

GaAIAs-Infrarot-Sendediode GaAIAs-Infrared Emitter

IRL 81 A



Wesentliche Merkmale

- GaAIAs-Lumineszenzdiode im nahen Infrarotbereich
- Rosa Kunststoff-Miniaturgehäuse, seitliche Abstrahlung
- Preisgünstig
- Lange Lebensdauer (Langzeitstabilität)
- Weiter Öffnungskegel ($\pm 25^\circ$)
- Passend zu Fototransistor LPT 80 A

Anwendungen

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

Features

- GaAIAs infrared emitting diode in the near infrared range
- Pink plastic package with lateral emission
- Cost-effective
- Long-term stability
- Wide beam ($\pm 25^\circ$)
- 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 81 A	Q68000-A8000

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	5	V
Durchlaßstrom Forward current	I_F	100	mA
Verlustleistung Power dissipation	P_{tot}	200	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}	375	K/W

Kennwerte ($T_A = 25\text{ °C}$)**Characteristics**

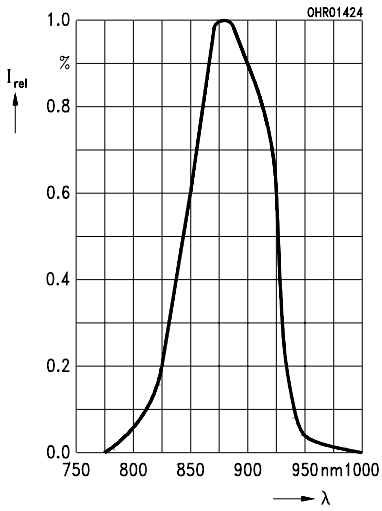
Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Wellenlänge der Strahlung bei I_{max} Wavelength of peak emission	λ_{peak}	880	nm
Spektrale Bandbreite bei 50% von I_{max} Spectral bandwidth at 50% of I_{max}	$\Delta\lambda$	36 ... 44	nm
Abstrahlwinkel Half angle	φ	± 25	Grad deg.
Durchlaßspannung, $I_F = 20\text{ mA}$ Forward voltage	V_F	1.5 (≤ 2.0)	V
Strahlstärke ¹⁾ , $I_F = 20\text{ mA}$ Radiant intensity	I_e	≥ 1.0	mW/sr
Gesamtstrahlungsfluß, $I_F = 20\text{ mA}$ Total radiant flux	Φ_e	1.5	mW

¹⁾ Ein Silizium-Empfänger mit radiometrischem Filter und mit 1 cm^2 strahlungsempfindlicher Fläche wird nach der mechanischen Achse der Sendediode ausgerichtet. Es wird eine Lochblende verwendet.

¹⁾ A 1 cm^2 silicon detector with radiometric filter is aligned with the mechanical axis of the DUT. An aperture is used.

