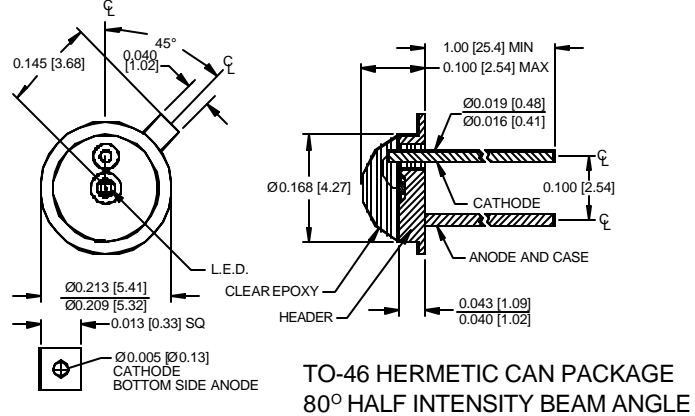


# PHOTONIC DETECTORS INC.

## High-Power GaAs Infrared Emitters Peak Wavelength 940 nm, Type PDI-E904



### PACKAGE DIMENSIONS inch (mm)



### FEATURES

- Hermetically sealed
- High reliability
- Wide angle

**DESCRIPTION:** The PDI-E904 infrared emitting diode uses high reliability liquid phase epitaxially grown GaAs. Optimized for high power, high efficiency. This 940 nm emitter is packaged in a TO-46 header with a clear epoxy glob top.

### APPLICATIONS

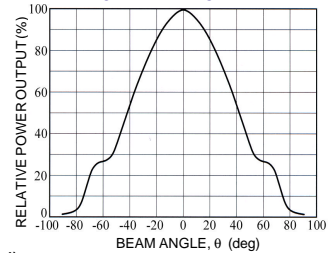
- Photo interrupters
- I.R. remotes
- Infrared sources

### ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
Pd	Power Dissipation		160	mW
I <sub>FP</sub>	Continuous Forward Current		100	mA
I <sub>FP</sub>	Peak Forward Current (10μs, 10Hz)		2.5	A
V <sub>R</sub>	Reverse voltage		5	V
To & Ts	Storage & Operating Temperature	-65	+125	°C
TS	Soldering Temperature*		+260	°C

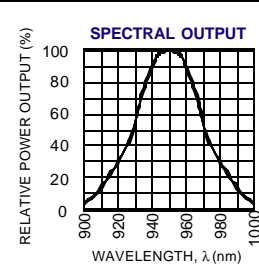
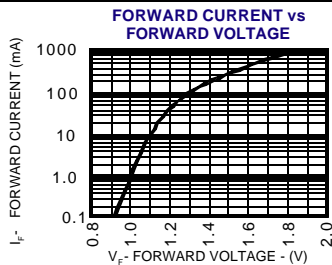
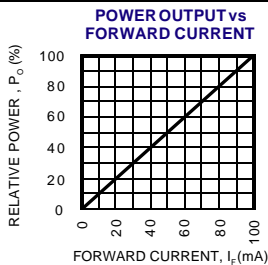
\*1/16 inch from case for 3 secs max

### TYPICAL RADIATION PATTERN



### ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>o</sub>	Output Power	I <sub>F</sub> = 20 mA	1	1.2		mW
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 100 mA		1.30	1.50	V
V <sub>R</sub>	Reverse Breakdown Voltage	I <sub>F</sub> = 10 μA	5			V
λ <sub>p</sub>	Peak Wavelength	I <sub>F</sub> = 100 mA	920	940	960	nm
Δλ	Spectral Halfwidth	I <sub>F</sub> = 100 mA		50		nm
C <sub>t</sub>	Terminal Capacitance	V <sub>R</sub> = 0 V, f = 1 MHz		30		pF
t <sub>r</sub>	Rise Time	I <sub>F</sub> = 100 mA		0.8		μS
t <sub>f</sub>	Fall Time	I <sub>F</sub> = 100 mA		0.8		mS



Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice. Optical power and radiant intensity measured using uncapped dimpled TO-46 into integrating sphere.