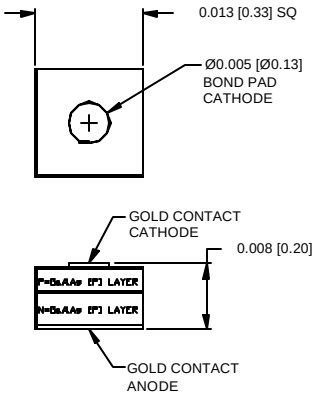
PHOTONIC DETECTORS INC.

High-Power GaAlAs Infrared Emitter Chip
Peak Wavelength, 880 nm, Type PDI-E800

PACKAGE DIMENSIONS inch (mm)

INDUSTRY EQUIVALENT
OPC226



FEATURES

- High output power
- Low degradation
- High reliability

DESCRIPTION: The **PDI-E800** infrared emitting diode uses high reliability liquid phase epitaxially grown GaAlAs. They are optimized for high power, high efficiency, and low degradation.

APPLICATIONS

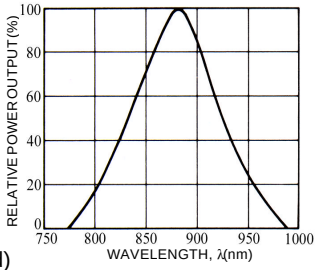
- Photoelectric switches
- Solid state switches
- Infrared sources

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
Pd	Power Dissipation		160	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	Light Current	-35	+100	°C
TS	Soldering Temperature*		+240	°C

*1/16 inch from case for 3 secs max

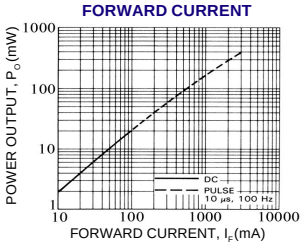
SPECTRAL OUTPUT



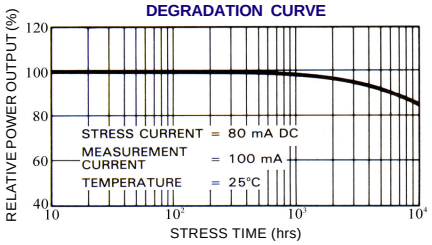
ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_O	Output Power	I_F = 100 mA	20	24		mW
V_F	Forward Voltage	I_F = 100 mA		1.50	1.90	V
V_R	Reverse Breakdown Voltage	I_F = 10 mA	5	30		V
λ_P	Peak Wavelength	I_F = 50 mA	865	880	895	nm
$\Delta\lambda$	Spectral Halfwidth	I_F = 50 mA		50		nm
C_t	Terminal Capacitance	V_R = 0 V,f = 1 MHz		30		pF
t_r	Rise Time	I_F = 100 mA		0.6		µS
t_f	Fall Time	I_F = 100 mA		0.5		mS

POWER OUTPUT vs FORWARD CURRENT



TYPICAL POWER OUTPUT DEGRADATION CURVE



POWER OUTPUT vs TEMPERATURE