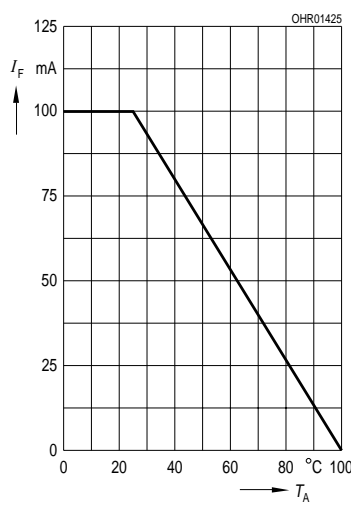
Relative Spectral Emission

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



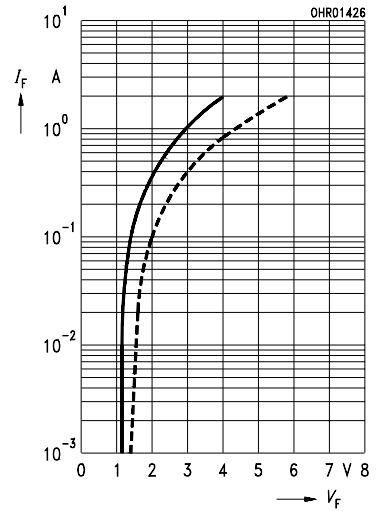
Max. Forward Current

$I_F = f(T_A)$



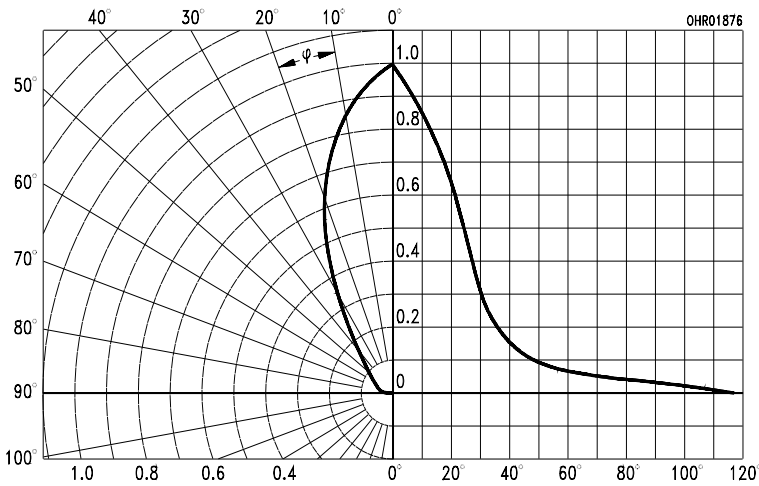
Forward Current

$I_F = f(V_F)$

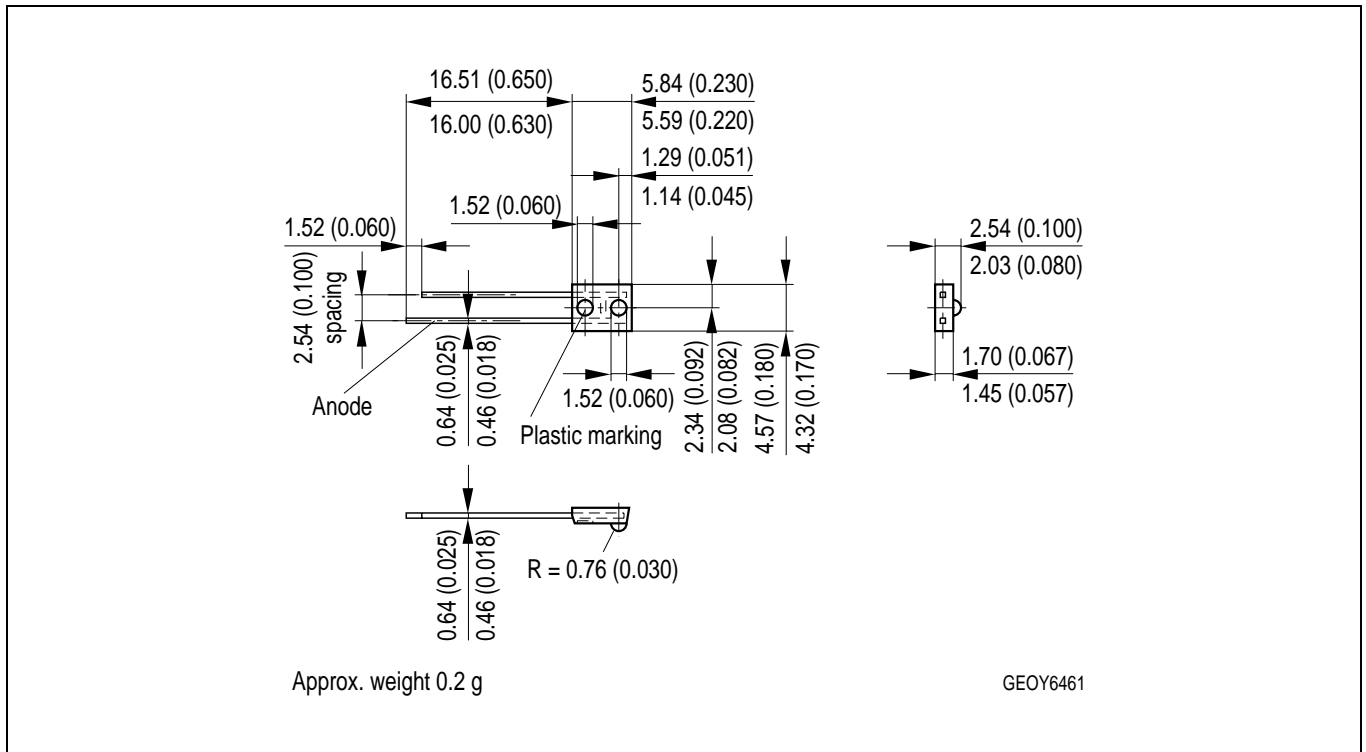


Directional Characteristics

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



**Maßzeichnung
Package Outlines**



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

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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.

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