

1270-1610nm CWDM 14PIN Butterfly Device

FGx9xx-xxxx-xx

1.Description

The high quality MQW DFB laser diode with butterfly package can meet high power of optical transmitter system. Also, the built-in thermo-electric cooler (TEC) can make the laser diode work properly in various environments.



2.Features:

- Multi-Quantum Well (MQW) Distributed Feedback (DFB) lasers
- 14-pin butterfly package
- Built-in thermistor, and TEC
- Operating Temperature -20~ +70℃
- Single-mode fiber pigtail.

3.Applications

- Optical fiber communication
- Optical instrument
- Optical fiber sensor
- Light source

4.Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Condition
Operating Case Temperature	T_c	-20	70	℃	--
Storage Temperature	T_{stg}	-40	85	℃	--
Reverse Voltage	V_R	--	2.0	V	
Forward current	I		120	mA	
Thermoelectric cooler voltage	V_{TEC}		2.6	V	
Thermoelectric cooler current	I_{TEC}		1.5	A	
Lead solder Temperature	--		260	℃	--
Lead Soldering Time	--		10	s	--

5.Optical/Electrical Characteristics (T=25℃, unless otherwise stated)

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical Output Power	P_o	6.0	--	12.0	mW	CW,
Threshold Current	I_{th}	--	8	15	mA	T=25 ℃
Forward Voltage	V_F	--	1.1	2.0	V	
Operating Current	I_{op}	--	--	90	mA	CW, T=25 ℃
Center Wavelength	λ_c	λ_c-3	λ_c	λ_c+3	nm	CW, T=25 ℃
Side-mode Suppression Ratio	SMSR	35	40	--	dB	$I_{op}=30mA$
Optical Isolation (*1)		35			dB	
Spectral Width (-20 dB)	$\Delta\lambda$	--	0.1	1.0	nm	
Wavelength temperature coefficient	$\Delta\lambda/\Delta T$		0.08	0.12	nm/℃	

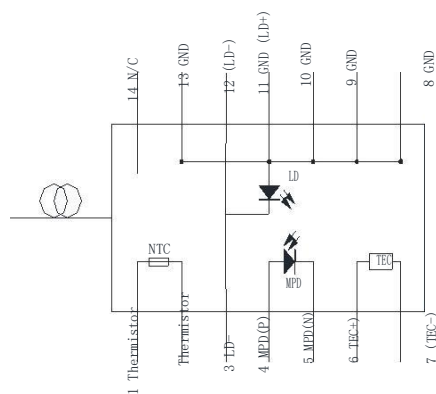
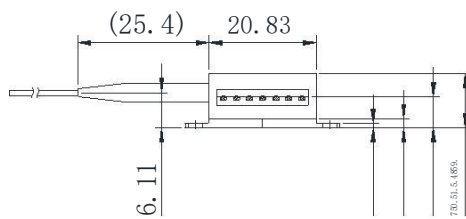
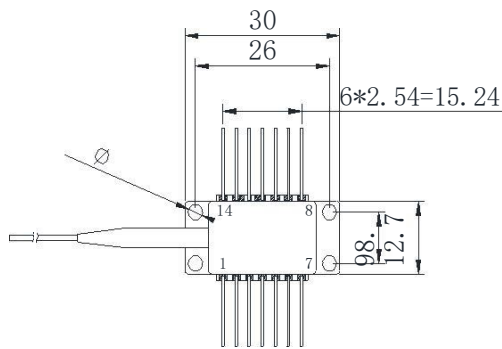
Monitor Current	I _{mon}	50	--	1500	μA	V _R =5 V,
Monitor Dark Current	I _D	--	--	50	nA	V _R =5 V
Thermistor Resistance	R _T	9.5	10.0	10.5	KΩ	T=25 °C
Thermistor B-Value		--	3950	--	K	25°C/85°C
Tracking Error	TE	-1.0	--	+1.0	dB	TE=10log(Po(Tc)/Po(25 °C))

Note: 1*For with isolator type (P/N: FGx9xx-xx1x-xx)

