NPN-Silizium-Fototransistor
Silicon NPN Phototransistor

LPT 80 A

Wesentliche Merkmale

- Speziell geeignet für Anwendungen im Bereich von 470 nm bis 1080 nm
- Sidelooker im Kunststoffgehäuse
- Hohe Empfindlichkeit
- Passend zu IRED IRL 80 A, IRL 81 A

Features

- Especially suitable for applications from 470 nm to 1080 nm
- Sidelooker in plastic package
- High sensitivity
- Matches IR emitter IRL 80 A, IRL 81 A

Anwendungen

- Fertigungs- und Kontrollanwendungen der Industrie
- Lichtschranken

Applications

- A variety of manufacturing and monitoring applications
- Photointerrupters

Typ Type	Bestellnummer Ordering Code	Gehäuse Package
LPT 80 A	Q68000-A7852	Klares Kunststoffgehäuse, Lötspieße im 2.54-mm-Raster ($^1/_{10}$”), Kollektorkennzeichnung: Längerer Lötspieß Clear plastic miniature package, 2.54 mm ($^1/_{10}$”) lead spacing, collector marking: long solder lead

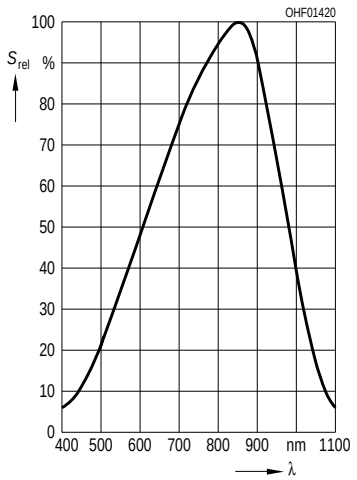
Grenzwerte
Maximum Ratings

Bezeichnung **Parameter**	**Symbol** **Symbol**	**Wert** **Value**	**Einheit** **Unit**
Betriebs- und Lagertemperatur Operating and storage temperature range	T_{op}; T_{stg}	– 40 … + 100	°C
Kollektor-Emitterspannung Collector-emitter voltage	V_{CE}	30	V
Kollektorstrom Collector current	I_C	50	mA
Kollektorspitzenstrom, $\tau = 10$ µs Collector surge current	I_{CS}	100	mA
Emitter-Kollektorspannung Emitter-collector voltage	V_{EC}	7	V
Verlustleistung, $T_A = 25$ °C Total power dissipation	P_{tot}	100	mW
Wärmewiderstand Thermal resistance	R_{thJA}	750	K/W

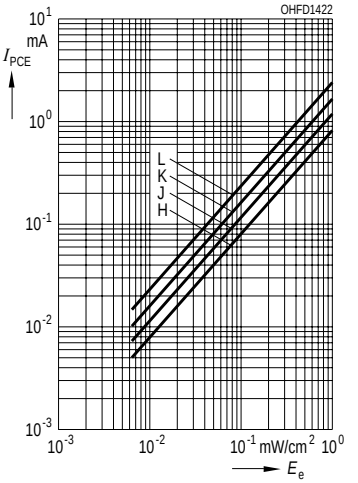
Kennwerte (T_A = 25 °C, λ = 950 nm)
Characteristics

Bezeichnung **Parameter**	**Symbol** **Symbol**	**Wert** **Value**	**Einheit** **Unit**
Wellenlänge der max. Fotoempfindlichkeit Wavelength of max. sensitivity	$\lambda_{S\ max}$	850	nm
Spektraler Bereich der Fotoempfindlichkeit S = 10% von S_{max} Spectral range of sensitivity S = 10% of S_{max}	λ	430 … 1070	nm
Abmessung der Chip-Fläche Dimensions of chip area	L x B L x W	0.55 × 0.55	mm × mm
Halbwinkel Half angle	φ	± 35	Grad deg.
Kapaziät, V_{CE} = 5 V, f = 1 MHz, E = 0 Capacitance	C_{CE}	3.3	pF
Dunkelstrom, V_{CE} = 5 V Dark current	I_R	3 (< 50)	nA
Fotostrom Photocurrent E_e = 0.5 mW/cm², V_{CE} = 5 V, λ = 950 nm E_v = 1000 lx, Normlicht/standard light A, V_{CE} = 5 V	 I_{PCE} I_{PCE}	 > 0.25 3.2	mA
Anstiegs- und Abfallzeit Rise and fall time R_L = 1 kΩ, V = 5 V, λ = 950 nm, I_C = 1 mA	t_r, t_f	10	µs
Kollektor-Emitter-Sättigungsspannung Collector-emitter saturation voltage $I_C = I_{PCE\ min} \times 0.8$, E_e = 0.5 mW/cm²	V_{CEsat}	150	mV

