PRELIMINARY

MITSUBISHI

OPTOELECTRONICS
FU-16SLD-N, FU-17SLD-N

1.3 μm Connectorized LD Module
for Singlemode Fiber

GENERAL

FU-16SLD-N and FU-17SLD-N are single mode connectorized LD modules. They are used for coupling a singlemode optical fiber to a 1.3μm wavelength InGaAsP LD(Laser diode). These modules are the optimum light source for use in medium-haul digital optical communication systems.

FEATURES

- High optical output (FU-16SLD-N1, FU-17SLD-N1)
- Emission wavelength is in 1.3μm band
- Low threshold current (9mA typ.)
- Connectorized package for FC connector
- With photodiode for optical output monitoring capability
- Wide operating case temperature

ABSOLUTE MAXIMUM RATINGS

Symbol	Items		Conditions	Ratings		Units
				FU-16SLD-N1 FU-17SLD-N1	FU-16SLD-N3 FU-17SLD-N3	
P_F	Laser diode	Optical output power from fiber end[1]	CW	2.5	0.5	mW
V_{RL}	Photodiode for monitoring	Reverse voltage	–	2		V
V_{RD}		Reverse voltage	–	15		V
I_{FD}		Forward current	–	2		mA
Tc	Operating case temperature		–	–20 ~ 65	–40 ~ 85	°C
Tstg	Storage temperature		–	–40 ~ 85		°C

[1]FC: Singlemode fiber master plug with mode field diameter = 10 ± 1μm, ferrule diameter = 2.499 ± 0.0005mm, eccentricity core/ferrule ≤ 0.5μm.

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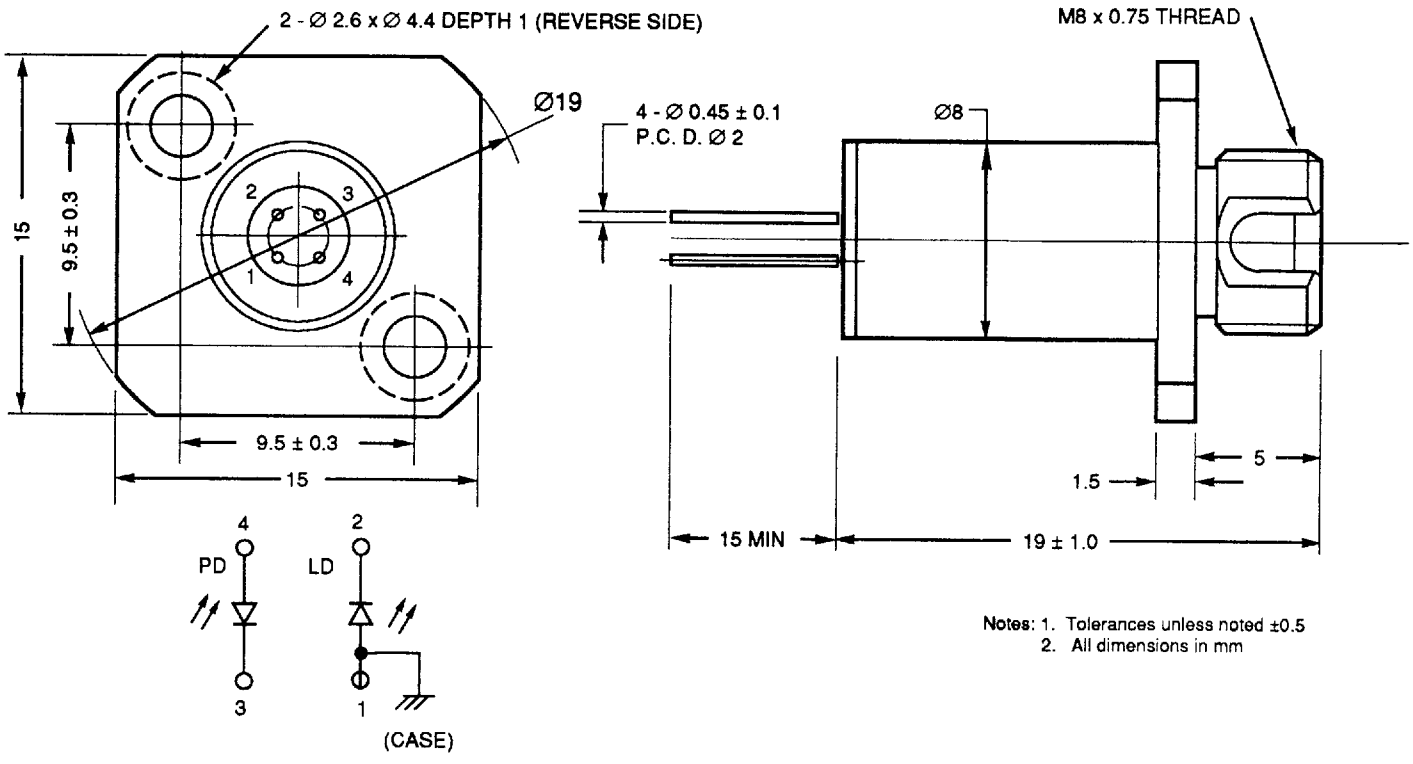
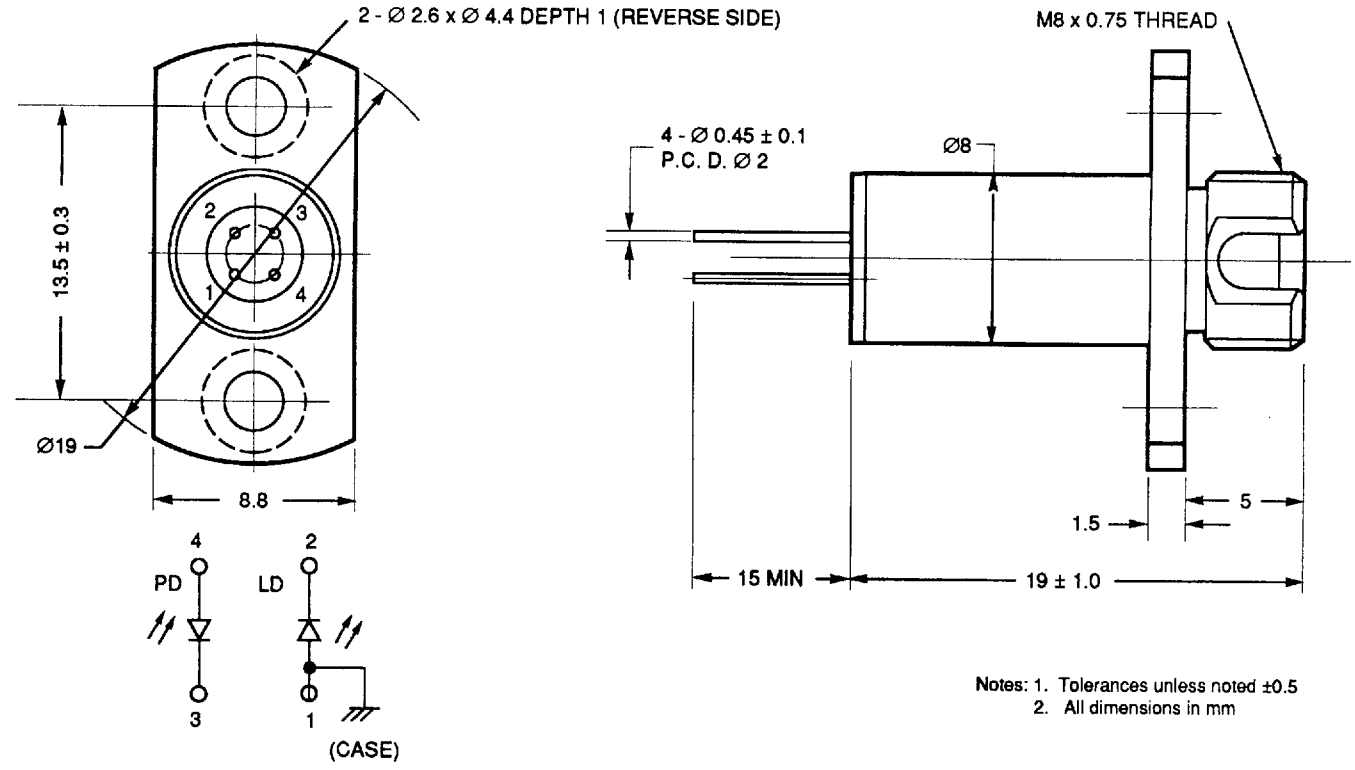