6. Dimensions and Pin Description

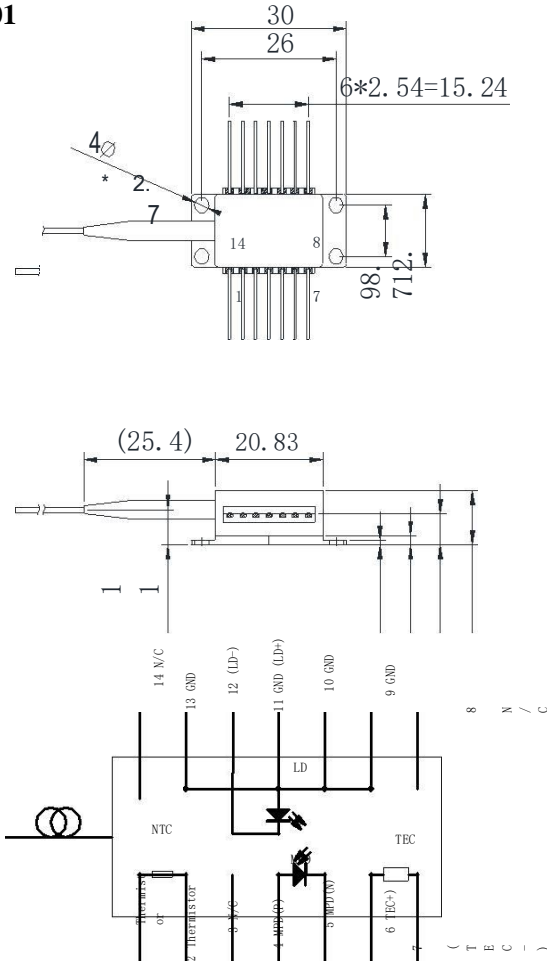
Dimensions are in millimeters. All dimensions are ±0.1mm unless otherwise specified.

6.1 Type: 00



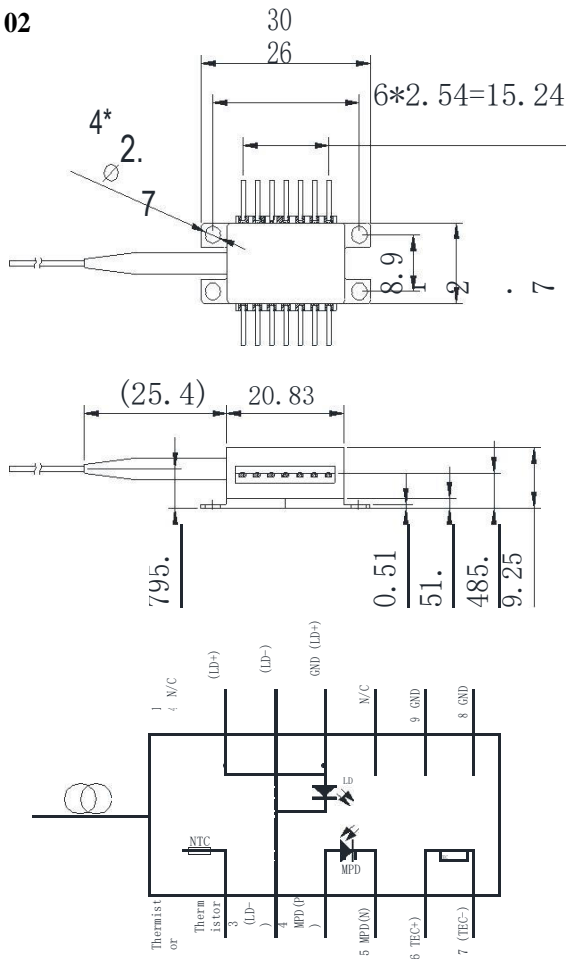
Pin	Description
1	Thermistor
2	Thermistor
3	LD-
4	MPD Anode
5	MPD Cathode
6	TEC(+)
7	TEC(-)
8	Ground
9	Ground
10	Ground
11	LD(+), Ground
12	LD(-)
13	Ground
14	N/C

6.2Type: 01



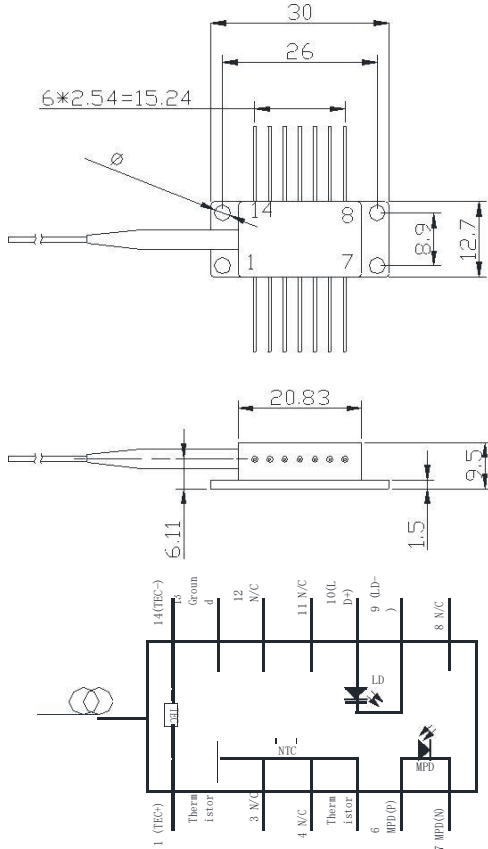
Pin	Description
1	Thermistor
2	Thermistor
3	N/C
4	MPD Anode
5	MPD Cathode
6	TEC(+)
7	TEC(-)
8	N/C
9	Ground
10	Ground
11	LD(+), Ground
12	LD(-)
13	Ground
14	N/C

