

MITSUBISHI (OPTICAL DEVICES)  
**FU-15PD-M1**

PD MODULE FOR LONG WAVELENGTH BAND

**DESCRIPTION**

FU-15PD-M1 is detector module containing highly reliable InGaAs Photodiode for long wavelength band (1~1.6 $\mu$ m).

InGaAs photodiode has very low dark current. These modules are used as detector for high-speed and long haul optical communication systems.

**FEATURES**

- High-speed response ( $f_c=1.5\text{GHz}$ )
- Low dark current (1nA max)
- High-responsivity (0.8A/W)
- Easy handling
- Receptacle type

**APPLICATION**

FitL,LAN



**ABSOLUTE MAXIMUM RATINGS** ( $T_c=25^\circ\text{C}$ )

Parameter	Symbol	Conditions	Rating	Unit
Reverse voltage	$V_r$	-	20	V
Reverse current (CW)	$I_r$	-	1	mA
Forward current (CW)	$I_f$	-	10	mA
Operating case temperature	$T_c$	-	-40~+85	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-	-40~+85	$^\circ\text{C}$

**ELECTRICAL/OPTICAL CHARACTERISTICS** ( $T_c=-40\sim+85^\circ\text{C}$ , unless otherwise noted)

Parameter	Symbol	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
Detection range	-	-	1000	-	1600	nm
Responsivity (Note 1)	R	$\lambda=1310\pm 20\text{nm}, V_r=5\text{V}$	0.7	-	-	A/W
Dark current	$I_d$	$V_r=5\text{V}, T_c=25^\circ\text{C}$	-	-	1	nA
		$V_r=5\text{V}, T_c=70^\circ\text{C}$	-	-	10	
		$V_r=5\text{V}, T_c=85^\circ\text{C}$	-	-	20	
Cut-off frequency (-3dB)	$f_c$	$V_r=5\text{V}, R_l=50\Omega$	1	1.5	-	GHz
Capacitance	$C_t$	$f=1\text{MHz}, V_r=5\text{V}$	-	1	1.3	pF

Note 1. Fiber : GI type with core dia. 50 $\mu$ m and N.A.0.2

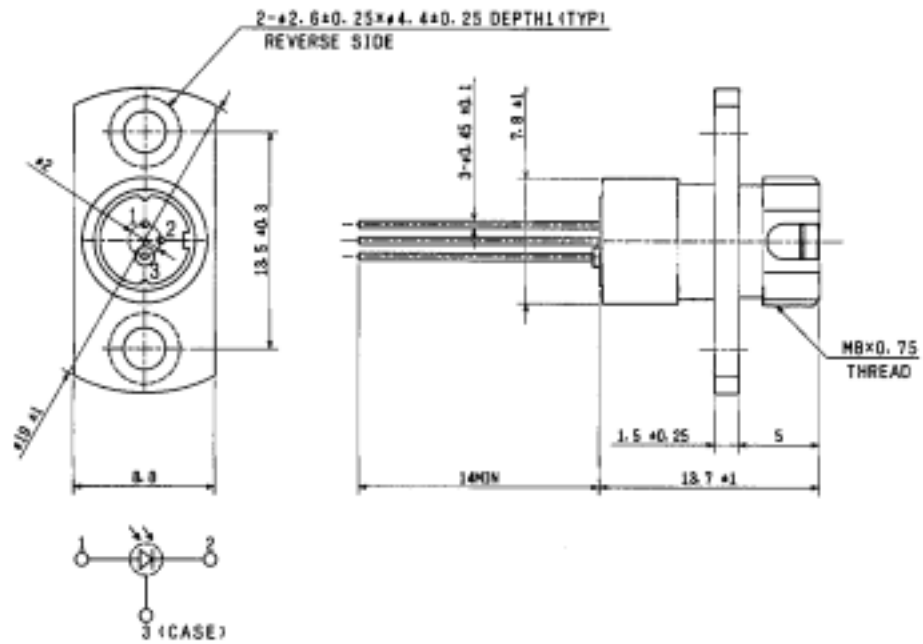
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## OUTLINE DIAGRAM

(Unit : mm)

NOTES 1. TOLERANCES UNLESS NOTED  $\pm 0.5$



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