

**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**

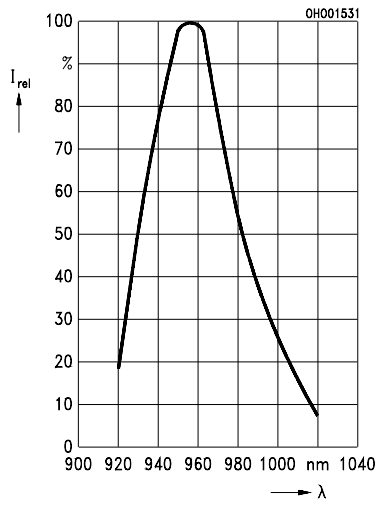
Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Wellenlänge der Strahlung bei $I_{max}$ Wavelength of peak emission	$\lambda_{peak}$	950	nm
Spektrale Bandbreite bei 50% von $I_{max}$ Spectral bandwidth at 50% of $I_{max}$	$\Delta\lambda$	$\pm 20$	nm
Abstrahlwinkel Half angle	$\varphi$	$\pm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

<sup>1)</sup> Ein Silizium-Empfänger mit 1 cm<sup>2</sup> strahlungsempfindlicher Fläche wird nach der mechanischen Achse ausgerichtet. Es wird eine Lochblende verwendet.

<sup>1)</sup> A 1 cm<sup>2</sup> silicon detector is aligned with the mechanical axis. An aperture is used.