6.2Type: 02



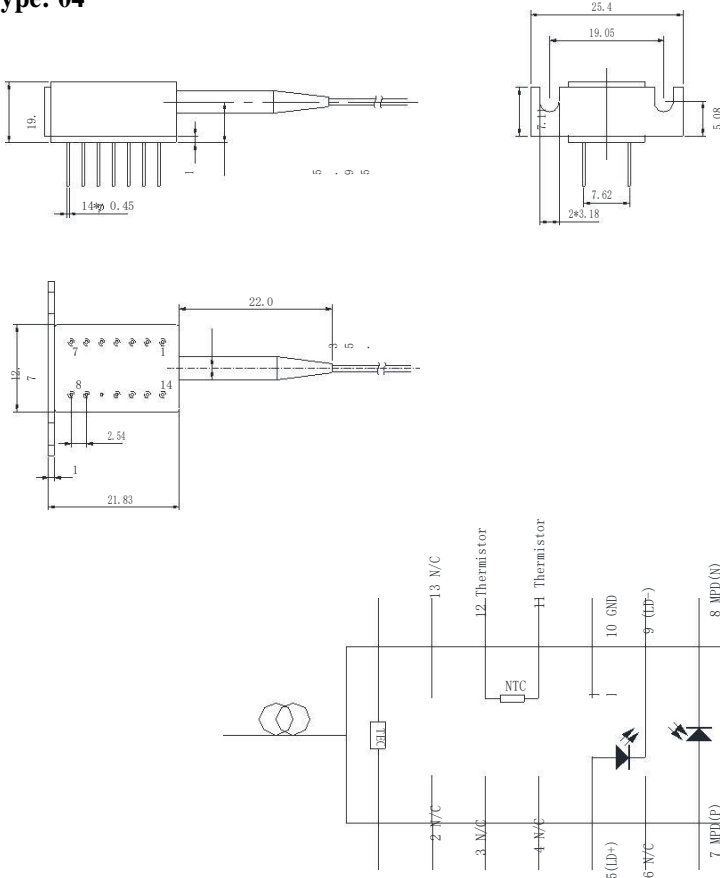
Pin	Description
1	Thermistor
2	Thermistor
3	LD(-)
4	MPD Anode
5	MPD Cathode
6	TEC(+)
7	TEC(-)
8	Ground
9	Ground
10	N/C
11	LD(+)
12	LD(-)
13	LD(+)
14	N/C

6.3Type: 03



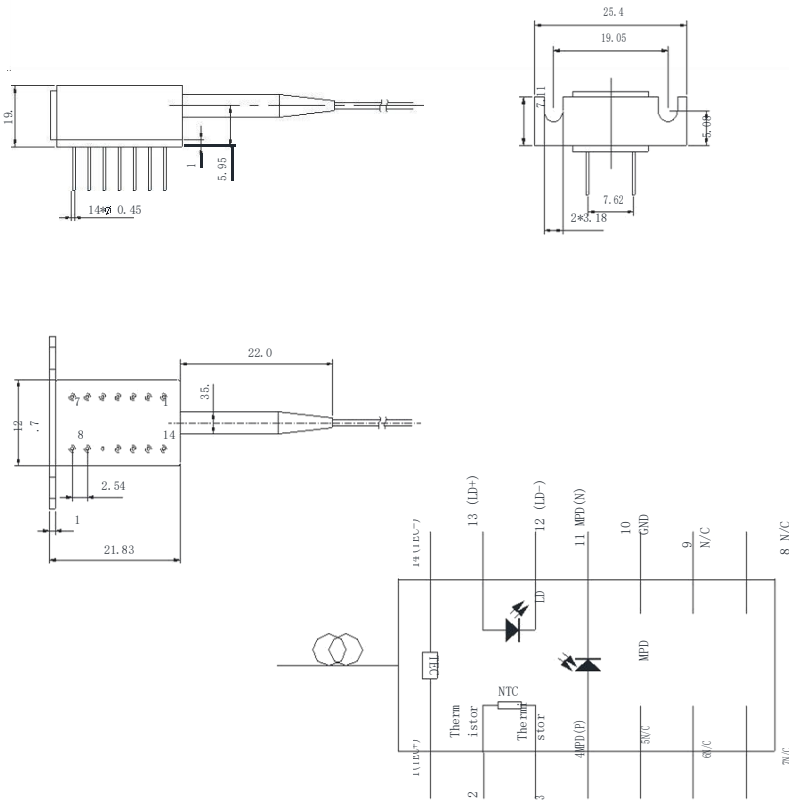
Pin	Description
1	TEC(+)
2	Thermistor
3	N/c
4	N/C
5	Thermistor
6	MPD Anode
7	MPD Cathode
8	N/C
9	LD(-)
10	LD (+)
11	N/C
12	N/C
13	Ground
14	TEC(-)

