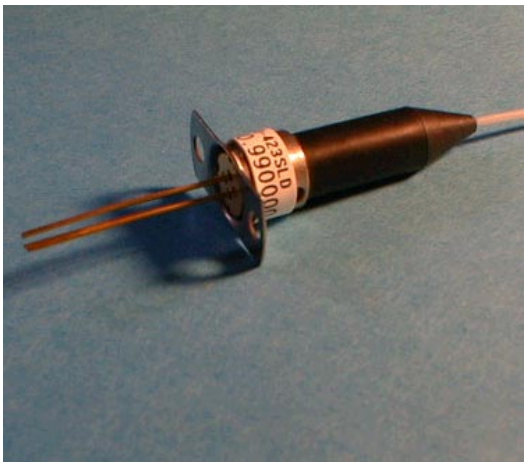
MITSUBISHI (OPTICAL DEVICES)

FU-423SLD-F3M31

1.3 μm LD MODULE WITH SINGLEMODE FIBER PIGTAIL

DESCRIPTION

Module type FU-423SLD-F3M31 has been developed for coupling a singlemode optical fiber and a 1.3μm wavelength InGaAsP LD (Laser diode).
FU-423SLD-F3M31 is suitable to light source for high-speed short haul and long haul digital optical communication systems.



FEATURES

- High-speed response
- Emission wavelength is in 1.3μm band
- Low threshold current (7mA typ.)
- With photodiode for optical output monitor
- MQW* active layer
- FSBH** structure fabricated by all MOCVD process

*Multiple quantum well
**Facet selective-growth buried heterostructure

APPLICATION

Trunk Line,FitL

ABSOLUTE MAXIMUM RATINGS (Tc=25°C)

Parameter		Symbol	Conditions	Rating	Unit
Laser diode	Optical output power from fiber end	Pf	CW Tc=-40~85°C	0.4	mW
	Reverse voltage	Vrl	-	2	V
Photodiode for monitoring	Reverse voltage	Vrd	-	20	V
	Forward current	Ifd	-	2	mA
Operating case temperature		Tc	-	-40~+85	°C
Storage temperature		Tstg	-	-40~+85	°C

ELECTRICAL/OPTICAL CHARACTERISTICS

Parameter	Symbol	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
Threshold current	Ith	CW,Tc=25°C	3	6	10	mA
		CW,Tc=-40~85°C	1	-	35	
Modulation current	Imod	CW,Pf=0.2mW, Tc=25°C	5	6	15	mA
		CW,APC, Imon(Pf(25°C)=0.2mW), Tc=-40~85°C	4	-	35	
Operating Voltage	Vop	CW,APC, Imon(Pf(25°C)=0.2mW), Tc=-40~85°C	0.8	-	1.5	V
Threshold power	Pfth	CW,If=Ith,Tc=-40~85°C (Note1)	-	-	10	μW
dPf/dIf linearity	ηI	CW,APC,Pf=0.04~0.2mW	-25	-	25	%
Center wavelength	λc	CW,Pf=0.2mW, Tc=25°C	1290	-	1330	nm
		CW,APC, Imon(Pf(25°C)=0.2mW), Tc=-40~85°C	1260	-	1360	
Spectral width(RMS) (Note 3)	Δλ	CW,APC, Imon(Pf(25°C)=0.2mW), Tc=-40~85°C	-	-	2.5	nm
Rise and fall times	tr,tf	Ib=Ith,Pfpeak=0.2mW, 10~90%,Tc=25°C	-	0.3	0.5	ns
Tracking error (Note2)	Er	CW,APC, Imon(Pf(25°C)=0.2mW), Tc=0~70°C	0	0.4	1	dB
		CW,APC, Imon(Pf(25°C)=0.2mW), Tc=-40~85°C	0	0.5	1.2	
Monitor current	Imon	CW,Vrd=3V,Pf=0.2mW	0.08	0.5	1	mA
Dark current (Photodiode)	Id	Vrd=3V	-	0.1	0.5	μA
Capacitance (Photodiode)	Ct	Vrd=3V,f=1MHz	-	-	15	pF

Note 1. If is ward current of LD.

2. $Er=MAX|10\times\log(Pf(Tc)/Pf(25^{\circ}C))|$

3. $\Delta\lambda=((\Sigma ai*(\lambda i-\lambda c)^2)/\Sigma ai)^{1/2}$

Where $ai \geq ap\times 0.01$

ai:Relative intensty of laser spectral emission modes

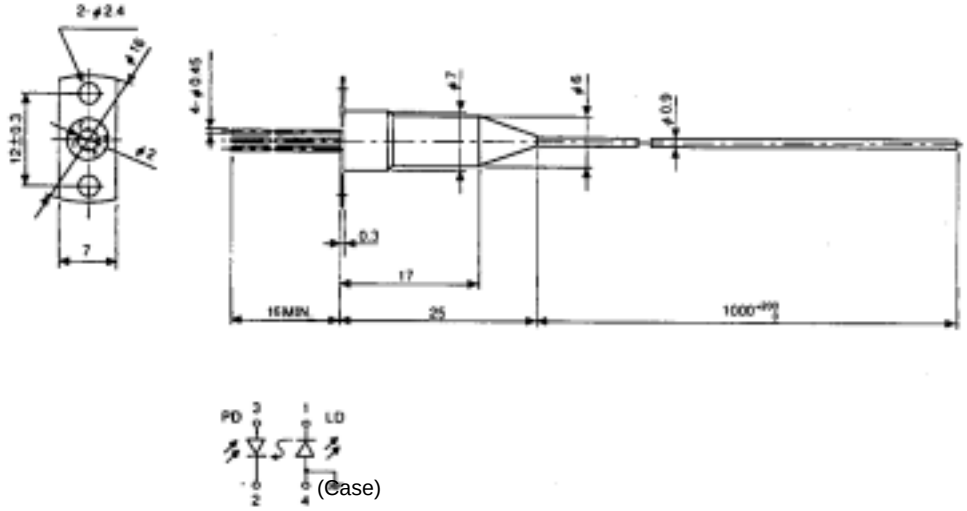
ap:Peak of laser spectral emission modes

OPTICAL FIBER SPECIFICATION

Parameter	Limits	Unit
Type	SM	-
Mode filed dia.	9.5±1	μm
Cladding dia.	125±2	μm
Jacket dia.	0.9 typ.	mm

OUTLINE DIAGRAM

(Unit : mm)



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