Notes: 1. Tolerances unless noted ±0.5
2. All dimensions in mm

FU-17SLD-N



Notes: 1. Tolerances unless noted ±0.5
2. All dimensions in mm

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

Symbol	Items	Conditions	FU-16SLD-N1 FU-17SLD-N1			FU-16SLD-N3 FU-17SLD-N3			Units
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Ith	Threshold current	CW	–	9	20	–	9	20	mA
Iop	Operating current	CW	–	30	65	–	30	65	mA
Vop	Operating voltage	CW, I_F = Iop[1]	–	1.2	1.6	–	1.2	1.6	V
P_F	Optical output power from fiber end[2]	CW, I_F = Iop	1	1.5	–	0.1	0.2	–	mW
λc	Central wavelength	CW, I_F = Iop	1270	1300	1330	1270	1300	1330	nm
tr, tr	Rise and fall time	I_B = Ith, 10 ~ 90%[3]	–	0.3	–	–	0.3	–	ns
Er	Tracking error[4]	Tc = –20 ~ 65°C, APC	–	0.5	–	–	–	–	dB
		Tc = –40 ~ 85°C, APC	–	–	–	–	0.5	–	
η	Differential efficiency[2]	–	–	0.06	–	–	0.01	–	W/A
Imon	Monitor current	CW, I_F = Iop, VR = 5V	0.25	1	–	0.1	0.6	–	mA
Id	Dark current (Photodiode)	VR = 5V	–	0.1	1	–	0.1	1	μm
Ct	Capacitance (Photodiode)	VRD = 5V, f = 1MHz	–	10	–	–	10	–	pF
–	Optical connecter type	–	FC						

[1] IF: Forward current (LD)
[2] FC: Measured with singlemode fiber master plug with mode field diameter = 10 ± 1μm, ferrule diameter = 2.499 ± 0.0005mm, Eccentricity core/ferrule ≤0.5μm.
[3] I_B: Bias current (LD)
[4] $Er = \text{Max} \quad 10 \cdot \log \left| \frac{PF}{PF\ (25^\circ C)} \right|$