

**FEATURES**

- High output power
- High reliability
- Narrow emission angle

**DESCRIPTION**

The **PDI-E809** is a high power 880 nm GaAlAs emitter, packaged in a low cost T 1¼ plastic package.

**APPLICATIONS**

- Photoelectric switches
- Infrared sources
- Optical readers

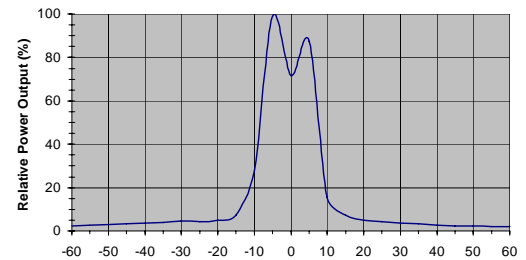


**ABSOLUTE MAXIMUM RATING** (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	MAX	UNITS
P <sub>d</sub>	Power Dissipation		200	mW
I <sub>f</sub>	Continuous Forward Current		100	mA
I <sub>p</sub>	Peak Forward Current		1	A
V <sub>r</sub>	Reverse Voltage		5	V
T <sub>STG</sub>	Storage Temperature	-25	+100	°C
T <sub>O</sub>	Operating Temperature	-25	+100	°C
T <sub>s</sub>	Soldering Temperature*		+240	°C

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

**RADIATION PATTERN**



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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>o</sub>	Radiant Intensity	I <sub>f</sub> = 50 mA	50	90		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		880		nm
Δλ	Spectral Bandwidth @ 50% (FWHM)	I <sub>f</sub> = 50 mA		70		nm
C <sub>t</sub>	Terminal Capacitance	V <sub>r</sub> = 0V, f = 1MHz		20		pF
t <sub>r</sub>	Rise Time	I <sub>f</sub> = 20 mA		1.5		µS
t <sub>f</sub>	Fall Time	I <sub>f</sub> = 20 mA		0.8		µS

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