MITSUBISHI ELECTRIC CORPORATION ENGLISH VERSION ONLY

SPECIFICATION			REV						
	PREPARED BY:	*M.Yamada*							
	CHECKED BY:	*K.Mori*							
	APPROVED BY:	*S.Minamihara*							
	DATE:	*Nov. 8. '01*							

1.TYPE : ML725B11F-04,05,06,07
2.APPLICATION : Optcal Fiber Communication
3.STRUCTURE : InGaAsP/InP DFB LASER DIODE
4.OUTLINE : G480570
5.ABSOLUTE MAXIMUM RATINGS

No.	PARAMETER	SYMBOL	CONDITION	RATINGS	UNIT
1	Optical Output Power	Po	CW	6	mW
2	Operating Current	Iop	—	150	
3	Reverse Voltage (LD)	V_{RL}	—	2	V
4	Reverse Voltage (PD)	V_{RD}	—	20	V
5	Forward Current (PD)	I_{FD}	—	2	mA
6	Case Temperature	Tc	—	0 to +85	°C
7	Storage Temperature	Tstg	—	-40 to +100	°C

6. OPTICAL AND ELECTRICAL CHARACTERISTICS
(Tc=25±3°C otherwise specified)

No.	PARAMETER	SYMBOL	CONDITION	LIMITS			UNIT
				MIN.	TYP.	MAX.	
1	Threshold Current	Ith	CW	—	6	20	mA
			CW,Tc=85°C	—	30	40	
2	Operating Current	Iop	CW,Po=5mW	—	18	40	mA
			CW,Po=5mW,Tc=85°C	—	50	75	
3	Operating Voltage	Vop	CW,Po=5mW	—	1.1	1.8	V
4	Peak Wavelength	λ p	CW,Po=5mW,Tc=25°C	<*2>			nm
5	Slope efficiency	η	CW,Po=5mW	0.3	0.4	—	mW /mA
6	Beam Divergence (Full angle at half Maximum	$\theta \parallel$	CW,Po=5mW (Parallel)	—	25	35	deg.
		$\theta \perp$	CW,Po=5mW (Perpendicular)	—	30	40	deg.
7	Side Mode Suppression Ratio	SMSR	CW,Po=5mW,Tc=0 to+85°C	30	—	—	dB
			3.0Gbit/s, Ibias=Ith Imod=40mA, Tc=25°C	30	—	—	
8	Rise time	tr	622Mbps, Ibias=Ith 10%-90%, short lead-pin	—	60	—	psec
9	Fall time	tf		—	110	—	psec
10	Tracking Error	TE	CW,APC Im(25°C)= 5mW TE=10log(Po(Tc)/Po(25°C)) TC=0 to 85°C	-1.0	—	1.0	dB
11	Monitor Current (PD)	Im	CW,Po=5mW V_{RD}=1V,RL=10Ω<*1>	0.05	0.2	—	mA
12	Dark Current (PD)	Id	V_{RD}=5V	—	—	1.0	μA
13	Capacitance (PD)	Ct	V_{RD}=5V, f=1MHz	—	10	20	pF

<*1> R_L is load resistance of the photo diode.

<*2> Peak Wave length

TYPE	SYMBOL	TEST CONFIYION	LIMITS			UNIT
			MIN.	TYP.	MAX.	
ML725B11F-04	λ p	CW,Po=5mW Tc=25°C	1270.7	1275.7	1280.7	nm
ML725B11F-05			1295.2	1300.2	1305.2	
ML725B11F-06			1319.7	1324.7	1329.7	
ML725B11F-07			1344.2	1349.2	1354.2	

7. ACCOMPANYING INSPECTION DATA

Ith,Iop,Vop, η , λ p,Im(@Po=5mW,Tc=25°C)

8. Safety precautions relating to handling of optical semiconductor device

General:

Although the manufacturer is always striving to improve the reliability of its products, problems and errors may occur with semiconductor products. Hence, it is required so that the user's products are designed with full regard to safety by incorporating the redundancy, fire prevention, error prevention so that any problems or error with a semiconductor product does not cause any accidents resulting in injury or death, fire, or environmental damage. The following requirements must be strictly observed.

Warning!

1. Avoid laser light entering the eyes

In normal operation the semiconductor laser device, an optical device , emits laser light. Laser light entering the eye causes extreme danger. Never look directly at the laser light , and never look it directly through an optical system such as a lens. Use an ITV camera or IR viewer to observe the laser light.

2. Handling of the product

This product uses GaAs (gallium arsenate). In normal conditions this product is not toxic. However, if it is powdered or vaporized, its powder or vapor is dangerous to humans. Never attempt to crush, grind, bake or chemically treat this product. Do not put this product into your mouth or swallow it.

3. Discarding the product

This product uses GaAs (gallium arsenate). It should be discarded as a specially controlled industrial waste, it should be separated from general industrial and household wastes, according to the "Law of Wastes and Cleaning".

