

GaAs-Infrarot-Sendediode
GaAs Infrared Emitter
Lead (Pb) Free Product - RoHS Compliant

IRL 80 A



Wesentliche Merkmale

- GaAs-Lumineszenzdiode im Infrarotbereich
- Klares Miniaturkunststoffgehäuse, seitliche Abstrahlung
- Preiswertes Kunststoffgehäuse
- Lange Lebensdauer (Langzeitstabilität)
- Weiter Öffnungskegel ($\pm 30^\circ$)
- Passend zu Fototransistor LPT 80 A

Anwendungen

- Fertigungs- und Kontrollanwendungen der Industrie, die eine Unterbrechung des Lichtstrahls erfordern
- Lichtschranken

Features

- GaAs infrared emitting diode
- Clear plastic package with lateral emission
- Low cost plastic package
- Long term stability
- Wide beam ($\pm 30^\circ$)
- Matches phototransistor LPT 80 A

Applications

- For a variety of manufacturing and monitoring applications which require beam interruption
- Light barriers

Typ Type	Bestellnummer Ordering Code
IRL 80 A	Q68000A7851

Grenzwerte ($T_A = 25\text{ °C}$)

Maximum Ratings

Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Betriebs- und Lagertemperatur Operating and storage temperature range	$T_{op}; T_{stg}$	- 40 ... + 100	°C
Sperrspannung Reverse voltage	V_R	3	V
Durchlassstrom Forward current	I_F	60	mA
Verlustleistung Power dissipation	P_{tot}	100	mW
Verringerung der Verlustleistung, $T_A > 25\text{ °C}$ Derate above, $T_A > 25\text{ °C}$	-	1.33	mW/°C
Wärmewiderstand Thermal resistance	R_{thJA}	750	K/W

Kennwerte ($T_A = 25\text{ °C}$)

Characteristics

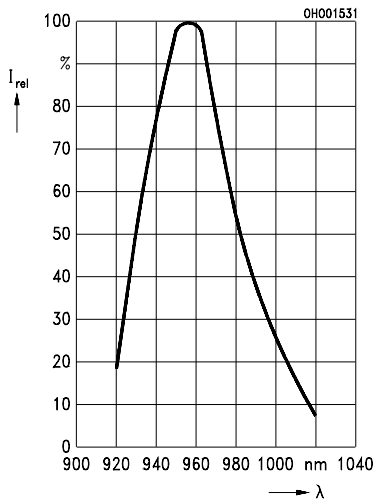
Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Wellenlänge der Strahlung bei I_{max} Wavelength of peak emission	λ_{peak}	950	nm
Spektrale Bandbreite bei 50% von I_{max} Spectral bandwidth at 50% of I_{max}	$\Delta\lambda$	± 20	nm
Abstrahlwinkel Half angle	φ	± 30	Grad deg.
Durchlassspannung, $I_F = 20\text{ mA}$ Forward voltage	V_F	≤ 1.5	V
Strahlstärke ¹⁾ , $I_F = 20\text{ mA}$ Radiant intensity	I_e	≥ 0.4	mW/sr

¹⁾ Ein Silizium-Empfänger mit 1 cm² strahlungsempfindlicher Fläche wird nach der mechanischen Achse ausgerichtet. Es wird eine Lochblende verwendet.

¹⁾ A 1 cm² silicon detector is aligned with the mechanical axis. An aperture is used.

