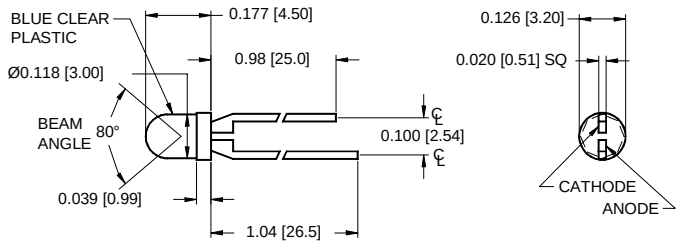
PHOTONIC DETECTORS INC.

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 reliablity
- 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

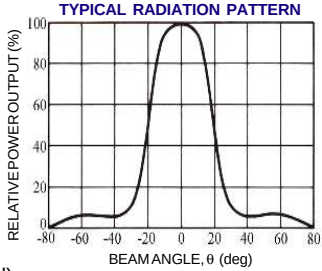
- Photoelectric switches
- Infrared sources
- Automatic controls

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	ºC
TS	Soldering Temperature*		+240	ºC

*1/16 inch from case for 3 secs max

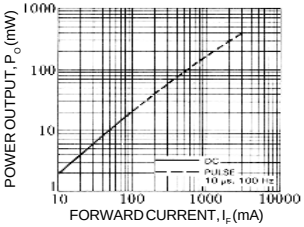
TYPICAL RADIATION PATTERN



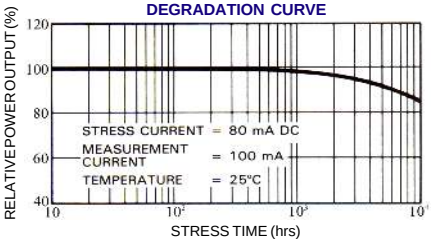
ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

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
$\triangle\lambda$	Spectral Halfwidth	I_F = 50 mA		70		nm
C_t	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