

PWDM PD TX1550 RX 1310/1490nm WDM Photo-Detector

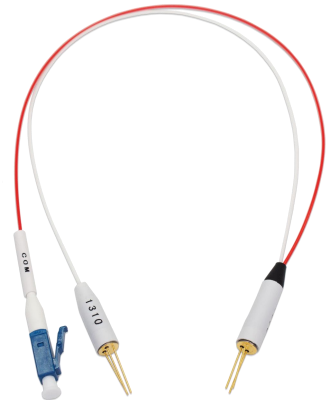
FW-PWPD-025/R13T15-PD-09-025

FW-PWPD-025/R13T15-PD-09-025 is an integrated FWDM wavelength division photo-detector device. The module couples and encapsulates optical signals from the transmission port (1550 nm) and reflection port (1310/1490 nm) of the FWDM component simultaneously into high-responsivity photo-detectors (PDs), enabling independent photoelectric detection for three wavelength channels with a single fiber input.

Adopting a compact hermetic package design, this device highly integrates wavelength division multiplexing and photodetection functions. It greatly simplifies the optical path of the system and reduces overall equipment size, making it an ideal candidate for PON network monitoring, optical power monitoring (OPM), channel monitoring in WDM systems and other applications.

Product Features

- ◆ **High Isolation:** FWDM filter ensures low crosstalk between channels.
- ◆ **High Reliability:** Hermetic packaging, compliant with reliability requirements of Telcordia GR-468.
- ◆ **High Responsivity:** Adopts high-sensitivity InGaAs photodetector chip.
- ◆ **Low Dark Current & Low Noise:** Guarantees detection accuracy for weak optical signals.
- ◆ **Miniature Package:** Compact structure for easy system integration.



Product Applications

- ◆ Online optical power monitoring for FTTx / PON networks (EPON / GPON)
- ◆ Signal detection for Optical Line Terminal (OLT) and Optical Network Unit (ONU)
- ◆ Channel power monitoring in Wavelength Division Multiplexing (WDM) systems
- ◆ Input / output optical power detection of optical amplifiers (EDFA)
- ◆ Optical test instruments and optical sensing systems

Optical & Electrical Characteristics

Parameter			Unit	Value			Remarks
				Min	Type	Max	
Operating Wavelength		$\lambda 1$	nm	1260	1310	1360	Reflection
		$\lambda 2$		1480	1490	1500	
		$\lambda 3$		1520	1550	1610	Transmission
WDM	Insertion Loss	COM→R @ $\lambda 1$ & $\lambda 2$	dB		0.5	0.6	
	Isolation	COM→R @ $\lambda 3$		15	22	-	
		COM→T@ $\lambda 1$ & $\lambda 2$		30	35	-	
PD	Responsivity	Transmission	A/W	0.85	0.9		1550nm
		Reflection		0.85	0.9		1310nm
Saturation power		Ps	mW			2	
Forward current		If	mA		2		
Connector	Insertion Loss		dB	-	-	0.2	LC/PC
PDL			dB	-	-	0.2	
Return Loss			dB		40	-	
Dimensions			mm				See figure below

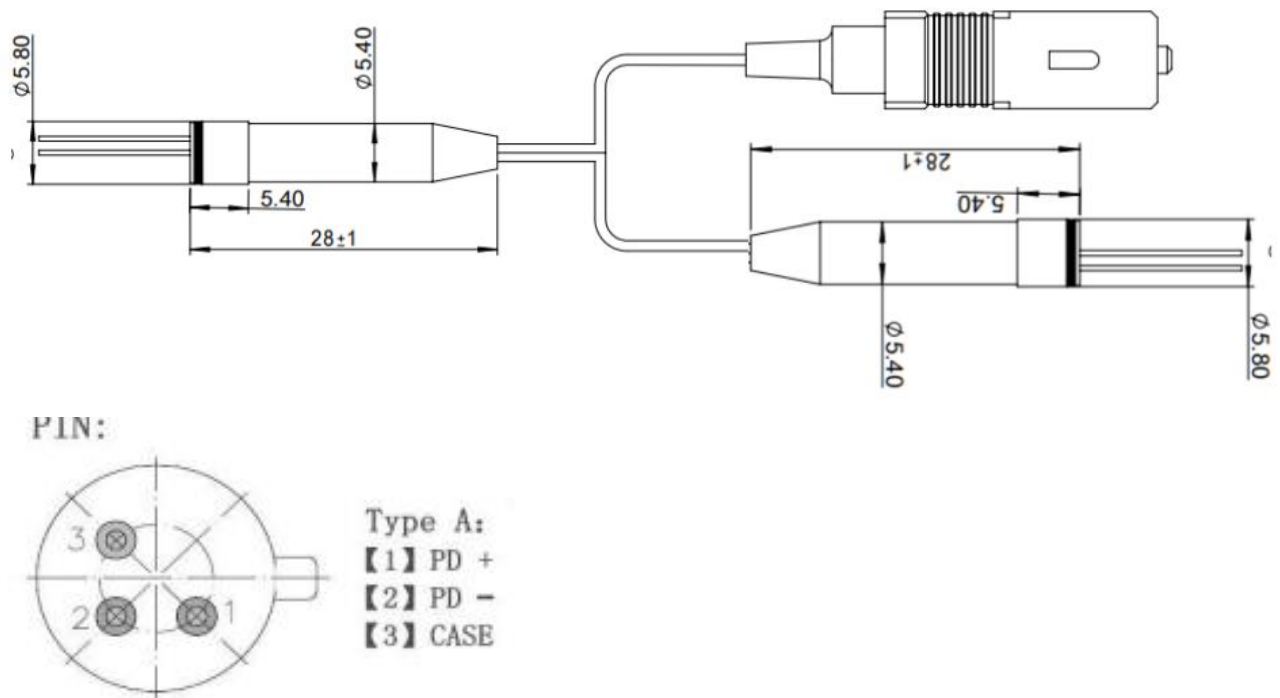
Operating & Storage Conditions

Parameter	Characteristics	Unit
Operating Temperature	-40 ~ +80	°C
Operating Humidity	5~85	%RH
Storage Temperature	-40 ~ +85	°C
Storage Humidity	5~95	%RH

Mechanical Structure Drawing

Fibers are 0.9mm Hytel, available in white and red or customer-specified colors. Fiber length is $L \pm 10$ mm.

All components comply with RoHS.



Ordering Information

PN	Specification
FW-PWPD-025/R13T15-PD-09-025LCU	PWDM -PD TX1550 RX1310/1490 FWDM-coupled PD , LC/UPC,0.9MM 0.25M FIBER
FW-PWPD-025/R13T15-PD-09-025SCU	PWDM -PD TX1550 RX1310/1490 FWDM-coupled PD , SC/UPC,0.9MM 0.25M FIBER
FW-PWPD-025/R13T15-PD-09-025FCU	PWDM -PD TX1550 RX1310/1490 FWDM-coupled PD , FC/UPC,0.9MM 0.25M FIBER
FW-PWPD-025/R13T15-PD-09-025LCA	PWDM -PD TX1550 RX1310/1490 FWDM-coupled PD , LC/APC,0.9MM 0.25M FIBER
FW-PWPD-025/R13T15-PD-09-025SCA	PWDM -PD TX1550 RX1310/1490 FWDM-coupled PD , SC/APC,0.9MM 0.25M FIBER
FW-PWPD-025/R13T15-PD-09-025FCA	PWDM -PD TX1550 RX1310/1490 FWDM-coupled PD , FC/APC,0.9MM 0.25M FIBER
OTHERS	