

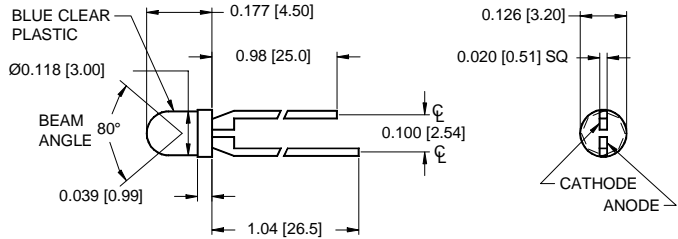
PHOTONIC DETECTORS INC.

High-Power GaAlAs Infrared Emitters Peak Wavelength, 880 nm, Type PDI-E808



PACKAGE DIMENSIONS inch (mm)

INDUSTRY EQUIVALENTS
SFH487 & SEP8705



BLUE TINT T 1 PACKAGE
40° HALF INTENSITY BEAM ANGLE

FEATURES

- High output power
- High reliability
- Medium emission angle

DESCRIPTION: The **PDI-E808** 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 low cost T 1 [3 mm diameter] package.

APPLICATIONS

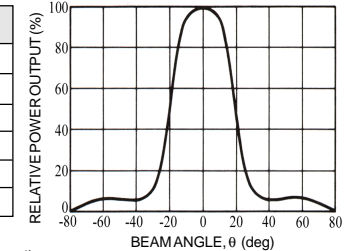
- Photoelectric switches
- Infrared sources
- Automatic controls

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
Pd	Power Dissipation		200	mW
I _{FP}	Continuous Forward Current		100	mA
I _{FP}	Peak Forward Current (10μs, 10Hz)		2.5	A
V _R	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

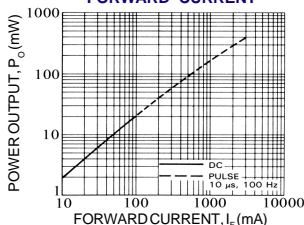
TYPICAL RADIATION PATTERN



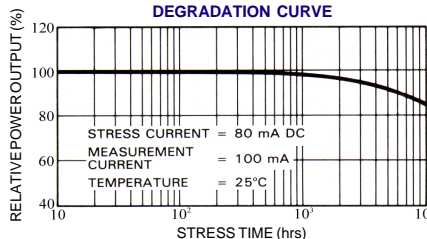
ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _E	Radiant Intensity	I _F = 50 mA	30	50		mW/Sr
V _F	Forward Voltage	I _F = 100 mA		1.6	2.0	V
V _R	Reverse Breakdown Voltage	I _F = 100 μA	5	30		V
λ _P	Peak Wavelength	I _F = 50 mA	883	880	886	nm
Δλ	Spectral Halfwidth	I _F = 50 mA		70		nm
C _i	Terminal Capacitance	V _R = 0 V, f = 1 MHz		20		pF
t _r	Rise Time	I _F = 100 mA		1.5		μs
t _f	Fall Time	I _F = 50 mA		0.8		μs

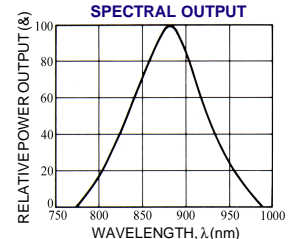
POWER OUTPUT vs FORWARD CURRENT



TYPICAL POWER OUTPUT DEGRADATION CURVE



SPECTRAL OUTPUT



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. [FORM NO. 100-PDI-E808 REV A]