GaAs-IR-Lumineszenzdioden-Zeilen
GaAs Infrared Emitter Arrays

LD 262 … LD 264

Wesentliche Merkmale

- GaAs-IR-Lumineszenzdiode
- Hohe Zuverlässigkeit
- Gruppiert lieferbar
- Gehäusegleich mit BPX 80-Serie
- Miniatur-Gehäuse

Features

- GaAs infrared emitting diode
- High reliability
- Available in bins
- Same package as BPX 80 series
- Miniature package

Anwendungen

- Miniaturlichtschranken für Gleich- und Wechsellichtbetrieb
- Barcodeleser
- Industrieelektronik
- „Messen/Steuern/Regeln“
- Sensorik
- Drehzahlsteuerung

Applications

- Miniature photointerrupters
- Barcode readers
- Industrial electronics
- For control and drive circuits
- Sensor technology
- Speed controller

Typ Type	IRED pro Zeile per Row	Maß „A“ Dimension “A”		Bestellnummer Ordering Code	Gehäuse Package
		min.	max.		
LD 262	2	4.5	4.9	Q62703-Q70	Zeilenbauform, Leiterbandgehäuse, klares Epoxy-Gießharz, linsenförmig, Anschlüsse im 2.54-mm-Raster ($^1/_{10}$''), Kathodenkennzeichnung: Nase am Lötspieß Lead frame arrays, transparent epoxy resin lens, solder tabs, lead spacing 2.54 mm ($^1/_{10}$''), cathode marking: projection at solder lead
LD 263	3	7	7.4	Q62703-Q71	
LD 264	4	9.6	10	Q62703-Q72	

Grenzwerte (T_A = 25 °C)
Maximum Ratings

Bezeichnung **Parameter**	**Symbol** **Symbol**	**Wert** **Value**	**Einheit** **Unit**
Betriebs- und Lagertemperatur Operating and storage temperature range	T_{op}; T_{stg}	– 40 … + 80	°C
Sperrschichttemperatur Junction temperature	T_j	80	°C
Sperrspannung Reverse voltage	V_R	5	V
Durchlaßstrom Forward current	I_F	50	mA
Stoßstrom, $\tau \leq 10$ µs, $D = 0$ Surge current	I_{FSM}	1.6	A
Verlustleistung Power dissipation	P_{tot}	70	mW
Wärmewiderstand Thermal resistance	R_{thJA} R_{thJL}	750 650	K/W K/W

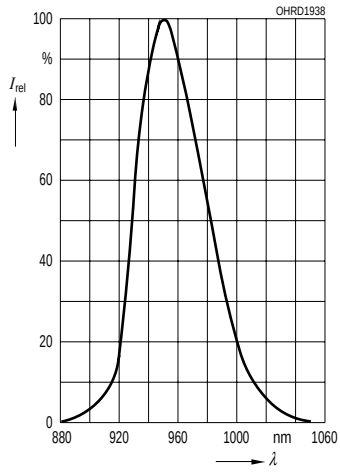
Kennwerte (T_A = 25 °C)
Characteristics

Bezeichnung **Parameter**	**Symbol** **Symbol**	**Wert** **Value**	**Einheit** **Unit**
Wellenlänge der Strahlung Wavelength at peak emission I_F = 50 mA, t_p = 20 ms	λ_{peak}	950	nm
Spektrale Bandbreite bei 50% von I_{max} Spectral bandwidth at 50% of I_{max} I_F = 50 mA, t_p = 20 ms	$\Delta\lambda$	55	nm
Abstrahlwinkel Half angle	φ	± 15	Grad deg.
Aktive Chipfläche Active chip area	A	0.25	mm^2
Abmessungen der aktiven Chipfläche Dimension of the active chip area	$L \times B$ $L \times W$	0.5 × 0.5	mm
Abstand Chipoberfläche bis Linsenscheitel Distance chip surface to lens top	H	1.3 … 1.9	mm

Kennwerte (T_A = 25 °C)
Characteristics (cont'd)

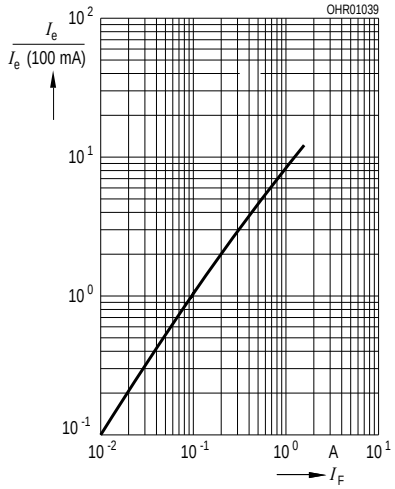
Bezeichnung **Parameter**	**Symbol** **Symbol**	**Wert** **Value**	**Einheit** **Unit**
Schaltzeiten, I_e von 10% auf 90% und von 90% auf 10%, bei I_F = 50 mA, R_L = 50 Ω Switching times, I_e from 10% to 90% and from 90% to 10%, I_F = 50 mA, R_L = 50 Ω	t_r, t_f	1	µs
Kapazität, V_R = 0 V Capacitance	C_o	40	pF
Durchlaßspannung, I_F = 50 mA, t_p = 20 µs Forward voltage	V_F	1.25 (≤ 1.4)	V
Sperrstrom, V_R = 5 V Reverse current	I_R	0.01 (≤ 1)	µA
Gesamtstrahlungsfluß, I_F = 50 mA, t_p = 20 ms Total radiant flux	Φ_e	9	mW
Temperaturkoeffizient von I_e bzw. Φ_e, I_F = 50 mA Temperature coefficient of I_e or Φ_e, I_F = 50 mA	TC_V	– 0.55	%/K
Temperaturkoeffizient von V_F, I_F = 50 mA Temperature coefficient of V_F, I_F = 50 mA	TC_V	– 1.5	mV/K
Temperaturkoeffizient von λ_{peak}, I_F = 50 mA Temperature coefficient of λ_{peak}, I_F = 50 mA	TC_λ	0.3	nm/K
Strahlstärke, I_F = 50 mA, t_p = 20 ms Radiant intensity	I_e	typ. 5 (≥ 2)	mW/sr