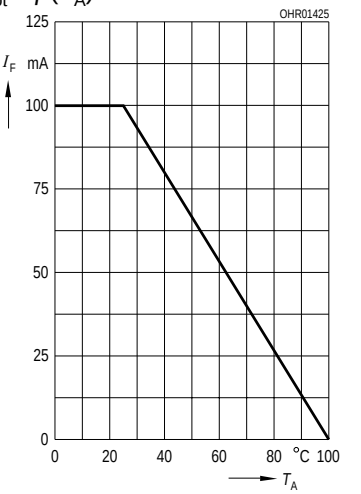
Relative Spectral Sensitivity
$S_{rel} = f(\lambda)$



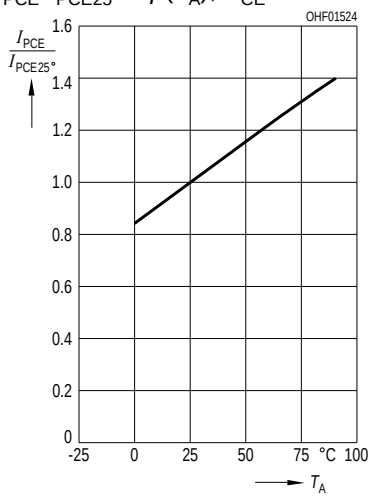
Photocurrent
$I_{PCE} = f(E_e)$, V_{CE} = 5 V



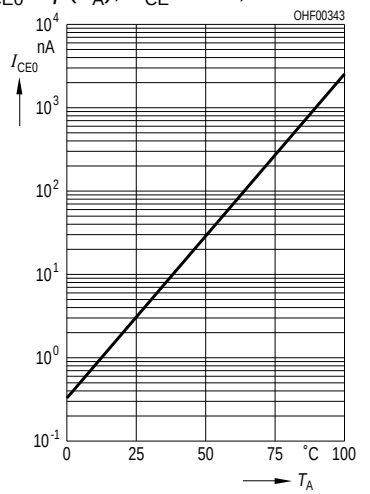
Total Power Dissipation
$P_{tot} = f(T_A)$



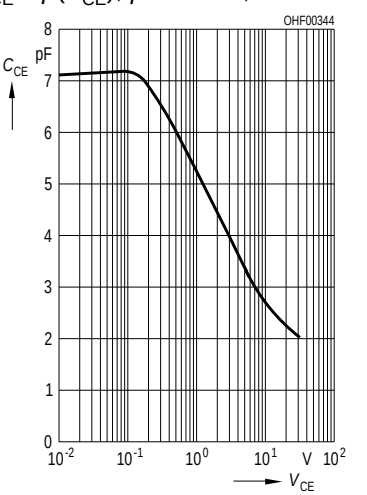
Photocurrent
$I_{PCE}/I_{PCE25°} = f(T_A)$, V_{CE} = 5 V



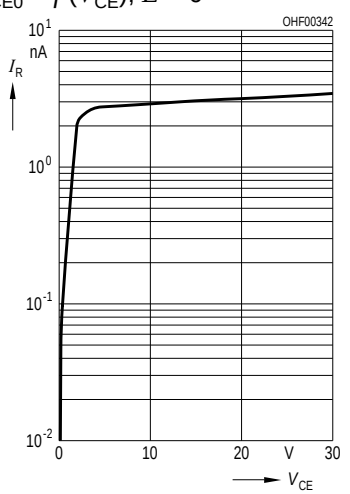
Dark Current
$I_{CE0} = f(T_A)$, V_{CE} = 5 V, E = 0



