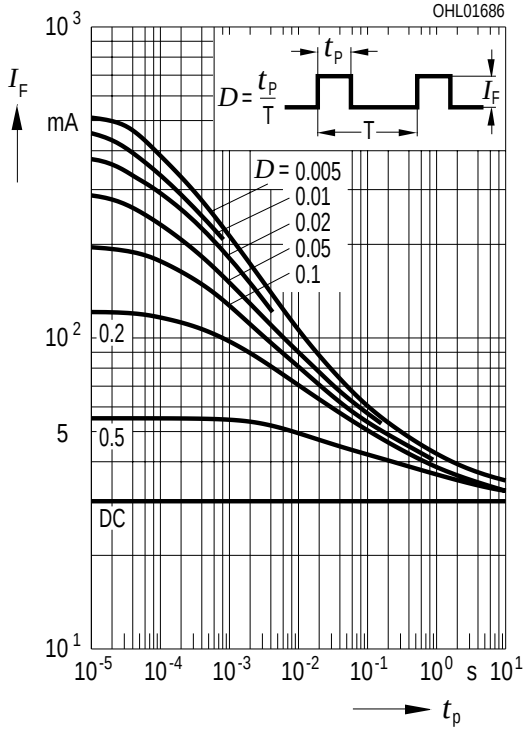
Relative Lichtstärke $I_V/I_{V(25\,°C)} = f(T_A)$
Relative Luminous Intensity
I_F = 10 mA



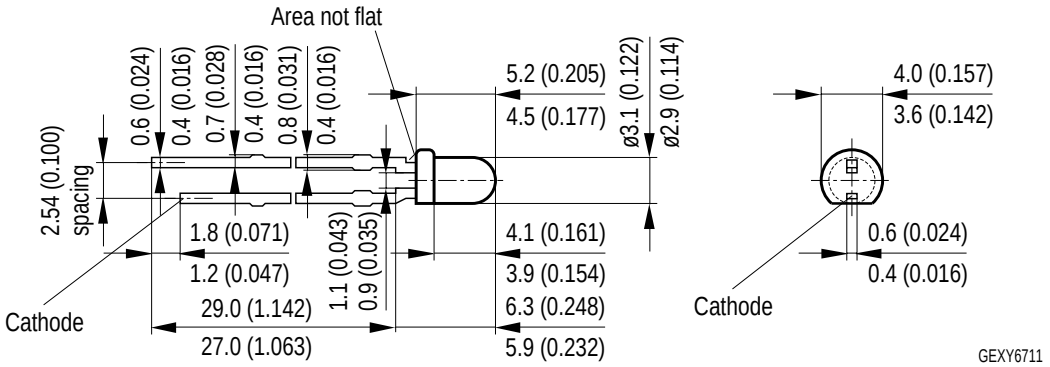
Zulässige Impulsbelastbarkeit $I_F = f(t_p)$
Permissible Pulse Handling Capability
Duty cycle D = parameter, T_A = 25 °C
LS, LY, LG



Zulässige Impulsbelastbarkeit $I_F = f(t_p)$
Permissible Pulse Handling Capability
Duty cycle D = parameter, T_A = 25 °C
LP



Maßzeichnung
Package Outlines

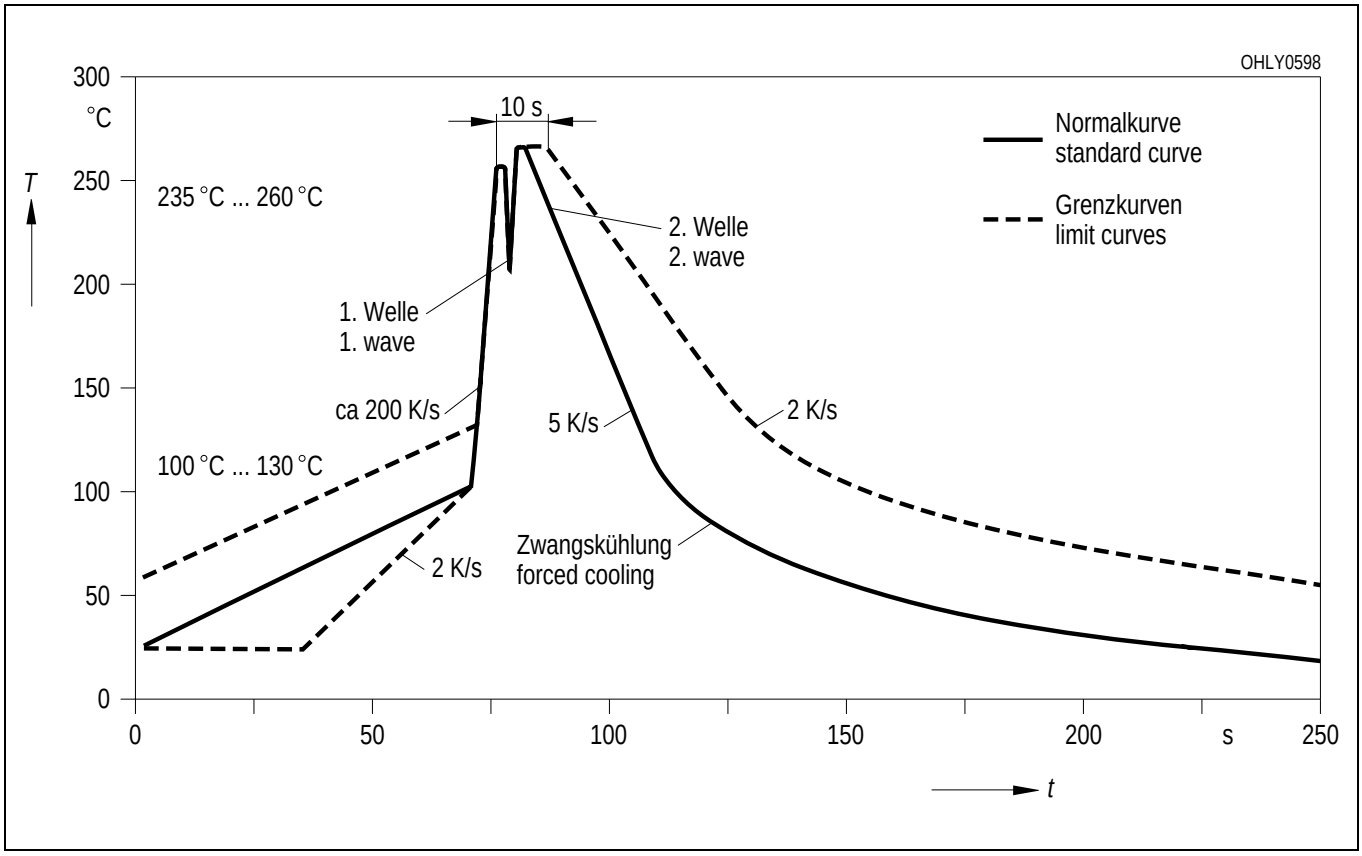


Maße werden wie folgt angegeben: mm (inch) / Dimensions are specified as follows: mm (inch).

Kathodenkennung: kürzerer Lötspieß
Cathode mark: short solder lead
Gewicht / Approx. weight: 0.15 g

Lötbedingungen
Soldering Conditions

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



Empfohlenes Lötpaddesign Wellenlöten (TTW)
Recommended Solder Pad TTW Soldering