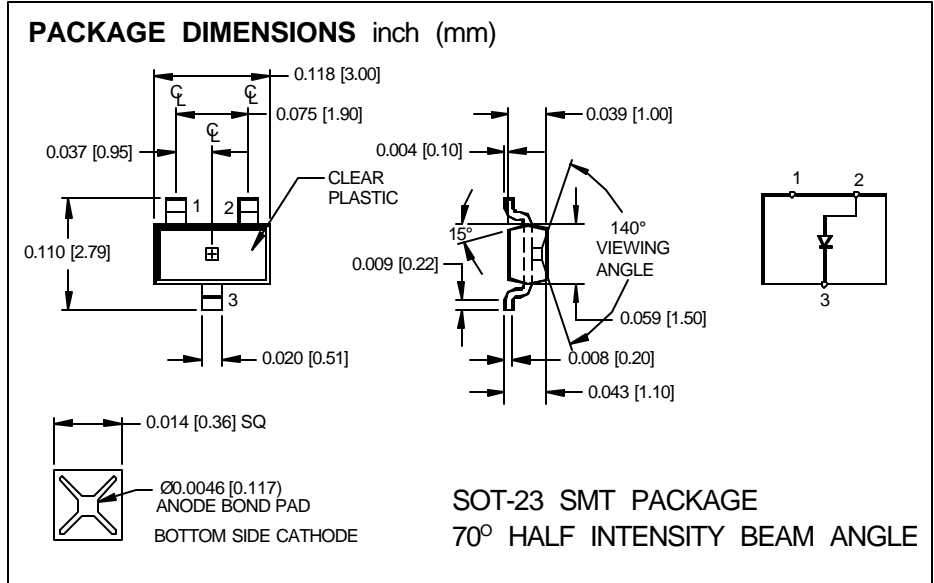


# PHOTONIC DETECTORS INC.

## High-Power GaAlAs Infrared Emitters Peak Wavelength, 880 nm, SMT Type PDI-E880SM



### FEATURES

- SOT-23 package
- Surface mount
- Wide emission angle

### DESCRIPTION:

The **PDI-E880SM** infrared emitting diode uses high reliability liquid phase epitaxially grown GaAlAs. Optimized for high power, high efficiency. This 880 nm emitter is packaged in a clear plastic SOT-23.

Compatible with automatic pick & place equipment.

### APPLICATIONS

- Light screens
- Touch screens
- Infrared sources

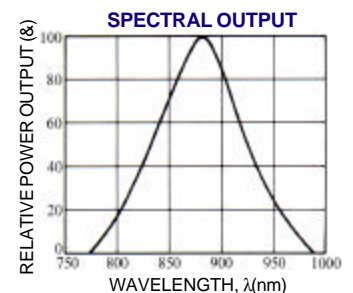
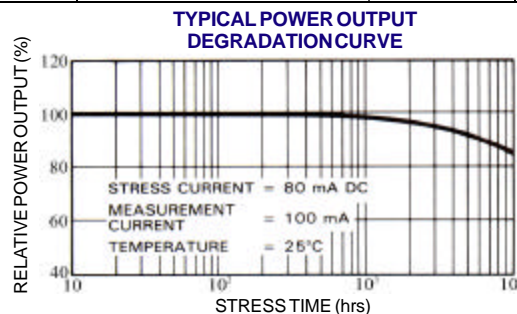
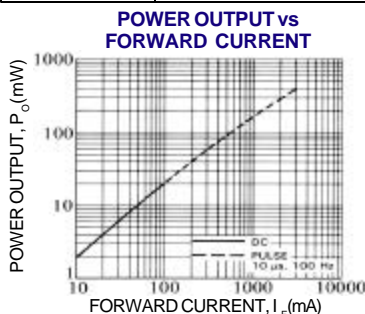
### ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
Pd	Power Dissipation		200	mW
I <sub>FP</sub>	Continuous Forward Current		100	mA
I <sub>FP</sub>	Peak Forward Current (10μs, 10Hz)		1	A
V <sub>R</sub>	Reverse voltage		5	V
To & Ts	Storage & Operating Temperature	-25	+100	°C
TS	Soldering Temperature*		+240	°C

\*1/16 inch from case for 3 secs max

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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>o</sub>	Radiant Intensity	I <sub>F</sub> = 50 mA	0.5	1.0		mW/sr
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 20 mA	1.3	1.5		V
V <sub>R</sub>	Reverse Breakdown Voltage	I <sub>F</sub> = 10 μA	5	30		V
λ <sub>P</sub>	Peak Wavelength	I <sub>F</sub> = 50 mA		880		nm
Δλ	Spectral Halfwidth	I <sub>F</sub> = 50 mA		70		nm
C <sub>t</sub>	Terminal Capacitance	V <sub>R</sub> = 0 V, f = 1 MHz		20		pF
t <sub>r</sub>	Rise Time	I <sub>F</sub> = 100 mA		1.5		μS
t <sub>f</sub>	Fall Time	I <sub>F</sub> = 100 mA		0.8		μS



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-E880SM REV N/C]