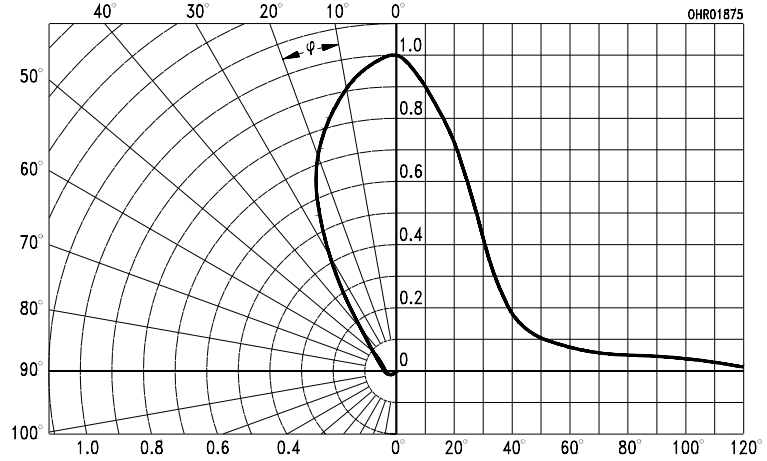
Relative Spectral Emission

$$S_{rel} = f(\lambda)$$

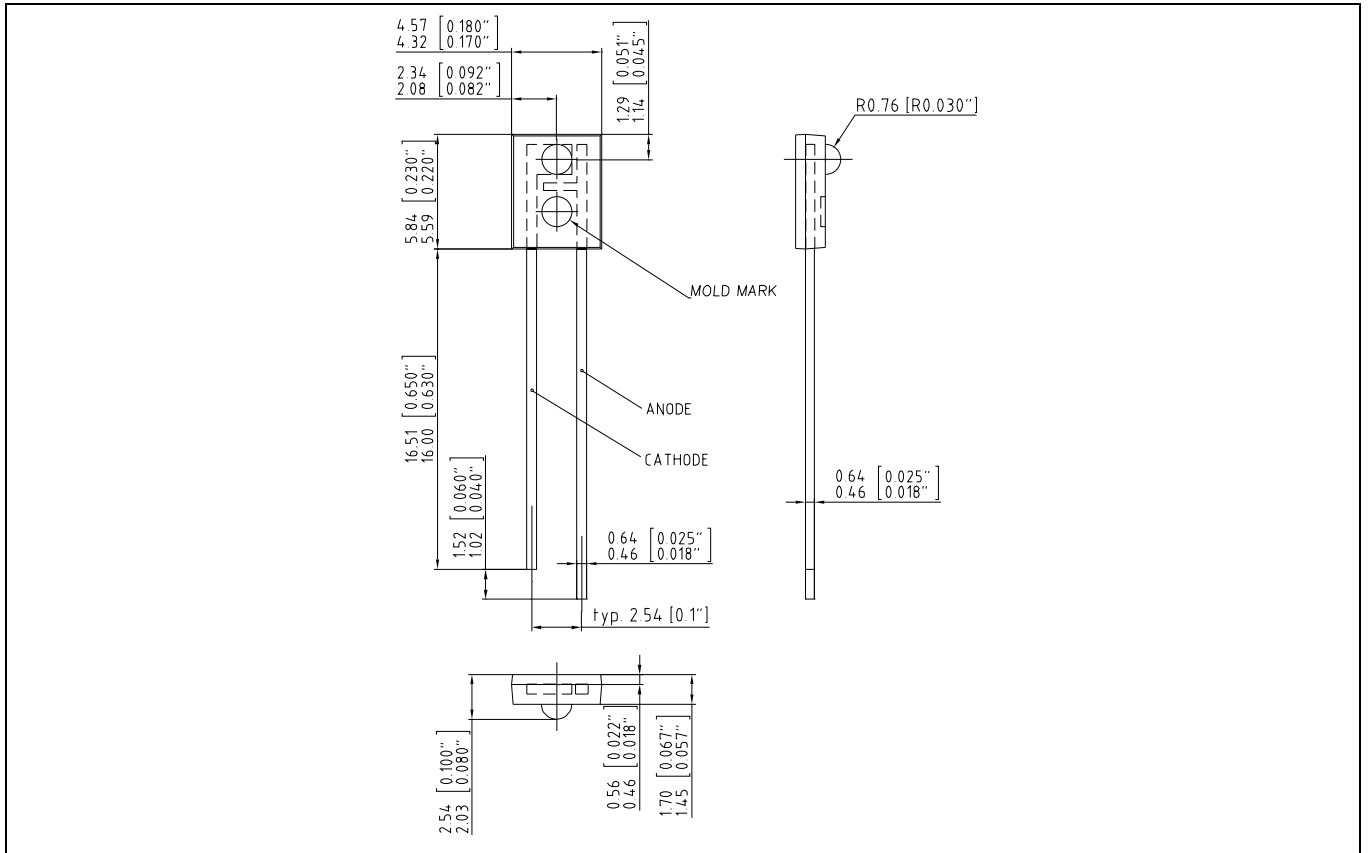


Directional Characteristics

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



**Maßzeichnung
Package Outlines**

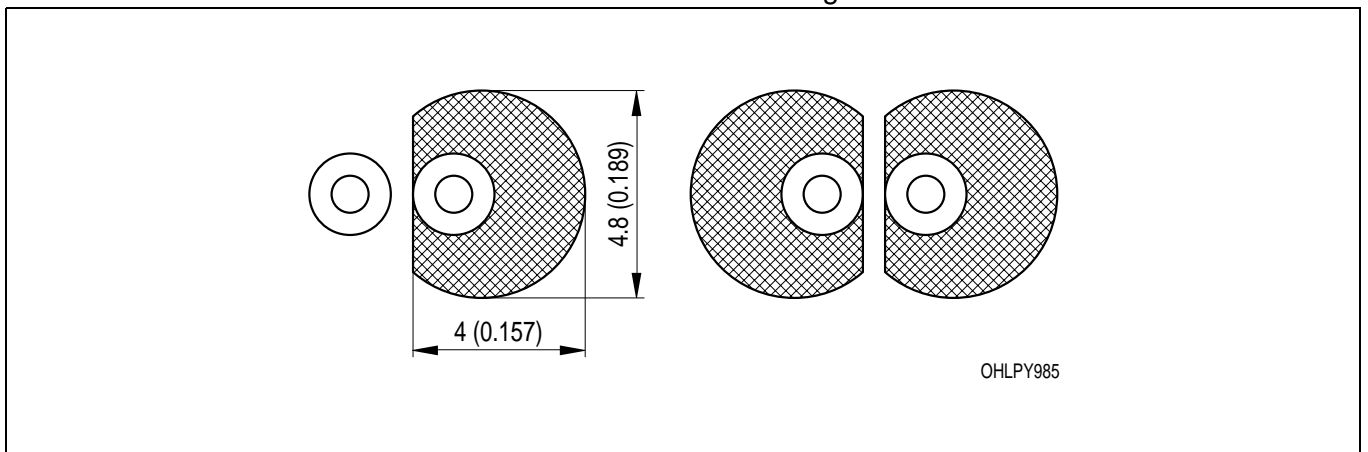


Maße in mm (inch) / Dimensions in mm (inch).

