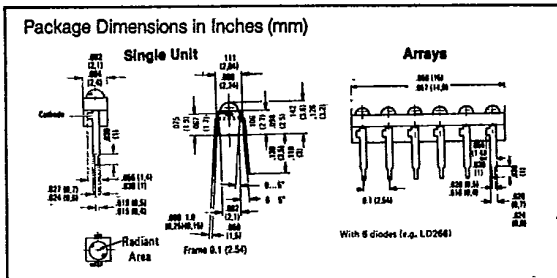


**SIEMENS**

**LD 261 SERIES  
INFRARED EMITTER  
SINGLE AND ARRAYS**

T-41-11



**FEATURES**

- Low Cost
- Miniature Size
- Available As Single Unit, LD 261 and Arrays:
  - Two Diodes, LD 262
  - Three Diodes, LD 263
  - Four Diodes, LD 264
  - Five Diodes, LD 265
  - Six Diodes, LD 266
  - Seven Diodes, LD 267
  - Eight Diodes, LD 268
  - Nine Diodes, LD 269
  - Ten Diodes, LD 260
- Medium Wide Beam, 60°

**DESCRIPTION**

The LD 261 series, GaAs infrared emitting diodes, emit radiation at a wavelength in the near infrared range. This miniature device comes in a grey plastic package and is available as a single emitter as well as two through ten element arrays. The terminals are solder pins with .10" lead spacing. The LD 261 series is designed for use with the BPX 81 series phototransistor when the spacing between each is approximately 10mm. These devices can easily be mounted on PC boards and in thick film circuits for simple or complex scanning systems.

**Maximum Ratings**

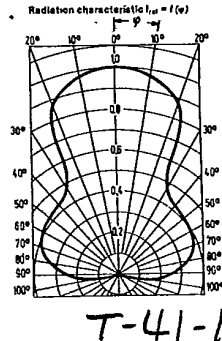
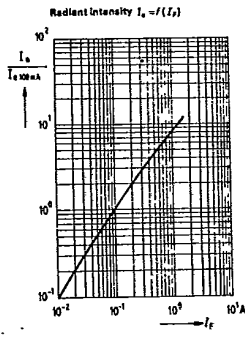
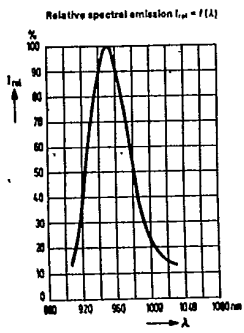
Storage Temperature	T	-40 to +80	°C
Soldering Temperature (Distance from soldering joint to package ≥ 2 mm, soldering time t ≤ 3 s)	T <sub>S</sub>	230	°C
Junction Temperature	T <sub>J</sub>	80	°C
Reverse Voltage	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	60	mA
Surge Current (t = 10 μs, D = 0)	I <sub>FS</sub>	1.6	A
Power Dissipation	P <sub>tot</sub>	85	mW
Thermal Resistance	R <sub>thJamb</sub>	750	K/W
	R <sub>thJL</sub>	650	K/W

**Characteristics (T<sub>amb</sub> = 25°C)**

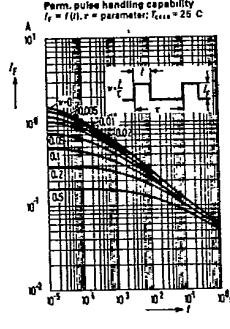
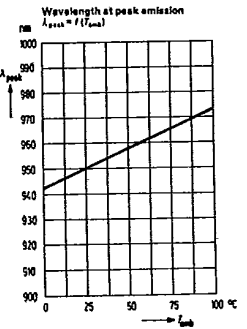
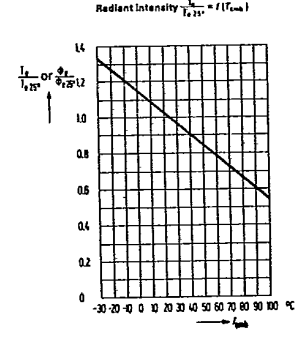
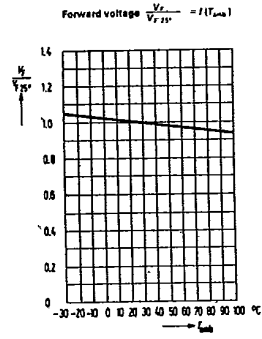
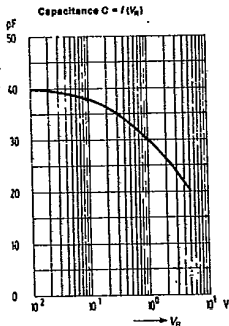
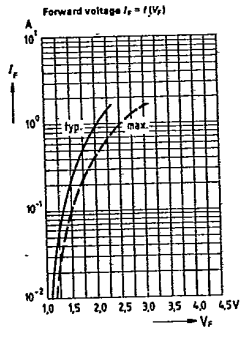
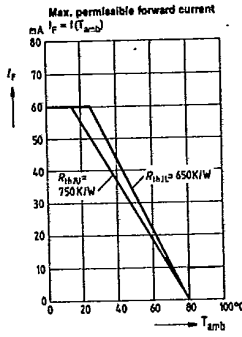
Wavelength (I <sub>F</sub> = 50 mA, t <sub>p</sub> = 20 ms)	λ	950 ± 20	nm
Spectral Bandwidth (I <sub>F</sub> = 50 mA, t <sub>p</sub> = 20 ms)	Δλ	55	nm
Half Angle	φ	±30	Deg.
Active Area	A	0.25	mm <sup>2</sup>
Active Die Area per Die	L x W	0.5 x 0.5	mm
Distance Die Surface to Package Surface	H	1.3 to 1.9	mm
Switching Time (I <sub>F</sub> from 10% to 90% and from 90% to 10% at I <sub>F</sub> = 50 mA)	t <sub>r</sub> , t <sub>f</sub>	1	μs
Capacitance (V <sub>R</sub> = 0 V)	C <sub>0</sub>	40	pF
Forward Voltage (I <sub>F</sub> = 50 mA, t <sub>p</sub> = 20 ms)	V <sub>F</sub>	1.25 (≤1.4)	V
Breakdown Voltage (I <sub>R</sub> = 10 μA)	V <sub>BR</sub>	30 (≥5)	V
Reverse Current (V <sub>R</sub> = 5 V)	I <sub>R</sub>	0.01 (≤1)	μA
Temperature Coefficient of I <sub>F</sub> or φ <sub>e</sub>	TC <sub>I</sub>	-0.55	%/K
Temperature Coefficient of V <sub>F</sub>	TC <sub>V</sub>	-1.5	mV/K
Temperature Coefficient of λ <sub>peak</sub>	TC <sub>λ</sub>	0.3	nm/K

**Radiant Intensity I<sub>e</sub> in Axial Direction Measured at a Solid Angle of Ω = 0.01 sr**

Group	LD261-4	LD261-5	260, 262-269	
Radiant Intensity (I <sub>F</sub> = 50 mA, t <sub>p</sub> = 20 ms) I <sub>e</sub>	2 to 4	3.2 to 6.3	2.5 to 8	mW/sr
Radiant Power (I <sub>F</sub> = 50 mA, t <sub>p</sub> = 20 ms) Φ <sub>e</sub>	5	6.5	8	mW



T-41-11



Infrared Emitters