

MITSUBISHI (OPTICAL DEVICES)
FU-17SLD-F3M1

FC-CONNECTORIZED MODULE

DESCRIPTION

FU-17SLD-F3M1 is FC-connectorized devices designed to be used with singlemode optical fiber. This module is the optimum light source for medium haul digital optical communication systems.

FEATURES

- FC connectorized package
- Low optical output
- Low threshold current
- Built-in photodiode for output monitoring
- Wide operating temperature range (-40°C to +85°C)
- MQW* active layer
- FSBH** structure fabricated by all MOCVD process

*Multiple quantum well

**Facet selective-growth buried heterostructure



APPLICATION

FitL, LAN

ABSOLUTE MAXIMUM RATINGS (T_c=25°C)

Parameter		Symbol	Conditions	Rating	Unit
Laser diode	Optical output power from fiber end (Note1)	Pf	CW	0.5	mW
	Reverse voltage	Vrl	-	2	V
Photodiode for monitoring	Reverse voltage	Vrd	-	15	V
	Forward current	Ifd	-	2	mA
Operating case temperature		Tc	-	-40~+85	°C
Storage temperature		Tstg	-	-40~+85	°C

Note 1. Singlemode fiber master plug with mode field diameter 9.5μm

ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
Threshold current	I _{th}	CW	3	7	15	mA
Operating current	I _{mod}	CW	8	-	20	mA
Operating Voltage	V _{op}	CW, I _f =I _{th} +I _{mod} (Note 2)	-	1.1	1.6	V
Optical output power from fiber end (Note 3)	P _f	CW, I _f =I _{th} +I _{mod}	0.15	-	-	mW
Center wavelength	λ _c	CW, I _f =I _{th} +I _{mod}	1285	1300	1330	nm
Rise and fall time(LD)	t _r , t _f	I _b =I _{th} , 10~90% (Note4)	-	0.3	0.5	ns
Tracking error (Note 5)	E _r	T _c =-40~85°C, CW, APC	-	0.5	-	dB
Differential efficiency (Note 3)	η	-	-	0.018	-	mW/mA
Monitor current	I _{mon}	CW, I _f =I _{th} +I _{mod} , V _{rd} =5V	0.2	0.6	1.0	mA
Dark current (Photodiode)	I _d	V _{rd} =5V	-	0.1	0.5	μA
Capacitance (Photodiode)	C _t	V _{rd} =5V, f=1MHz	-	-	20	pF

Note 2. I_f : Forward current (LD)

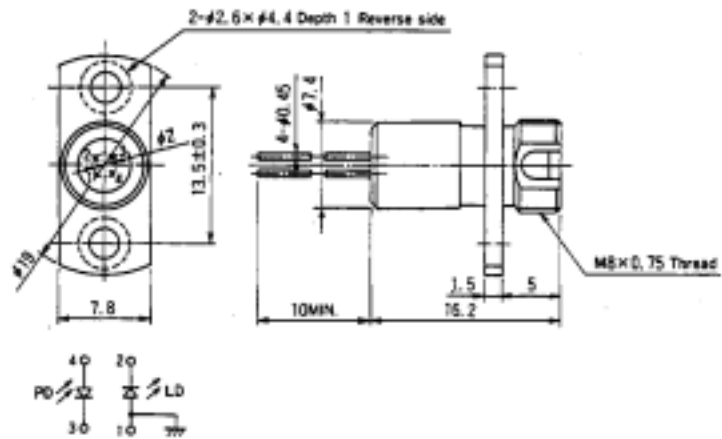
3. Singlemode fiber master plug with mode field diameter 9.5μm

4. I_b : Bias current (LD)

5. E_r=MAX|10×log(P_f(T_c)/P_f(25°C))|

OUTLINE DIAGRAM

(Unit : mm)



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