Approx weight 0.2g

**Empfohlenes Lötpaddesign
Recommended Solder Pad**

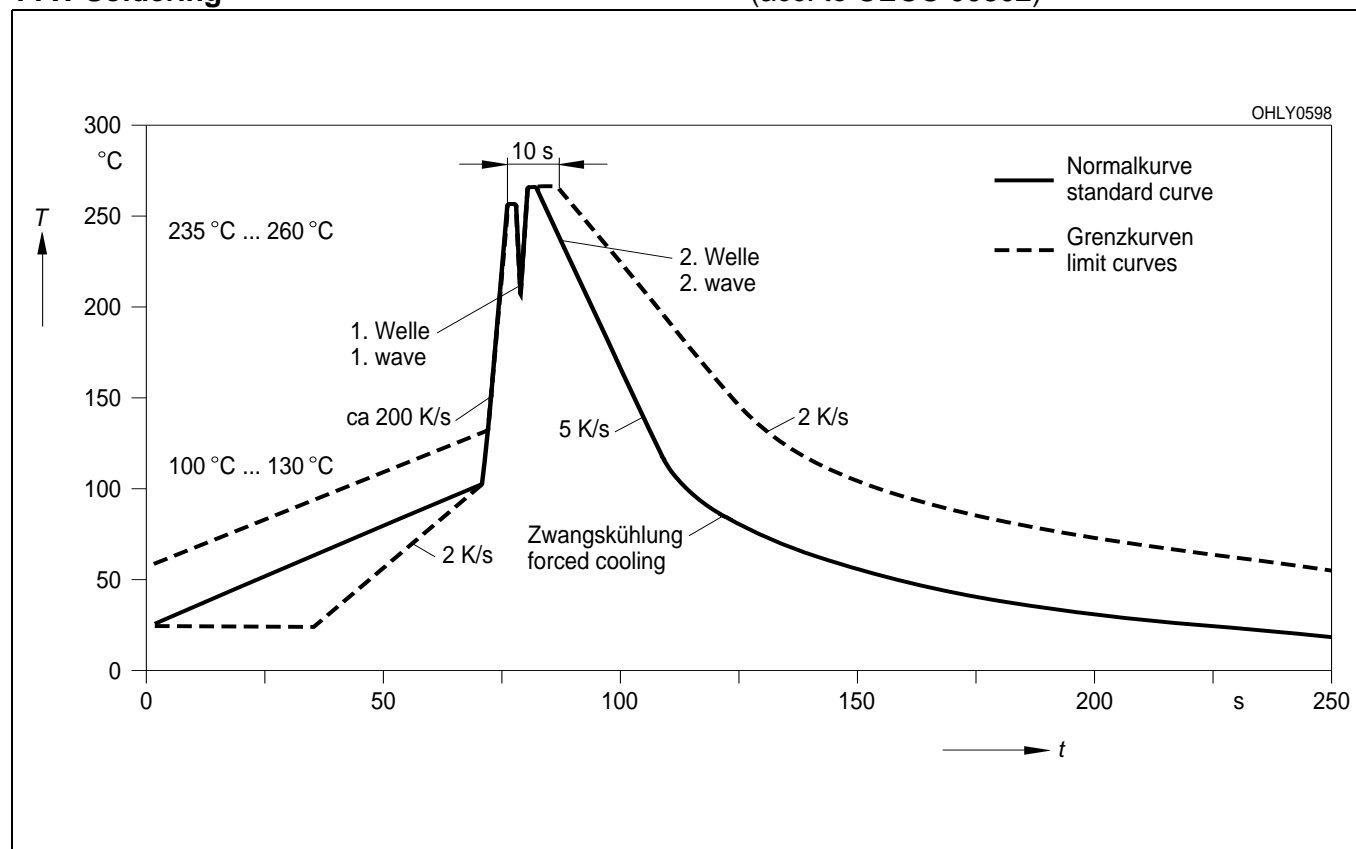
**Wellenlöten (TTW)
TTW Soldering**



Maße in mm (inch) / Dimensions in mm (inch).

Wellenlötten (TTW) TTW Soldering

(nach CECC 00802)
(acc. to CECC 00802)



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Components used in life-support devices or systems must be expressly authorized for such purpose! Critical components¹, may only be used in life-support devices or systems² 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 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.