



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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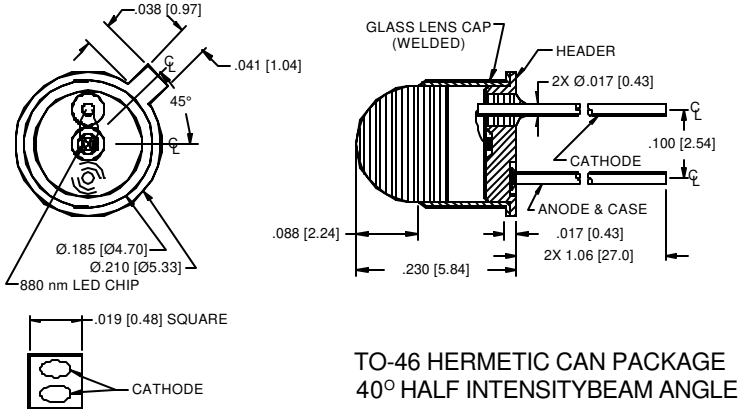


# PHOTONIC DETECTORS INC.

## High-Power & Current GaAlAs Infrared Emitters Peak Wavelength, 880 nm, Type PDI-E812



### PACKAGE DIMENSIONS inch (mm)



TO-46 HERMETIC CAN PACKAGE  
40° HALF INTENSITY BEAM ANGLE

### FEATURES

- Dual cathode
- High current
- Medium emission angle

**DESCRIPTION:** The PDI-E812 infrared emitting diode uses dual cathode, high current liquid phase epitaxially grown GaAlAs. Optimized for high power, high current at 880 nm. Packaged in a TO-46 header with a glass lens cap.

### APPLICATIONS

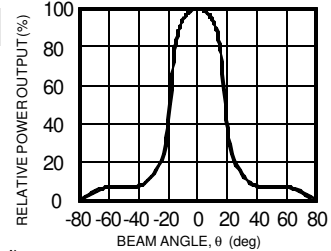
- Photoelectric switches
- Reflective switches
- Smoke detectors

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
Pd	Power Dissipation		360	mW
I <sub>FP</sub>	Continuous Forward Current		180	mA
I <sub>FP</sub>	Peak Forward Current (100µs pulse, 10pps)		3.0	A
V <sub>R</sub>	Reverse voltage		3.0	V
To & Ts	Storage & Operating Temperature	-65	+125	°C
TS	Soldering Temperature*		+260	°C

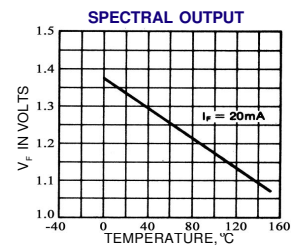
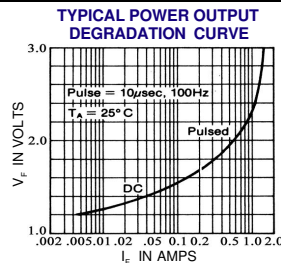
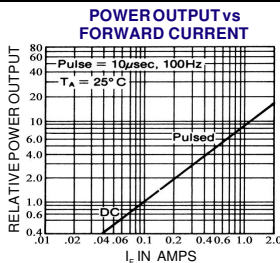
\*1/16 inch from case for 3 secs max

### TYPICAL RADIATION PATTERN



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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>O</sub>	Output Power	I <sub>F</sub> = 100 mA	7.0	15		mW
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 100 mA		1.5	1.9	V
I <sub>R</sub>	Reverse Current	V <sub>R</sub> = -3.0 V			10	mA
λ <sub>P</sub>	Peak Wavelength	I <sub>F</sub> = 50 mA	865	880	895	nm
Δλ	Spectral Halfwidth	I <sub>F</sub> = 50 mA		80		nm
R <sub>d</sub>	Dynamic Resistance	I <sub>F</sub> = 100 mA		1.2		Ohm
t <sub>r</sub>	Rise Time	I <sub>F</sub> = 100 mA		0.6		µS
t <sub>f</sub>	Fall Time	I <sub>F</sub> = 100 mA		0.5		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.