

### FEATURES

- High output power
- High reliability
- Medium emission angle

### DESCRIPTION:

The PDI-E807 infrared emitting diode uses high reliability liquid phase epitaxially grown GaAlAs. Optimized for high power, high efficiency. This 880 nm I.R. emitter is packaged in a TO-46 can with a glass lens cap.

### APPLICATIONS

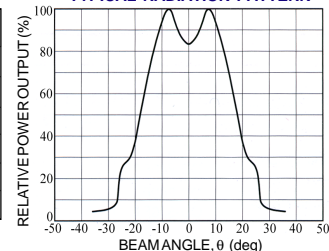
- Photoelectric switches
- Infrared sources
- Automatic controls

### 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)		3.0	A
V <sub>R</sub>	Reverse voltage		5	V
To & Ts	Storage & Operating Temperature	-55	+100	°C
TS	Soldering Temperature*		+240	°C

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

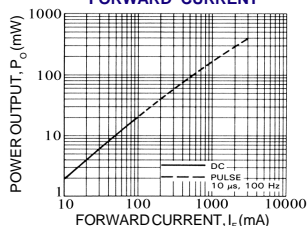
### TYPICAL RADIATION PATTERN



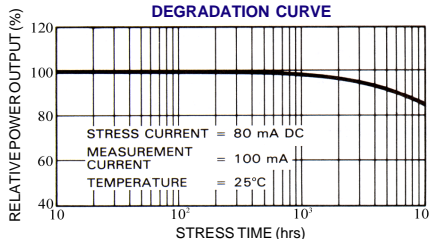
### ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>0</sub>	Output Power	I <sub>F</sub> = 100 mA	18	24		mW/Sr
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 100 mA		1.6	2.0	V
V <sub>R</sub>	Reverse Breakdown Voltage	I <sub>F</sub> = 100 μA	5	30		V
λ <sub>P</sub>	Peak Wavelength	I <sub>F</sub> = 50 mA	883	880	886	nm
Δλ	Spectral Halfwidth	I <sub>F</sub> = 50 mA		70		nm
C <sub>i</sub>	Terminal Capacitance	V <sub>R</sub> = 0 V, f = 1 MHz		20		pF
t <sub>r</sub>	Rise Time	I <sub>F</sub> = 100 mA		1.5		μs
t <sub>f</sub>	Fall Time	I <sub>F</sub> = 50 mA		0.8		μs

**POWER OUTPUT vs FORWARD CURRENT**



**TYPICAL POWER OUTPUT DEGRADATION CURVE**



**SPECTRAL OUTPUT**

