

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 1.3μm band
 - MQW* active layer
 - FSBH** structure fabricated by all MOCVD process
- *Multiple quantum well
 **Facet selective-growth buried heterostructure



APPLICATION

OTDR

ABSOLUTE MAXIMUM RATINGS (Tc=25°C)

Parameter		Symbol	Conditions	Rating	Unit
Laser diode	Reverse voltage	Vr1	-	2	V
	Forword current	Ifl	Pulse(Note 1)	1	A
Operating case temperature		Tc	-	-20~+60	°C
Storage temperature		Tstg	-	-40~+70	°C

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

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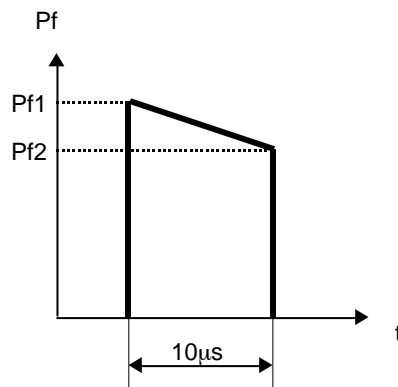
ELECTRICAL/OPTICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$, unless otherwise noted)

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) $T_c=25^\circ\text{C}$	80	-	-	mW
		$I_f=I_{op}$, Pulse (Note 1) $T_c=60^\circ\text{C}$	40			
Central wavelength	λ_c	$I_f=I_{op}$, Pulse (Note 1)	1290	1310	1330	nm
Spectral width(RMS)	$\Delta\lambda$	$I_f=I_{op}$, 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 $\leq 10\mu\text{s}$, Duty ratio $\leq 1\%$

2. I_b : Bias current (LD)

3. $\Delta P_f = (P_{f1} - P_{f2}) / P_{f1} \times 100$



OPTICAL FIBER SPECIFICATION

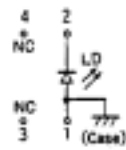
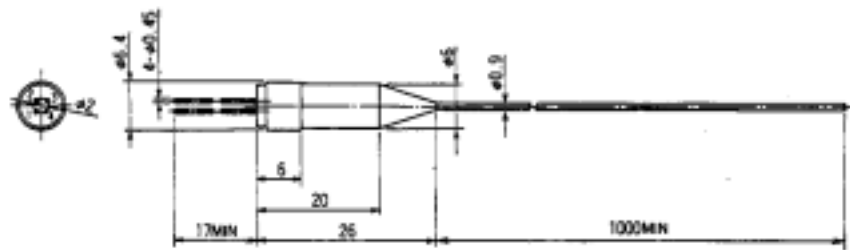
Parameter	Limits	Unit
Type	SM	-
Mode field dia.	9.5 ± 1	μm
Cladding dia.	125 ± 2	μm
Jacket dia.	0.9 typ.	mm

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OUTLINE DIAGRAM

(Unit : mm)



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