

### FEATURES

- High output power
- High reliability
- Narrow emission angle

### DESCRIPTION

The **PDI-E803** is an 880 nm high power GaAlAs infrared emitter, packaged in a hermetic TO-46 metal header with a dome window glass.

### APPLICATIONS

- Photoelectric switches
- Infrared sources
- Optical readers

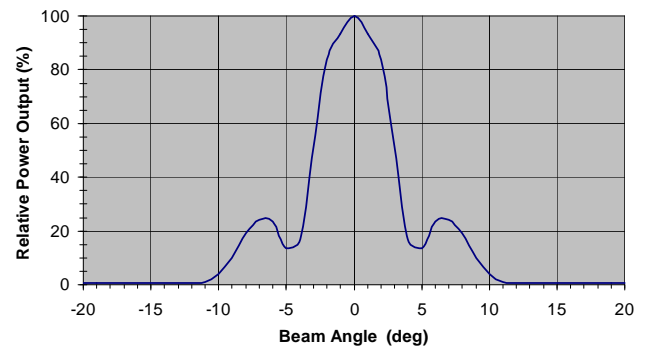


### ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	MAX	UNITS
P <sub>d</sub>	Power Dissipation		160	mW
I <sub>f</sub>	Continuous Forward Current		100	mA
I <sub>p</sub>	Peak Forward Current		3.0	A
V <sub>r</sub>	Reverse Voltage		5	V
T <sub>STG</sub>	Storage Temperature	-55	+100	°C
T <sub>O</sub>	Operating Temperature	-55	+100	°C
T <sub>S</sub>	Soldering Temperature*		+240	°C

\* 1/16 inch from case for 3 seconds max.

### RADIATION PATTERN



### RELIABILITY

This API high-reliability detector is in principle able to meet military test requirements (Mil-Std-750, Mil-Std-883) after proper screening and group test. Contact API for recommendations on specific test conditions and procedures.

### ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>o</sub>	Output Power	I <sub>f</sub> = 100 mA	7.8	9		mW
V <sub>f</sub>	Forward Voltage	I <sub>f</sub> = 100 mA		1.5	1.9	V
V <sub>r</sub>	Reverse Breakdown Voltage	I <sub>f</sub> = 10 μA	5	30		V
λ <sub>p</sub>	Peak Wavelength	I <sub>f</sub> = 20 mA	865	880	895	nm
Δλ	Spectral Bandwidth @ 50% (FWHM)	I <sub>f</sub> = 20 mA		65		nm
C <sub>t</sub>	Terminal Capacitance	V <sub>r</sub> = 0V, f = 1MHz		18		pF
t <sub>r</sub>	Rise Time	I <sub>f</sub> = 20 mA		0.75		μs
t <sub>f</sub>	Fall Time	I <sub>f</sub> = 20 mA		0.40		μs