6.4Type: 04



Pin	Description
1	TEC(+)
2	N/C
3	N/C
4	N/C
5	LD(+)
6	N/C
7	MPD Anode
8	MPD Cathode
9	LD(-)
10	GND
11	Thermistor
12	Thermistor
13	N/C
14	TEC(-)

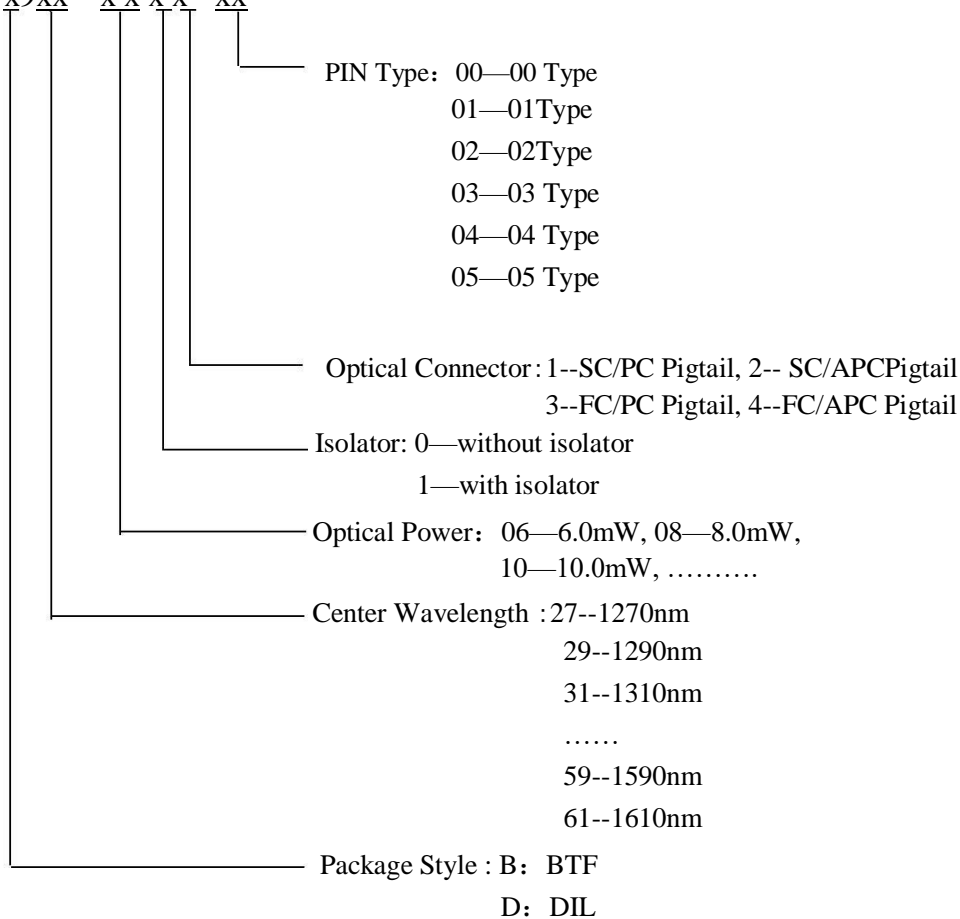
6.4Type: 05



Pin	Description
1	TEC(+)
2	Thermistor
3	Thermistor
4	MPD Anode
5	N/C
6	N/C
7	N/C
8	N/C
9	N/C
10	GND
11	MPD Cathode
12	LD(-)
13	LD(+)
14	TEC(-)

7.Order information

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8. Contact us

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