



### FEATURES

- High output power
- High reliability
- Medium emission angle

### DESCRIPTION

The **PDI-E813** is a high power GaAlAs infrared emitter, packaged in a hermetic TO-46 metal header with a dome window glass.

### APPLICATIONS

- Photoelectric switches
- Infrared sources
- Optical readers

### ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	MAX	UNITS
$P_d$	Power Dissipation		360	mW
$I_f$	Continuous Forward Current		180	mA
$I_p$	Peak Forward Current		3.0	A
$V_r$	Reverse Voltage		3	V
$T_{STG}$	Storage Temperature	-55	+125	°C
$T_O$	Operating Temperature	-55	+125	°C
$T_s$	Soldering Temperature*		+240	°C

\* 1/16 inch from case for 3 seconds max.

### ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$P_o$	Output Power	$I_f = 100 \text{ mA}$	7.0	15		mW
$V_f$	Forward Voltage	$I_f = 100 \text{ mA}$		1.5	1.9	V
$I_r$	Reverse current	$V_r = -3\text{V}$			10	uA
$\lambda_p$	Peak Wavelength	$I_f = 50 \text{ mA}$	865	880	895	nm
$\Delta\lambda$	Spectral Halfwidth	$I_f = 50 \text{ mA}$		80		nm
$R_d$	Dynamic Resistance	$I_f = 100\text{mA}$		1.2		Ohms
$t_r$	Rise Time	$I_f = 20 \text{ mA}$		0.6		uS
$t_f$	Fall Time	$I_f = 20 \text{ mA}$		0.5		uS

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.