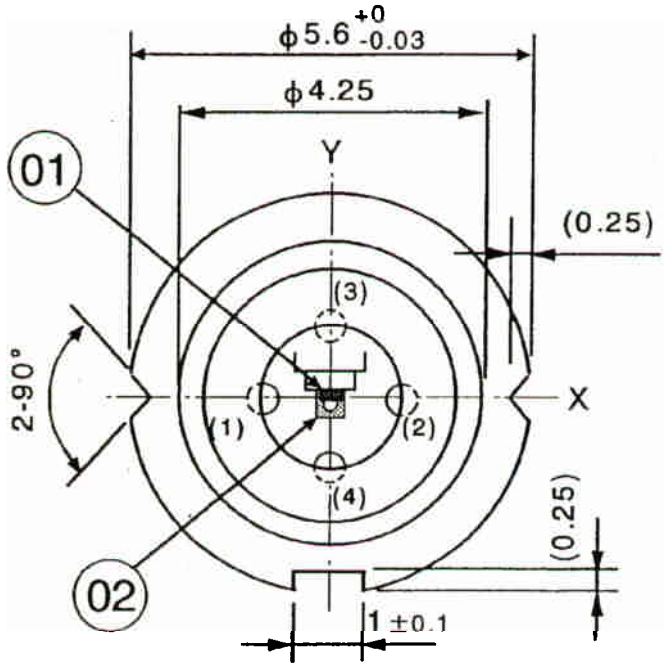
Caution!

1. High temperature

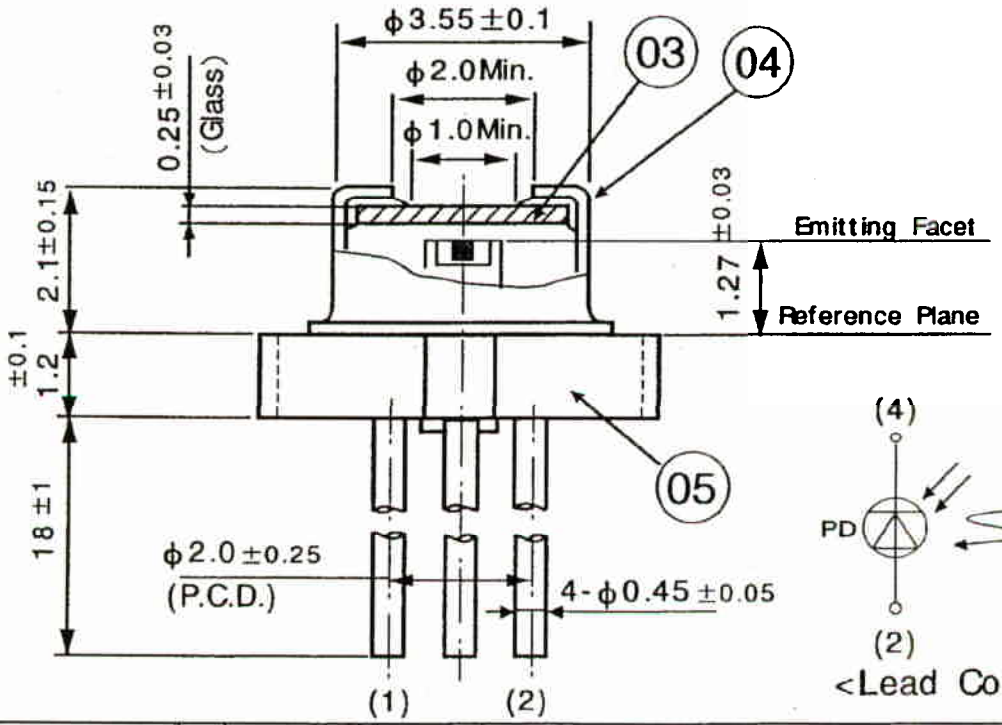
During operation the product may become hot. Therefore do not touch it directly during operation. The product will remain hot even after the power is turned off, so wait until it cools before you touch it. Otherwise burns may be caused. Never place any inflammable substance, which may cause a fire near the product.

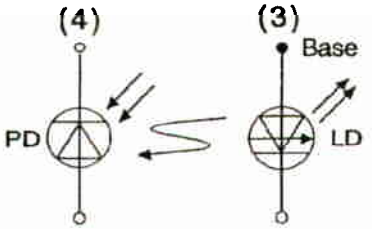
記 録

Item	Description	Materials	Remarks
01	LD Chip		
02	PD Chip		
03	Window	Glass	
04	Cap	Cover	
05	Base	SPC	



Note)
Positional accuracy of the emitting point respect to the Base.
ΔX, ΔY ≦ ±0.06
ΔZ ≦ ±0.03





<Lead Connection>

改定CHANGE			常用
	リード長18±1 は、元16±1 であった。 吉田 大村'97-6/9	A	保留
			一時
			商用

第3角法 3RD ANGLE PROJECTION	MITSUBISHI ELECTRIC CORPORATION				OUTLINE DRAWING OF LASER DIODE (25B-package, F-connection)
DIM IN mm	作成 DRAWN	照査 CHECKED	設計 DESIGNED	検認 APPROVED	
尺度 SCALE 10/1 NTS	吉田	山下	吉田	大村'96-11/14	G 4 8 0 5 7 0
作成日付 DATE '96-10/29					

控図先