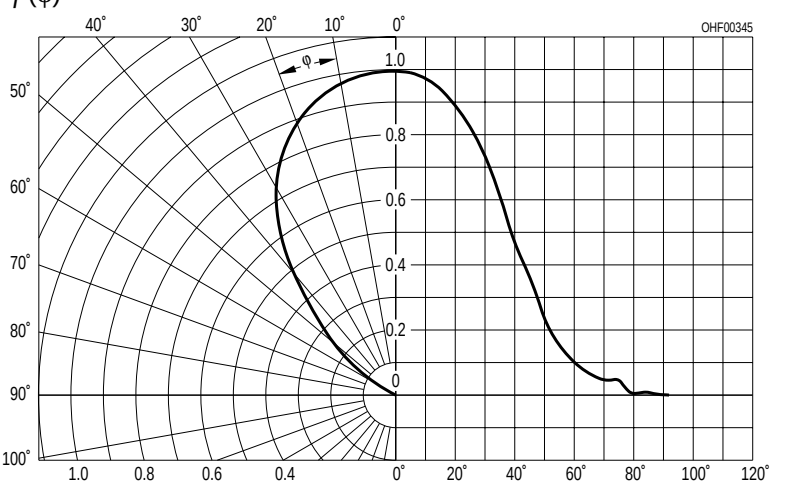
Capacitance
$C_{CE} = f(V_{CE})$, f = 1 MHz, E = 0



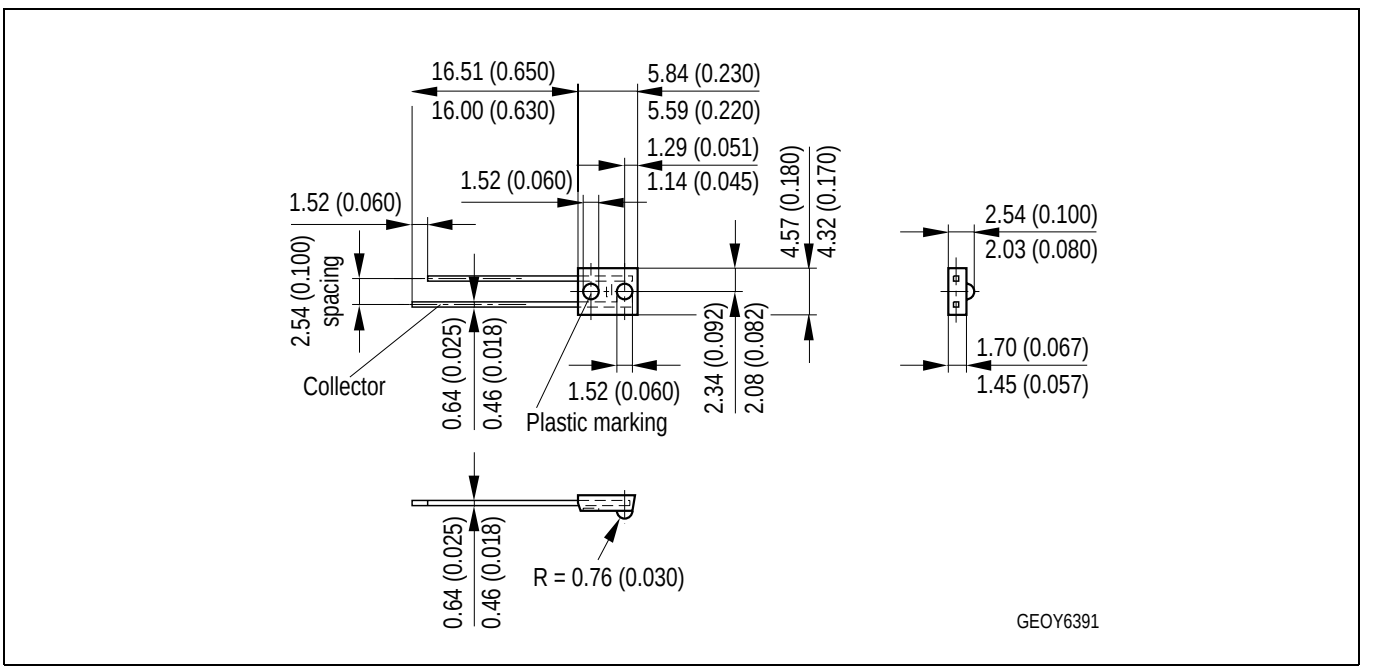
Dark Current
$I_{CE0} = f(V_{CE})$, E = 0



Directional Characteristics
$S_{rel} = f(\varphi)$



Maßzeichnung
Package Outlines



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

Published by OSRAM Opto Semiconductors GmbH & Co. OHG
Wernerwerkstrasse 2, D-93049 Regensburg

Attention please!
The information describes the type of component and shall not be considered as assured characteristics.
Terms of delivery and rights to change design reserved. Due to technical requirements components may contain dangerous substances. For information on the types in question please contact our Sales Organization.
Packing
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.
Components used in life-support devices or systems must be expressly authorized for such purpose! Critical components [1] , may only be used in life-support devices or systems [2] with the express written approval of OSRAM OS.
[1] A critical component is a component usedin 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.