

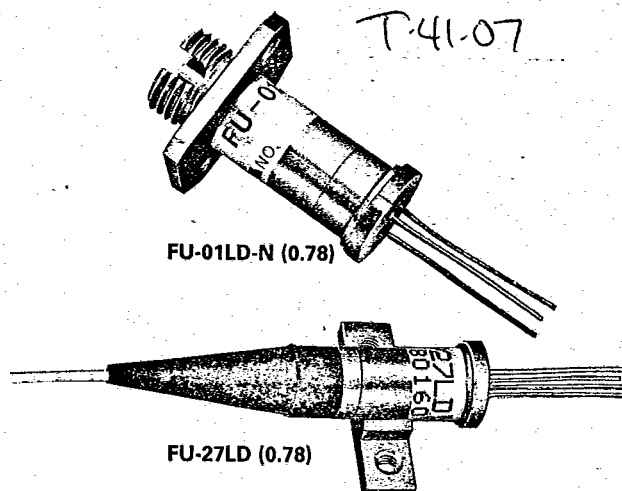
FU-01LD-N(0.78),FU-27LD(0.78)

0.78 μ m LD Module for Multimode Fiber

LD Module types FU-01LD-N (0.78) and FU-27LD (0.78) contain AlGaAs LDs (Laser diodes) for 0.78 μ m band and are used as light source for intermediate and high speed local area network systems.

FEATURES

- High-speed response
- Emission wavelength is in 0.78 μ m wavelength band
- Connectorized package for FC connector (FU-01LD-N (0.78))
- With photodiode for optical output monitor
- Diodes are hermetically sealed

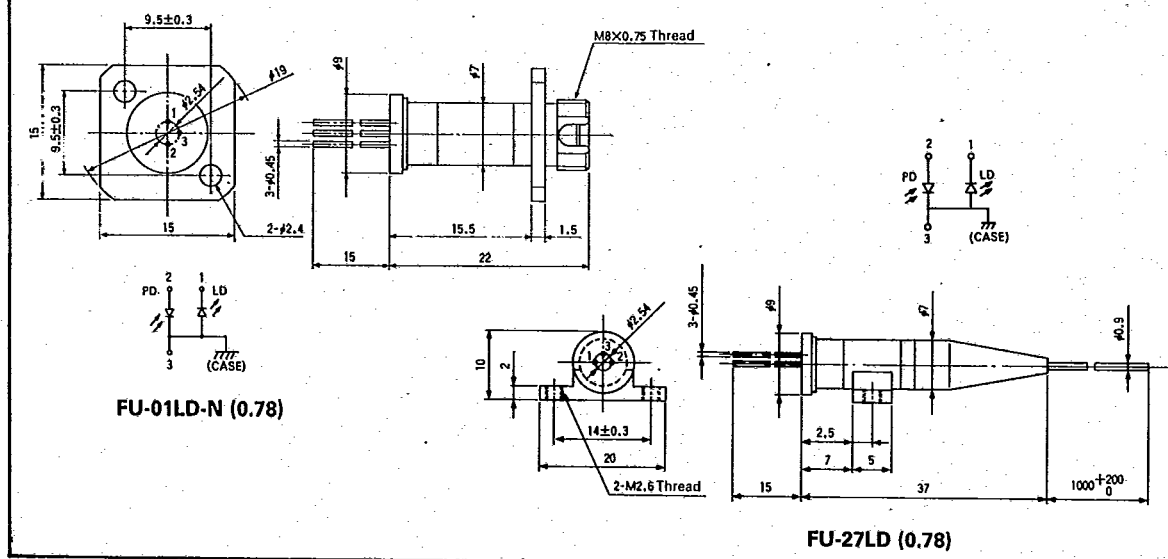


ABSOLUTE MAXIMUM RATINGS (T_C=25°C)