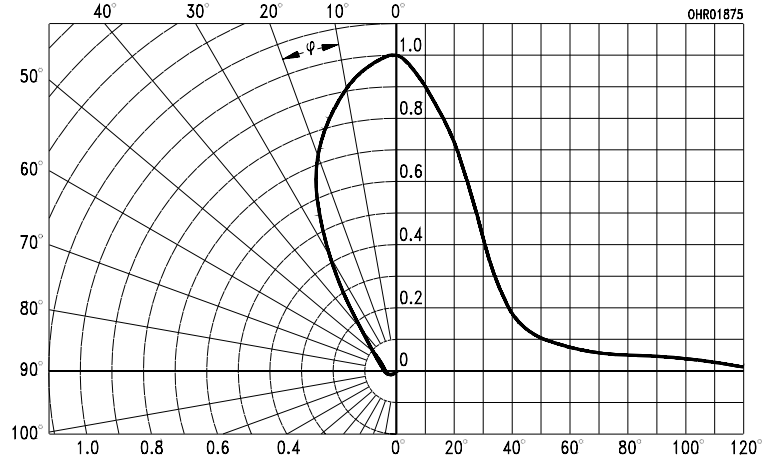
**Relative Spectral Emission**

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

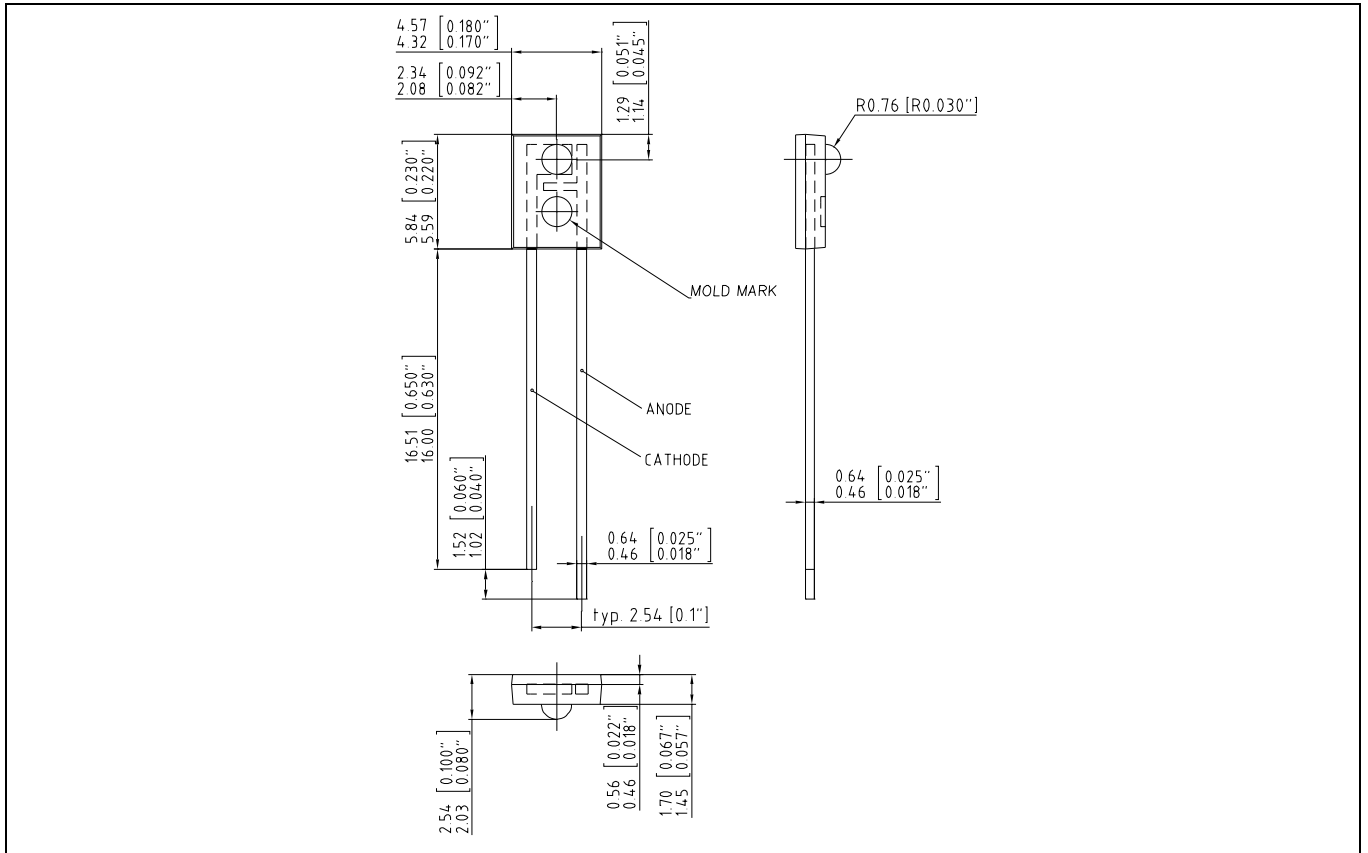


**Directional Characteristics**

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



**Maßzeichnung  
Package Outlines**

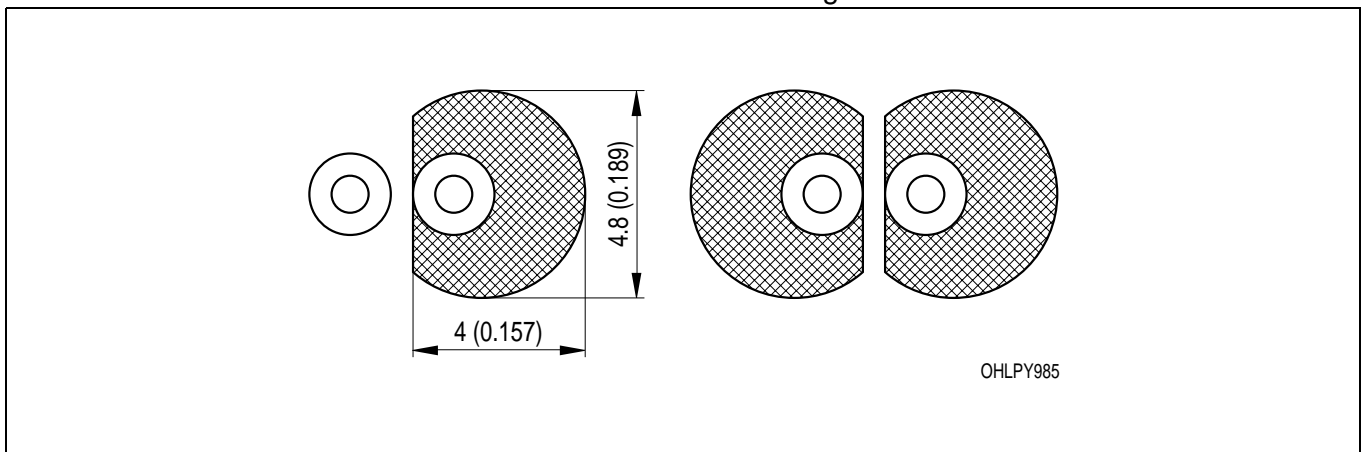


Maße in mm (inch) / Dimensions in mm (inch).

