



## 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	$I_f = 100$ mA	7.0	15		mW
$V_f$	Forward Voltage	$I_f = 100$ mA		1.5	1.9	V
$I_r$	Reverse current	$V_r = -3$ V			10	µA
$\lambda_p$	Peak Wavelength	$I_f = 50$ mA	865	880	895	nm
$\Delta\lambda$	Spectral Halfwidth	$I_f = 50$ mA		80		nm
$R_d$	Dynamic Resistance	$I_f = 100$ mA		1.2		Ohms
$t_r$	Rise Time	$I_f = 20$ mA		0.6		µS
$t_f$	Fall Time	$I_f = 20$ mA		0.5		µS

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