



### FEATURES

- SOT-23 package
- Surface Mount
- Wide emission Angle

### DESCRIPTION

The **PDI-E940** is a high power 940 nm and high power GaAs emitter, packaged in a small low cost SOT-23 surface mount package

### APPLICATIONS

- Fiber optic sources
- Optical encoders
- Point light sources

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
$P_d$	Power Dissipation		170	mW
$I_f$	Continuous Forward Current		100	mA
$I_p$	Peak Forward Current		1	A
$V_r$	Reverse Voltage		5	V
$T_{STG}$	Storage Temperature	-25	+100	°C
$T_O$	Operating Temperature	-25	+100	°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	$I_f = 50$ mA	18	22		mW
$V_f$	Forward Voltage	$I_f = 20$ mA		1.5	1.9	V
$V_r$	Reverse Breakdown Voltage	$I_f = 10$ $\mu$ A	5	30		V
$\lambda_p$	Peak Wavelength	$I_f = 100$ mA	920	940	960	nm
$\Delta\lambda$	Spectral Halfwidth	$I_f = 100$ mA		50		nm
$C_t$	Terminal Capacitance	$V_r = 0V, f = 1MHz$		25		pF
$t_r$	Rise Time	$I_f = 100$ mA		80		nS
$t_f$	Fall Time	$I_f = 100$ mA		180		nS

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