Approx weight 0.2g

**Empfohlenes Lötpaddesign  
Recommended Solder Pad**

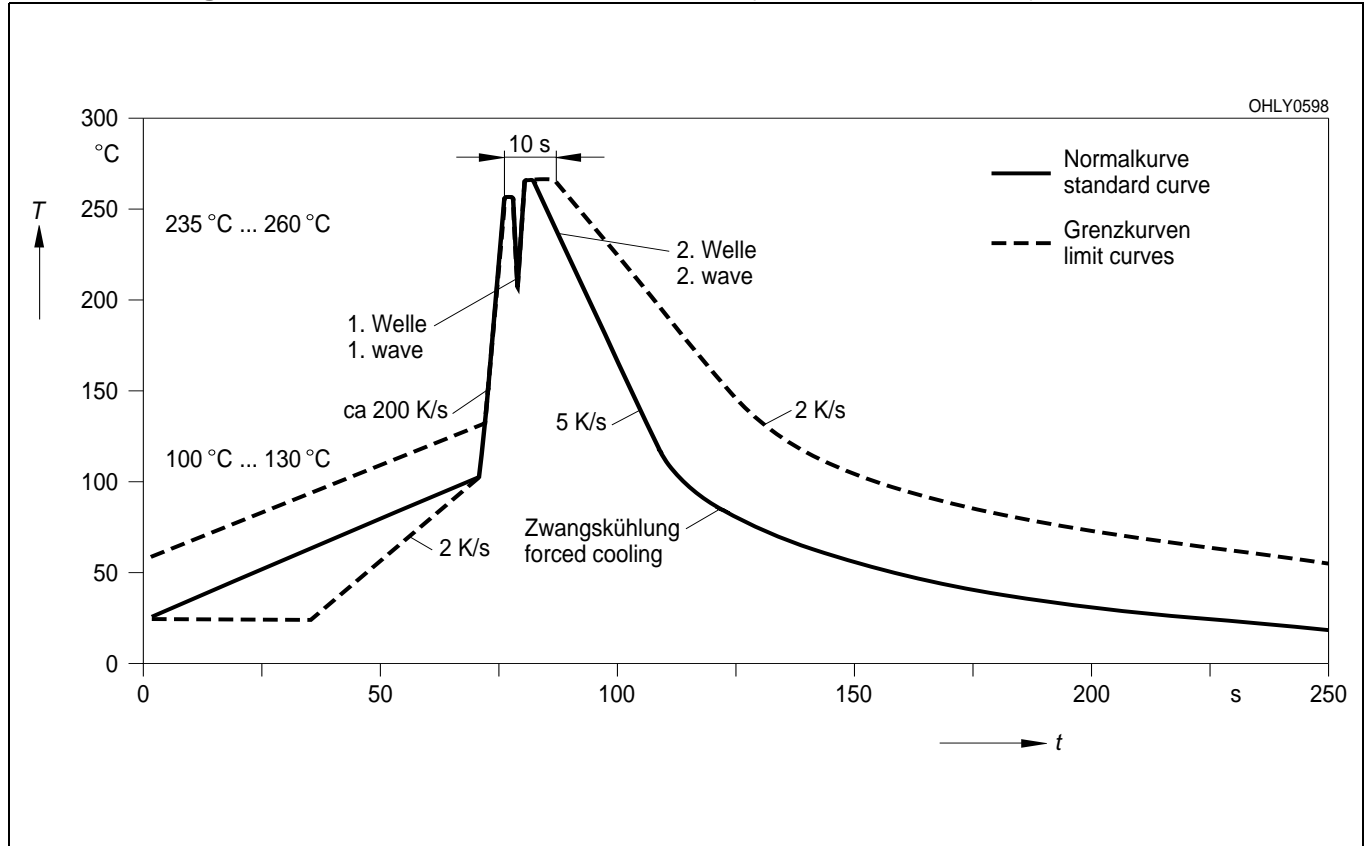
**Wellenlöten (TTW)  
TTW Soldering**



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

**Wellenlötten (TTW)**  
**TTW Soldering**

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



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