Items		Symbols	Conditions	Ratings		Units
				FU-01LD-N (0.78)	FU-27LD (0.78)	
Laser diode	Optical output power from fiber end (Note 1)	P _F	CW	3	3	mW
	Reverse Voltage	V _{RL}	—	2	2	V
Photodiode for monitoring	Reverse Voltage	V _{RD}	—	15	15	V
	Forward Current	I _{FD}	—	10	10	mA
Operating case temperature		T _C	—	-20~60	-20~60	°C
Storage temperature		T _{stg}	—	-40~70	-40~70	°C

(Note 1) Fiber: GI type with core dia. 50 μ m and N.A.0.2

OUTLINE DRAWINGS Unit (mm)



FU-01LD-N(0.78),FU-27LD(0.78)

T-41-07

0.78μm LD Module for Multimode Fiber

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

Items	Symbols	Conditions	FU-01LD-N (0.78)			FU-27LD (0.78)			Units
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Threshold current	I _{th}	CW	—	40	60	—	40	60	mA
Operating current	I _{op}	CW	—	50	70	—	50	70	mA
Operating voltage	V _{op}	CW, I _F =I _{op} (Note 1)	—	1.5	2.5	—	1.8	2.5	V
Optical output power from fiber end (Note 2)	P _F	CW, I _F =I _{op}	1	1.8	—	1	1.8	—	mW
Central wavelength	λ _C	CW, I _F =I _{op}	765	780	795	765	780	795	nm
Rise and fall times	t _r , t _f	I _B =I _{th} , 10~90% (Note 3)	—	0.4	—	—	0.4	—	ns
Tracking error (Note 4)	E _r	T _C =−20~60°C, APC	—	0.2	—	—	0.2	—	dB
Differential efficiency (Note 2)	η	—	—	0.18	—	—	0.18	—	mW/mA
Monitor current	I _{mon}	CW, I _F =I _{op} , V _{RD} =5V	0.15	0.4	—	0.15	0.4	—	mA
Dark current (Photodiode)	I _D	V _{RD} =5V	—	—	0.5	—	—	0.5	μA
Capacitance (Photodiode)	C _i	V _{RD} =5V, f=1MHz	—	7	—	—	7	—	pF
Optical connector type (Note 5)	—	—	FC			—			—

Note 1) I_F: Forward current (LD)

Note 2) Fiber: GI type with core dia. 50μm and N.A.0.2

Note 3) I_B: Bias current (LD)

Note 4) E_r=MAX $10 \cdot \log \frac{P_F}{P_F(25^\circ\text{C})}$

Note 5) FU-01LD-N (0.78) only

FIBER PIGTAIL SPECIFICATIONS (FU-27LD (0.78) only)

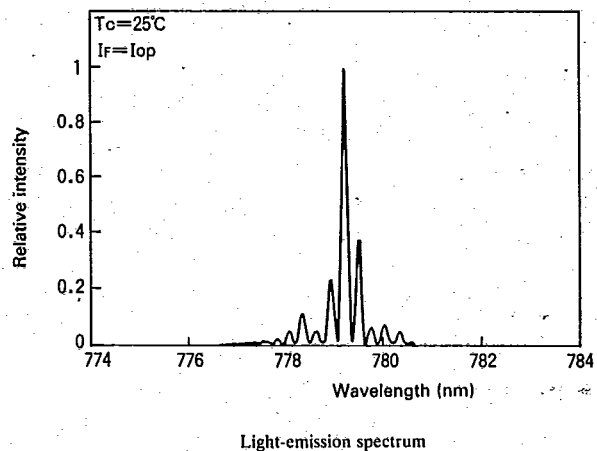
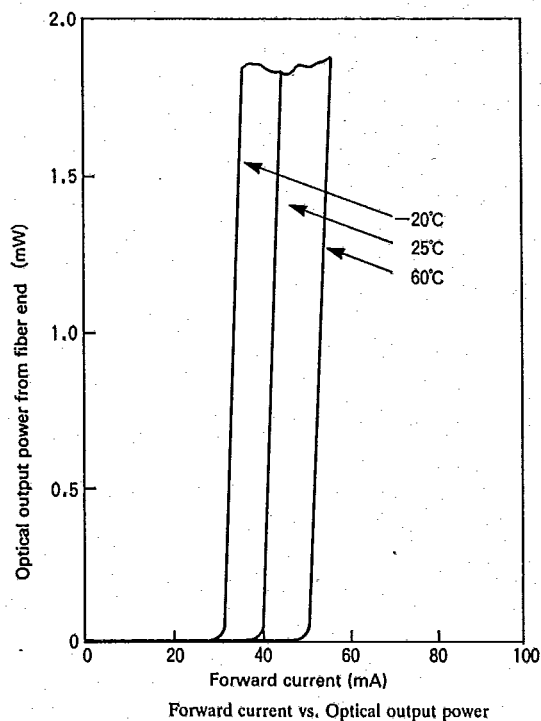
Items	Specifications	Units
Type	GI	—
Core dia.	50±3	μm
N.A.	0.2	—
Cladding dia.	125±3	μm
Jacket dia.	0.9	mm

