

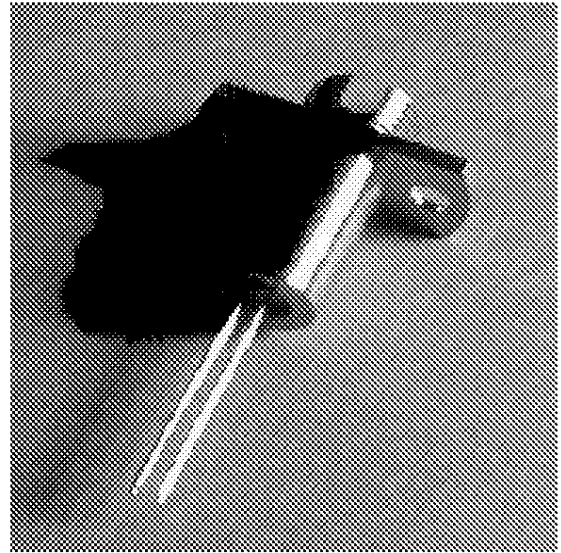
MITSUBISHI (OPTICAL DEVICES)  
**FU-17SLD-F1**  
 FC-CONNECTORIZED MODULE

**DESCRIPTION**

FU-17SLD-F1 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
  - High 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** (Tc=25°C)

Parameter		Symbol	Conditions	Rating	Unit
Laser diode	Optical output power from fiber end (Note1)	Pf	CW	2.5	mW
	Reverse voltage	Vrl	-	2	V
Photodiode for monitoring	Reverse voltage	Vrd	-	15	V
	Forward current	lfd	-	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 <sub>th</sub>	CW	3	7	15	mA
Operating current	I <sub>mod</sub>	CW	8	-	28	mA
Operating Voltage	V <sub>op</sub>	CW, I <sub>f</sub> =I <sub>th</sub> +I <sub>mod</sub> (Note 2)	-	1.2	1.6	V
Optical output power from fiber end (Note 3)	P <sub>f</sub>	CW, I <sub>f</sub> =I <sub>th</sub> +I <sub>mod</sub>	1	-	-	mW
Center wavelength	λ <sub>c</sub>	CW, I <sub>f</sub> =I <sub>th</sub> +I <sub>mod</sub>	1285	1300	1330	nm
Rise and fall time(LD)	t <sub>r</sub> , t <sub>f</sub>	I <sub>b</sub> =I <sub>th</sub> , 10~90% (Note4)	-	0.3	0.5	ns
Tracking error (Note 5)	E <sub>r</sub>	T <sub>c</sub> =-40~85°C, CW, APC	-	0.5	-	dB
Differential efficiency (Note 3)	η	-	-	0.07	-	mW/mA
Monitor current	I <sub>mon</sub>	CW, I <sub>f</sub> =I <sub>th</sub> +I <sub>mod</sub> , V <sub>rd</sub> =5V	0.2	0.9	1.5	mA
Dark current (Photodiode)	I <sub>d</sub>	V <sub>rd</sub> =5V	-	0.1	0.5	μA
Capacitance (Photodiode)	C <sub>t</sub>	V <sub>rd</sub> =5V, f=1MHz	-	-	20	pF

Note 2. I<sub>f</sub> : Forward current (LD)

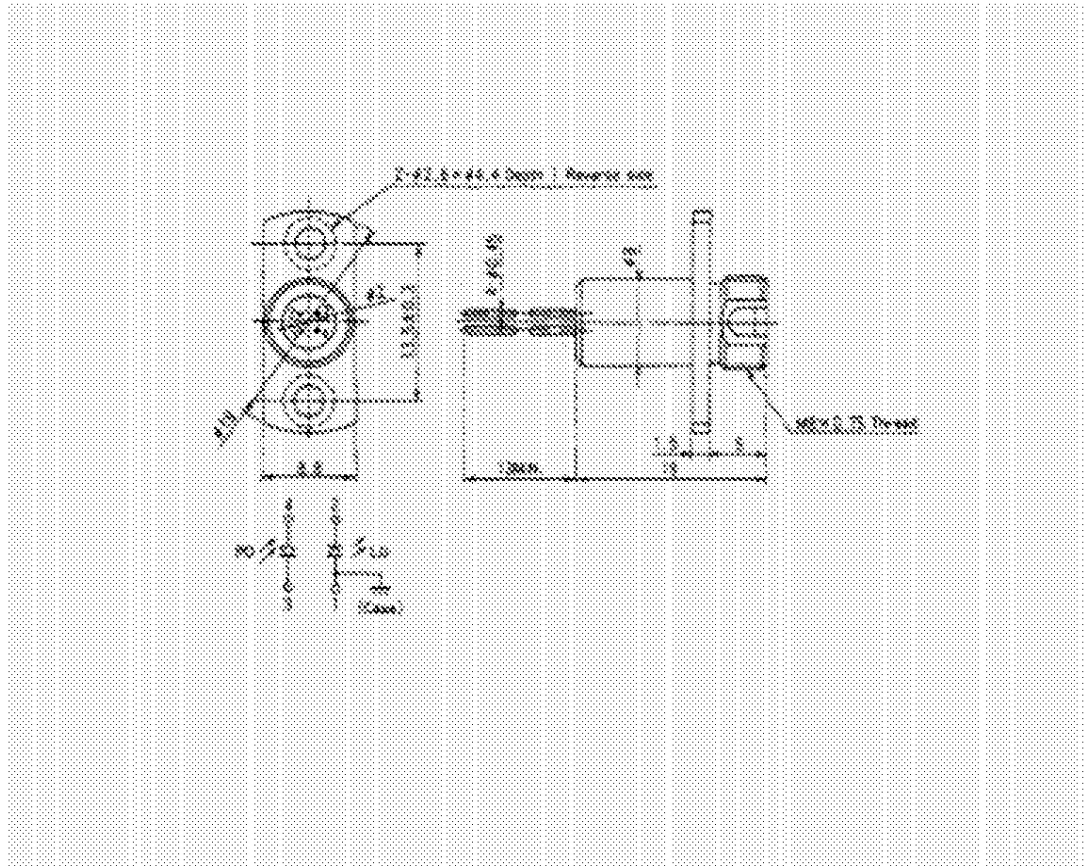
3. Singlemode fiber master plug with mode field diameter 9.5μm

4. I<sub>b</sub> : Bias current (LD)

5. E<sub>r</sub>=MAX|10×log(P<sub>f</sub>(T<sub>c</sub>)/P<sub>f</sub>(25°C))|

OUTLINE DIAGRAM

(Unit : mm)



FU-17SLD-F1