

MITSUBISHI (OPTICAL DEVICES)
FU-427SHL-8M22

1.3 μm LD MODULE WITH SINGLEMODE FIBER PIGTAIL

DESCRIPTION

Module type FU-427SHL-8M22 has been developed for coupling a singlemode optical fiber and a 1.3 μm wavelength InGaAsP LD (Laser diode). FU-427SHL-8M22 is suitable to light source for measuring instruments(especially, OTDR).

FEATURES

- High optical output power
 - Emission wavelength is in 1.3 μm band
 - MQW* active layer
 - FSBH** structure fabricated by all MOCVD process
- *Multiple quantum well
**Facet selective-growth buried heterostructure



APPLICATION

OTDR

ABSOLUTE MAXIMUM RATINGS ($T_c=25^\circ\text{C}$)

Parameter		Symbol	Conditions	Rating	Unit
Laser diode	Reverse voltage	V _{rl}	-	2	V
	Forword current	I _{fl}	Pulse(Note 1)	1	A
Operating case temperature		T _c	-	-20~+60	°C
Storage temperature		T _{stg}	-	-40~+70	°C

Note 1. Pulse condition : Pulse width $\leq 10\mu\text{s}$, Duty ratio $\leq 1\%$

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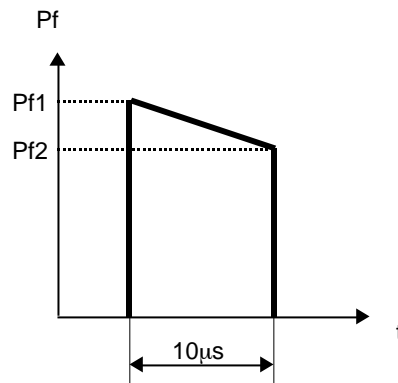
ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
Threshold current	I _{th}	-	-	20	50	mA
Operating current	I _{op}	Pulse (Note 1)	400	450	800	mA
Operating Voltage	V _{op}	I _f =I _{op} , Pulse (Note 1)	-	-	5	V
Optical output power from fiber end	P _f	I _f =I _{op} , Pulse (Note 1) T _c =25°C	80	-	-	mW
		I _f =I _{op} , Pulse (Note 1) T _c =60°C	40			
Central wavelength	λ _c	I _f =I _{op} , Pulse (Note 1)	1290	1310	1330	nm
Spectral width(RMS)	Δλ	I _f =I _{op} , Pulse (Note 1)	-	-	10	nm
Pulse droop (Note 3)	ΔP _f	I _f =I _{op} , Pulse (Note 1)	-	-	20	%
Rise and fall times	t _r , t _f	I _b =I _{th} , 10~90% (Note 2)	-	1	2	ns

Note 1. Pulse condition : Pulse width ≤10μs, Duty ratio ≤1%

2. I_b : Bias current (LD)

3. ΔP_f=(P_{f1}-P_{f2})/P_{f1}×100



OPTICAL FIBER SPECIFICATION

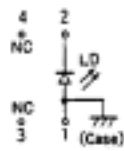
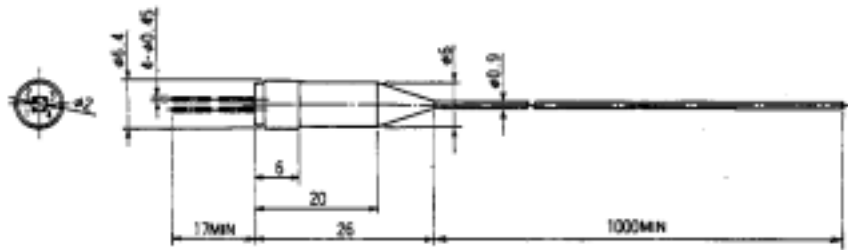
Parameter	Limits	Unit
Type	SM	-
Mode field dia.	9.5±1	μm
Cladding dia.	125±2	μm
Jacket dia.	0.9 typ.	mm

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OUTLINE DIAGRAM

(Unit : mm)



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