GaAs-IR-Lumineszenzdioden-Zeilen
GaAs Infrared Emitter Arrays
Lead (Pb) Free Product - RoHS Compliant

LD 260
LD 262 … LD 269

Wesentliche Merkmale

- GaAs-IR-Lumineszenzdiode
- Zeilenbauform, lieferbar von 2 bis 10 Emitter pro Zeile
- Farbe: transparent
- Hohe Zuverlässigkeit
- Gruppiert lieferbar
- Gehäusegleich mit BPX 80-Serie
- Miniatur-Gehäuse

Anwendungen

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

Features

- GaAs infrared emitting diode
- Leadframe arrays, available from 2 to 10 Emitters per array
- Colour: transparent
- High reliability
- Available in bins
- Same package as BPX 80 series
- Miniature package

Applications

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

Typ **Type**	**IRED pro Zeile per Row**	**Bestellnummer** **Ordering Code**	**Strahlstärkegruppierung** [1] (I_F = 50 mA, t_p = 20 ms) **Radiant intensity grouping** [1] I_e (mW/sr)
LD 262	2	Q62703Q0070	> 2.5 (typ. 5)
LD 263	3	Q62703Q0071	
LD 264	4	Q62703Q0072	
LD 265	5	Q62703Q0073	
LD 266	6	Q62703Q0074	
LD 267	7	Q62703Q0075	
LD 268	8	Q62703Q0076	
LD 269	9	Q62703Q0077	
LD 260	10	Q62703Q0078	

[1] gemessen bei einem Raumwinkel Ω = 0.01 sr / measured at a solid angle of Ω = 0.01 sr

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

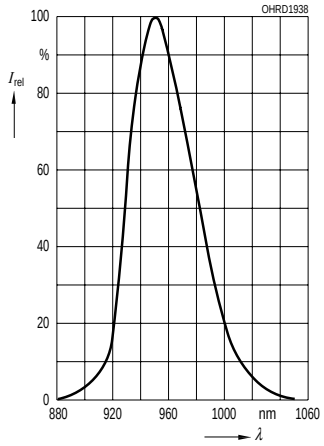
Kennwerte (T_A = 25 °C)
Characteristics

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	mm²
Abstand Chipoberfläche bis Linsenscheitel Distance chip surface to lens top	H	1.3 … 1.9	mm

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

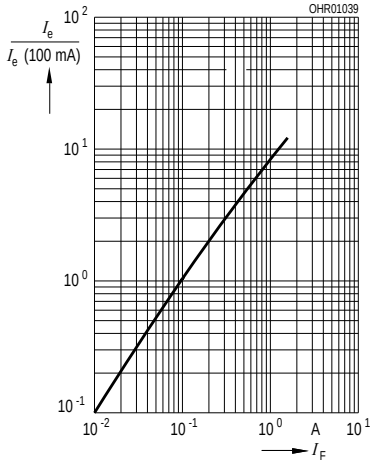
Bezeichnung **Parameter**	**Symbol** **Symbol**	**Wert** **Value**	**Einheit** **Unit**
Schaltzeiten, I_e von 10% auf 90% und von 90% auf 10%, bei I_F = 50 mA, R_L = 50 Ω Switching times, I_e from 10% to 90% and from 90% to 10%, I_F = 50 mA, R_L = 50 Ω	t_r, t_f	1	µs
Kapazität, V_R = 0 V Capacitance	C_o	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_I	– 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
$I_{rel} = f(\lambda)$

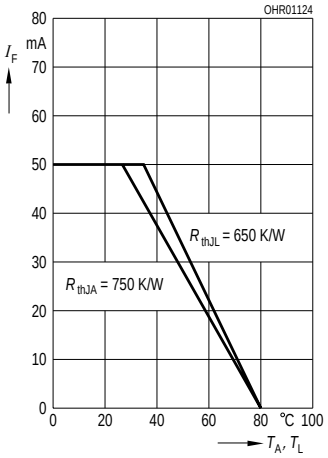


Radiant Intensity $\frac{I_e}{I_e\ 100\ mA} = f(I_F)$

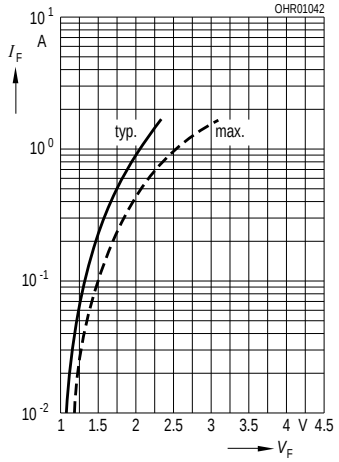
Single pulse, t_p = 20 µs



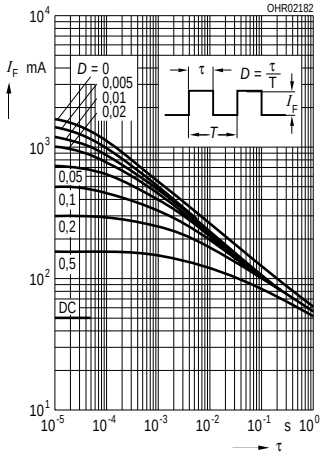
Max. Permissible Forward Current
$I_F = f(T_A)$



