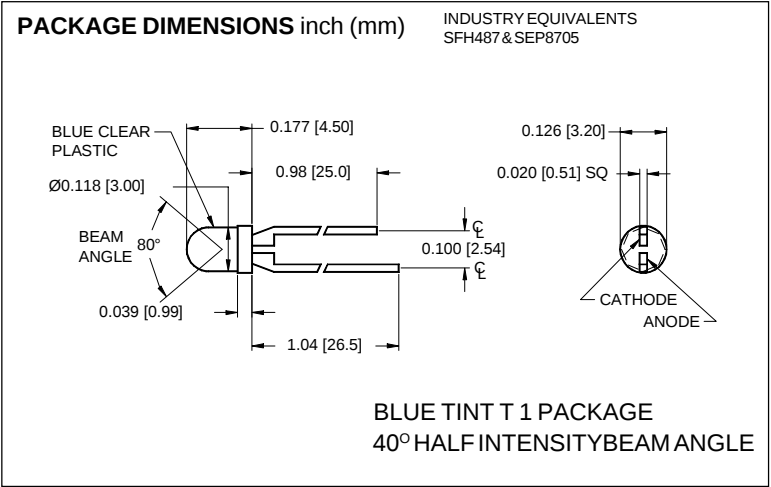


PHOTONIC
DETECTORS INC.

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



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

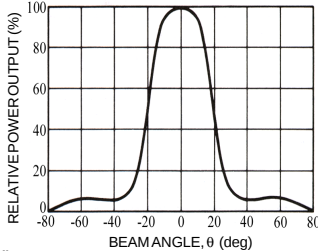
- Photoelectric switches
- Infrared sources
- Automatic controls

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
Pd	Power Dissipation		200	mW
IFP	Continuous Forward Current		100	mA
IFP	Peak Forward Current (10µs, 10Hz)		2.5	A
VR	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

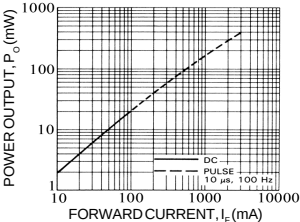
TYPICAL RADIATION PATTERN



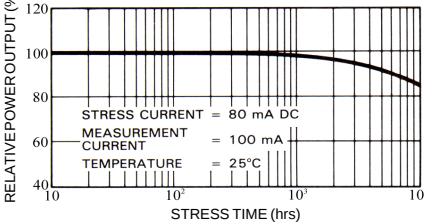
ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
IE	Radiant Intensity	IF = 50 mA	30	50		mW/Sr
VF	Forward Voltage	IF = 100 mA		1.6	2.0	V
VR	Reverse Breakdown Voltage	IF = 100 µA	5	30		V
λP	Peak Wavelength	IF = 50 mA	883	880	886	nm
Δλ	Spectral Halfwidth	IF = 50 mA		70		nm
Ci	Terminal Capacitance	VR = 0 V, f = 1 MHz		20		pF
tr	Rise Time	IF = 100 mA		1.5		µs
tf	Fall Time	IF = 50 mA		0.8		µs

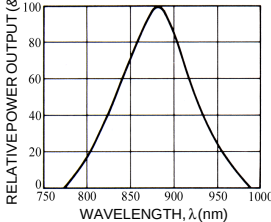
POWER OUTPUT vs FORWARD CURRENT



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]