Relative Spectral Emission
$I_{rel} = f(\lambda)$

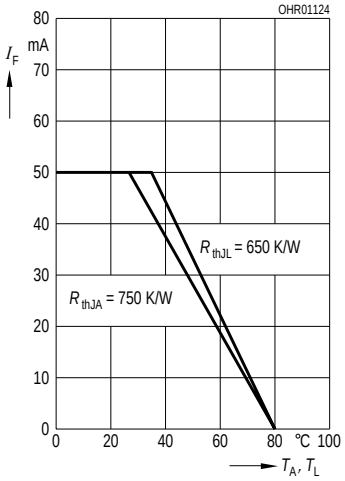


Radiant Intensity $\frac{I_e}{I_e\ 100\ mA} = f(I_F)$

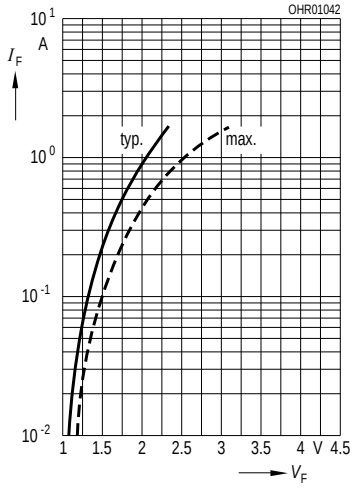
Single pulse, t_p = 20 µs



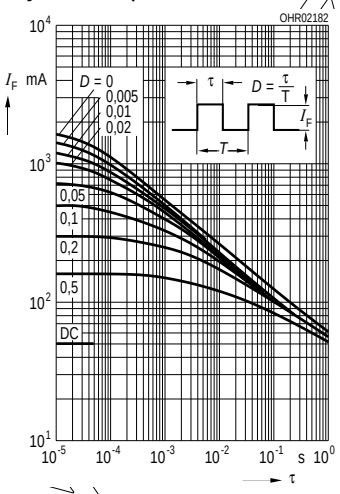
Max. Permissible Forward Current
$I_F = f(T_A)$



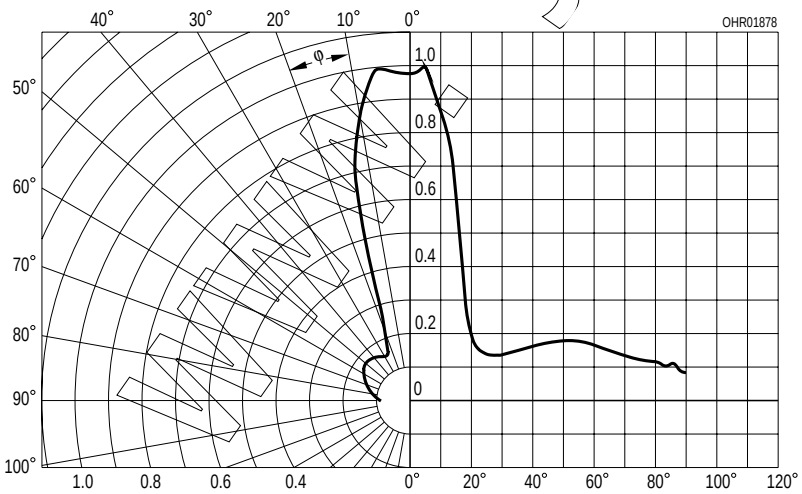
Forward Current
$I_F = f(V_E)$, single pulse,
t_p = 20 µs



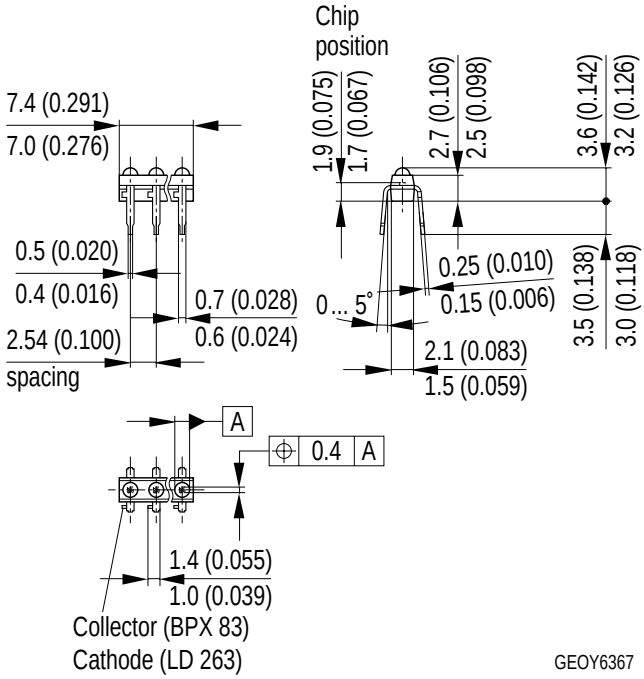
Permissible Pulse Handling Capability $I_F = f(\tau)$, T_C = 25 °C, duty cycle D = parameter



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



Maßzeichnung
Package Outlines



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

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.