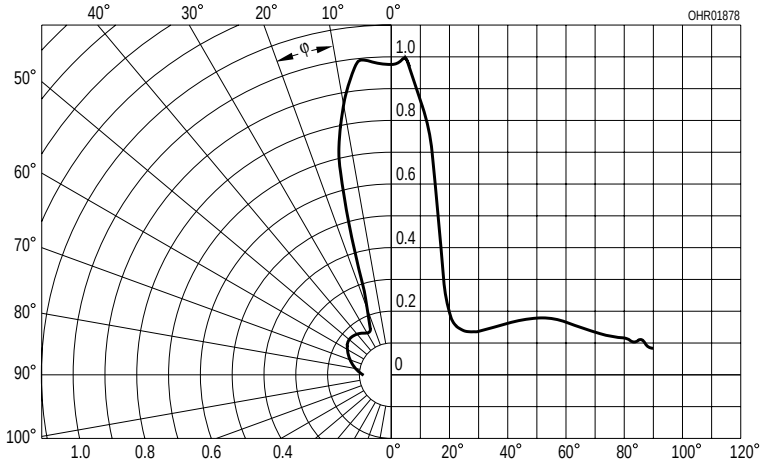
Forward Current
$I_F = f(V_E)$, single pulse,
t_p = 20 µs



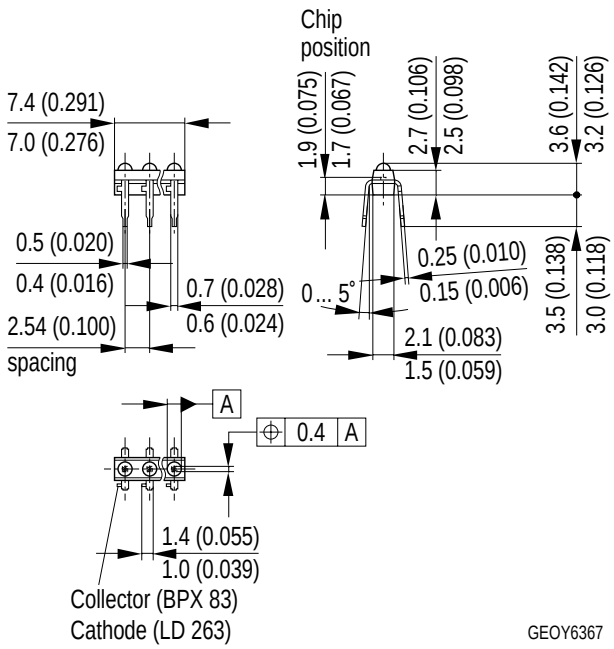
Permissible Pulse Handling Capability $I_F = f(\tau)$, T_C = 25 °C, duty cycle D = parameter



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



Maßzeichnung
Package Outlines



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

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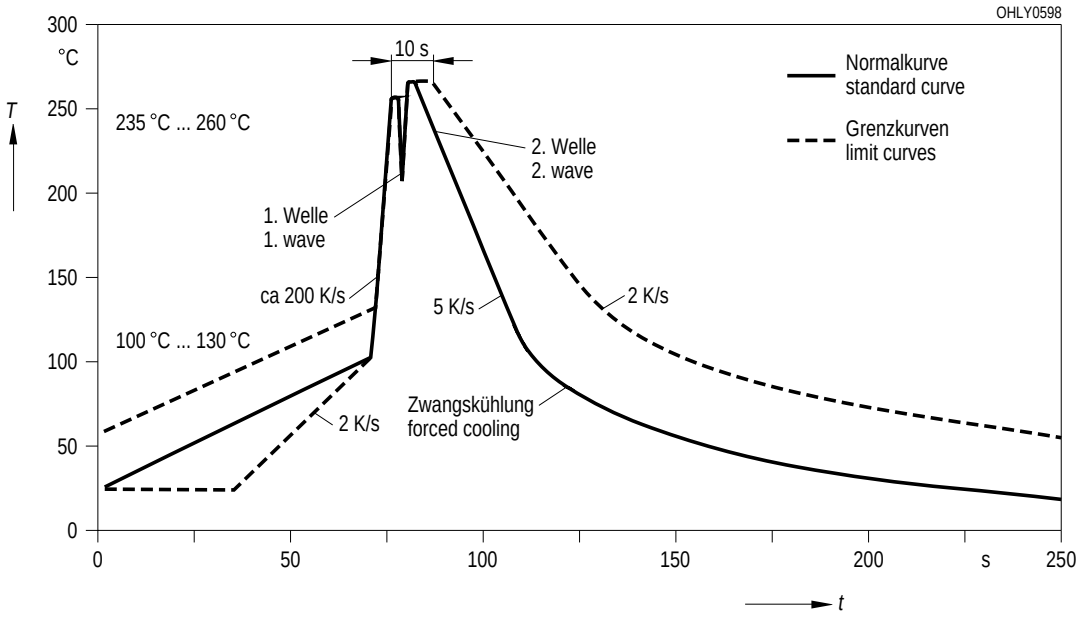
Typ Type	IRED pro Zeile IRED per Row	Maß „A“ Dimension “A”
LD 262	2	4.5 ... 4.9
LD 263	3	7.0 ... 7.4
LD 264	4	9.6 ... 10.0
LD 265	5	12.1 ... 12.5
LD 266	6	14.6 ... 16.0
LD 267	7	17.2 ... 17.6
LD 268	8	19.7 ... 20.1
LD 269	9	22.3 ... 22.7
LD 270	10	24.8 ... 25.2

Lötbedingungen
Soldering Conditions
Wellenlöten (TTW) (nach CECC 00802)
TTW Soldering (acc. to CECC 00802)



Published by
OSRAM Opto Semiconductors GmbH
Wernerwerkstrasse 2, D-93049 Regensburg
www.osram-os.com

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