

# PDI-80P

## InGaAs PHOTODIODE MODULES

These modules are detector modules containing highly reliable InGaAs pin for long wavelength band (800~1650nm) and single-mode fiber pigtails. These modules are used as detector for high-speed long haul optical communication systems.

**FEATURES:** PDI-80P-RM - optical matching modules  
PDI-80P-R50 - low back reflection modules

### Absolute maximum ratings

Reverse voltage, $V_R$	40V
Reverse current, $V_R$	20mA
Operating case temperature, $T_c$ :	-40 ÷ +80°C
Storage temperature, $T_{stg}$	-40 ÷ +100°C

### Electrical / optical characteristics (SM, T=25°C)

Parameter		Min.	Typ.	Max.	Unit	Test conditions
Responsivity	$S_\lambda$	0.9	1.05		A/W	$\lambda = 1550\text{nm}$ , $V_R = 5\text{V}$
Back reflection *	$R_L$		-55	-50	dB	$\lambda = 1550\text{nm}$
Dark current	$I_d$		0.05	1	nA	$V_R = 5\text{V}$
Capacitance	$C_t$		1.2	1.5	pF	$V_R = 5\text{V}$ , $F = 1\text{MHz}$
Cutoff frequency	$f_c$		2		GHz	$V_R = 5\text{V}$ , $\lambda = 1550\text{nm}$ , $R_L = 50\Omega$ , -3 dB
* for PDI -80P-R50						

### Ordering information

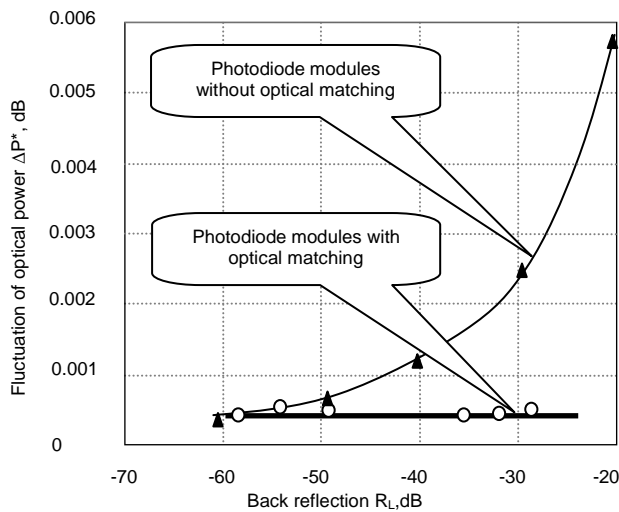
## PDI-80P-X-X-SM-X

Connector type: **FC/UPC**, **FC/APC**, **N** – without connector

Case type: **W**, **H**

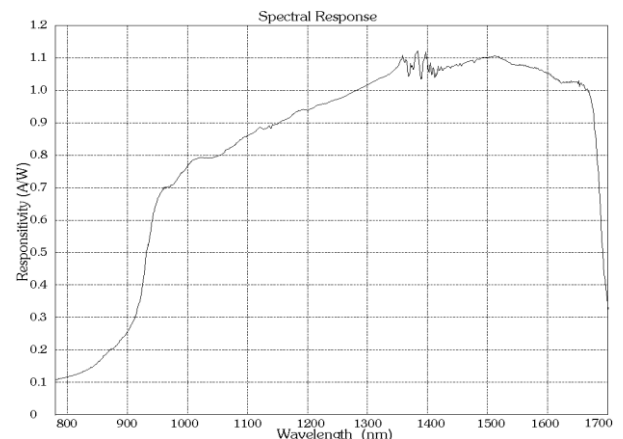
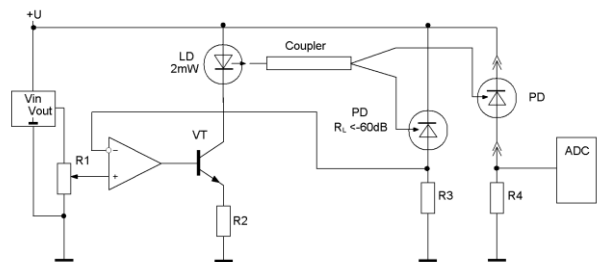
Back reflection: **R50** – -50dB, **RM** – optical matching

### Stability of optical power of optical communication system at the use of photodiode modules with a different back reflection

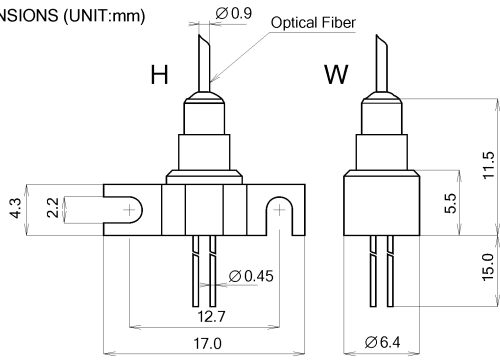


\* -  $\Delta P = 10 \lg[(2s+P)/P]$ , s- standard deviation of the single measuring for a middle temporal period, P- average optical power

### Measuring system



PACKAGE DIMENSIONS (UNIT:mm)



PIN Assignment (Bottom View)

