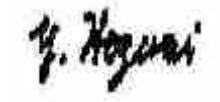
APPROVED	APPROVED	CHARGED
		N.Kamiya
CUSTOMER	APPROVED	APPROVED

SPECIFICATION PROPOSAL FOR

FU-636SDF-EV1M68 (1470nm ±3nm)
FU-636SDF-EV1M69 (1490nm ±3nm)
FU-636SDF-EV1M70 (1510nm ±3nm)
FU-636SDF-EV1M71 (1530nm ±3nm)
FU-636SDF-EV1M72 (1550nm ±3nm)
FU-636SDF-EV1M73 (1570nm ±3nm)
FU-636SDF-EV1M74 (1590nm ±3nm)
FU-636SDF-EV1M75 (1610nm ±3nm)

Uncooled DFB LD module with Isolator
(Pf=2.0mW, Tc=0 to 75°C)

A	B	C	D
	X		
Date		Approved	
'01..9.07		Y.Hozumi	

MITSUBISHI ELECTRIC CORPORATION

MITSUBISHI (OPTICAL DEVICES)

FU-636SDF-EV1M68_75

1.47 to 1.61μm DFB-LD MODULE WITH SINGLEMODE FIBER PIGTAIL

DESCRIPTION

Module type FU-636SDF-EV1M68 to 75 has been developed for coupling a singlemode optical fiber and a 1.47 / 1.49 /1.51 / 1.53 / 1.55 / 1.57 / 1.59 / 1.61μm wavelength InGaAsP DFB LD (Laser diode). FU-636SDF-E1M68 to 75 is suitable to light source for high-speed short haul and long haul digital optical communication systems.

FEATURES

- MQW-DFB laser diode module
- High-speed response
- Emission wavelength is in 1.47 to 1.61μm band
- Built-in optical isolator

APPLICATION

WDM systems

ABSOLUTE MAXIMUM RATINGS (Tc=25°C)

Parameter		Symbol	Conditions	Rating	Unit
Laser diode	Optical output power from fiber end	P0	CW	3	mW
	Reverse voltage	Vrl	-	2	V
Photodiode for monitoring	Reverse voltage	Vrd	-	15	V
	Forward current	Ifd	-	2	mA
Operating case temperature		Tc	-	0~+75	°C
Storage temperature		Tstg	-	-40~+85	°C

MITSUBISHI (OPTICAL DEVICES)

FU-636SDF-EV1M68_75

1.47 to 1.61μm DFB-LD MODULE WITH SINGLEMODE FIBER PIGTAIL

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

Parameter	Symbol	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
Fiber output power	Pf	CW		2.0		mW
Threshold Current	Ith	CW	-	12	25	mA
Threshold Output Power	Pth	CW,If=Ith(Note1)	-	-	0.1	mW
Operating Current	Iop	CW, Pf =2mW	-	-	60	mA
Modulation Current	Imod	CW, Pf =2mW	-	-	40	mA
Operating Voltage	Vop	CW, Pf =2mW	-	1.1	1.7	V
Differential Efficiency	η	CW	-	0.12	-	mW/mA
Central Wavelength	λc	CW, Pf =2mW	1467	1470	1473	nm
			1487	1490	1493	
			1507	1510	1513	
			1527	1530	1533	
			1547	1550	1553	
			1567	1570	1573	
			1587	1590	1593	
			1607	1610	1613	
Spectral Width (-20dB)	Δλ (-20dB)	CW, Pf =2mW	-	-	1.0	nm
Side Mode Suppression Ratio	SMSR	CW, Pf =2mW	30	-	-	dB
Rise and Fall Time	tr,tf	Pfpeak=2mW IB=Ith(Note 2) 10-90%	-	-	1.0	ns
Tracking Error (Note 3)	Er	CW,Tc=0 to 75°C Im(Pf(25°C)=2mW)	-	0.4	1.0	dB
Monitor Current	Imon	CW,Pf=2mW,Vrd=5V	0.05	-	-	mA
Dark Current (Photodiode)	Id	Vrd=5V	-	0.01	1	μA
Capacitance (Photodiode)	Ct	Vrd=5V,f=1MHz	-	-	25	pF

Note 1. If : Forward current(LD)
Note 2. Ib : Bias current(LD)
Note 3. Er=MAX|10×log(Pf(Tc)/Pf(25°C)|

OPTICAL FIBER SPECIFICATION

Parameter	Limits	Unit
Type	Single Mode	---
Fiber length (Fig.1)	L=1000 to 1200	mm
Mode field dia.	9.5±1	μm
Cladding dia.	125±2	μm
Jacket dia.	0.9typ.	mm
Connector type	FC/PC	---

MITSUBISHI (OPTICAL DEVICES)

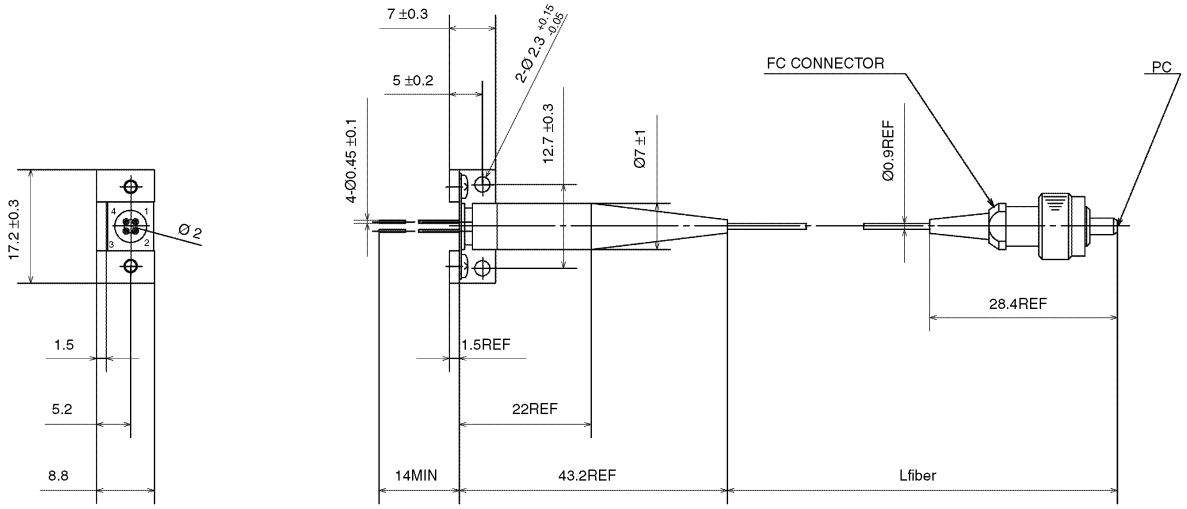
FU-636SDF-EV1M68_75

1.47 to 1.61μm DFB-LD MODULE WITH SINGLEMODE FIBER PIGTAIL

OUTLINE DIAGRAM

(Unit : mm)

NOTE. TOLERANCE UNLESS NOTED ±0.5



PIN	FUNCTION
1	PD ANODE
2	PD CATHODE
3	LD CATHODE
4	LD ANODE , GND