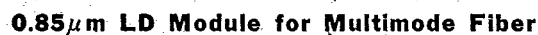
FU-01LD-N(0.78),FU-27LD(0.78)

T-41-07

0.78 μ m LD Module for Multimode Fiber

EXAMPLE OF CHARACTERISTICS





FU-01LD-N(0.85),FU-27LD(0.85)

T-41-07

0.85μm LD Module for Multimode Fiber

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

Items	Symbols	Conditions	FU-01LD-N (0.85)			FU-27LD (0.85)			Units
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Threshold current	I _{th}	CW	—	18	30	—	18	30	mA
Operating current	I _{op}	CW	—	25	40	—	25	40	mA
Operating voltage	V _{op}	CW, I _F =I _{op} (Note 1)	—	1.5	2	—	1.5	2	V
Optical output power from fiber end (Note 2)	P _F	CW, I _F =I _{op}	1	1.8	—	1	1.8	—	mW
Central wavelength	λ _C	CW, I _F =I _{op}	800	850	900	800	850	900	nm
Rise and fall times	t _r , t _f	I _B =I _{th} , 10~90% (Note 3)	—	0.4	—	—	0.4	—	ns
Tracking error (Note 4)	E _r	T _C =-20~60°C, APC	—	0.2	—	—	0.2	—	dB
Differential efficiency (Note 2)	η	—	—	0.25	—	—	0.25	—	mW/mA
Monitor current	I _{mon}	CW, I _F =I _{op} , V _{RD} =5V	0.1	0.3	—	0.1	0.3	—	mA
Dark current (Photodiode)	I _D	V _{RD} =5V	—	—	0.5	—	—	0.5	μA
Capacitance (Photodiode)	C _i	V _{RD} =5V, f=1MHz	—	7	—	—	7	—	pF
Optical connector type (Note 5)	—	—	FC			—			—

Note 1) I_F: Forward current (LD)

Note 2) Fiber: GI type with core dia. 50μm and N.A.0.2

Note 3) I_B: Bias current (LD)

Note 4) $E_r = \text{MAX} \left| 10 \cdot \log \frac{P_F}{P_F(25^\circ\text{C})} \right|$

Note 5) FU-01LD-N (0.85) only

FIBER PIGTAIL SPECIFICATIONS (FU-27LD (0.85) only)

Items	Specifications	Units
Type	GI	—
Core dia.	50±3	μm
N.A.	0.2	—
Cladding dia.	125±3	μm
Jacket dia.	0.9	mm

FU-01LD-N(0.85),FU-27LD(0.85)

0.85 μ m LD Module for Multimode Fiber

EXAMPLE OF CHARACTERISTICS

7-41-07

