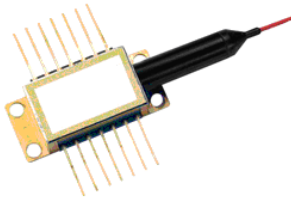


**Laser Diode 1550nm 100mW**

**FNLD-100S-1550-BTF-FBG**



**FNLD-100S-1550-BTF-FBG** is 1.55µm single frequency laser diode module designed for optical measurement and communication. The laser is packaged in 14-pin standard butterfly package with monitor photodiode and thermo-electric cooler (TEC).

**Key Features**

- Optical output: 100mW ( $I \leq 500$  mA)
- Narrow linewidth ( $\Delta\nu < 1$  MHz)
- Wavelength: 1550±10nm
- Fiber: Polarization maintaining PMF (ø0.9mm)
- FC-APC connector
- 14-pin butterfly package
- Internal monitor PD and TEC
- Low power consumption

**Optical and electrical characteristics: (T = 25°C)**

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Output Power	$P_f$				100	mW
Forward Voltage	$V_F$	$P_f=100mW$			1.6	V
Threshold Current	$I_{th}$				60	mA
Forward Current (BOL)	$I_F$	$P_f=100mW$			600	mA
Center Wavelength	$\lambda_c$	$P_f=100mW$	1530	1550	1570	nm
Spectral Width*	$\Delta\lambda$	Option A	10		MHz	
		Option B	5			
		Option C	1			
		Option D	0.1			
		Option E	0.05			
Monitor Current	$I_m$	$P_f=100$ mW, $V_{RD}=5V$	40		500	µA
PD Dark Current	$I_d$	$V_{RD}=5V$			0.1	µA
Tracking Error	$\Delta P_F$	$I_m=const$ , $T_C= -20$ to 70°C			0.5	dB
Cooler Voltage	$V_C$	$I_F=EOL$ , $TC=70^\circ C$			2.6	V
Cooler Current	$I_C$	$I_F=EOL$ , $TC=70^\circ C$			1.3	A
Thermal Resistance	$R_o$	$T_{LD}=25^\circ C$ , $B=3900\pm 100K$	9.5	10.0	10.5	kΩ
Extinction Ratio	$X_P$	$P_f=100mW$	17			dB

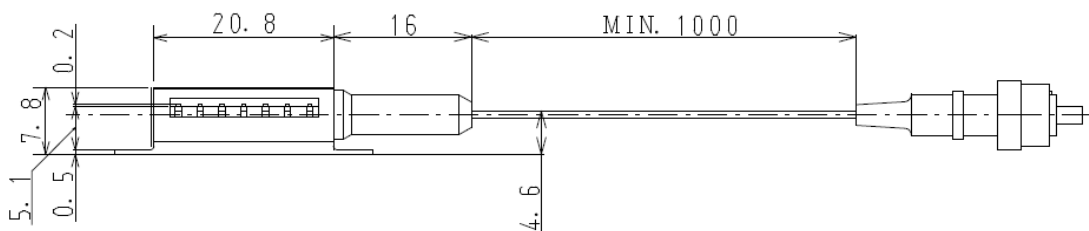
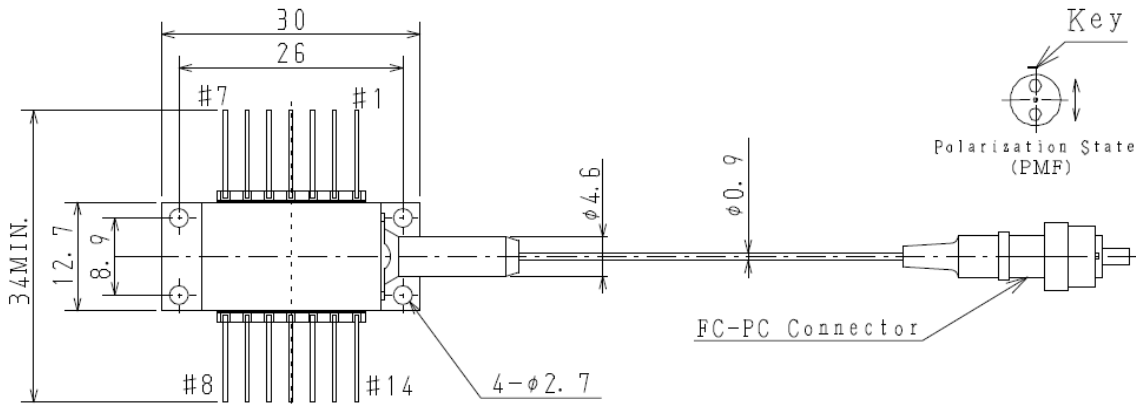
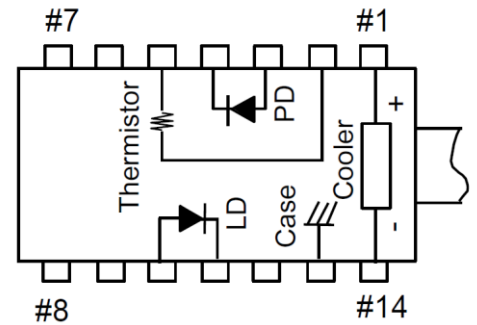
\*Please specify when ordering

## Absolute Maximum Ratings

Item	Symbol	Rating	Unit
LD Forward Current	$I_f$	700	mA
LD Reverse Voltage	$V_r$	1.8	V
PD Forward Current	$I_{FD}$	5	mA
PD Reverse Voltage	$V_{RD}$	10	V
Operation Case Temperature	$T_C$	-20 to +70	°C
Storage Temperature	$T_{stg}$	-40 to +85	°C
Cooler Current	$I_C$	1.4	A

## PACKAGING

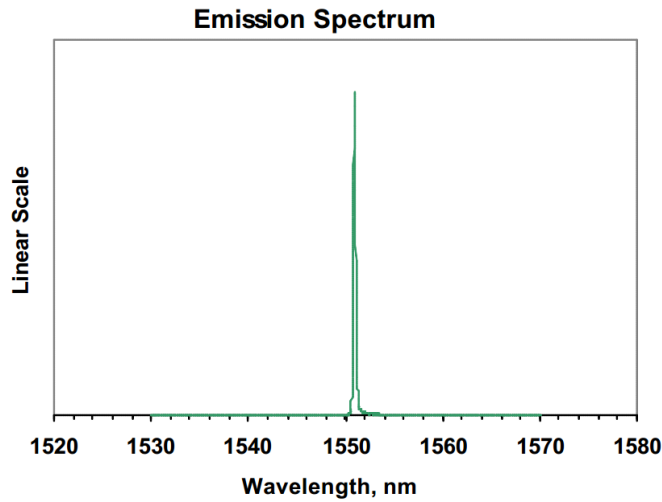
No.	FUNCTION	No.	FUNCTION
1	Cooler anode	8	NC
2	Thermistor	9	NC
3	PD anode	10	LD anode
4	PD cathode	11	LD cathode
5	Thermistor	12	NC
6	NC	13	Case
7	NC	14	Cooler cathode





## TYPICAL PERFORMANCE

CW Spectrum at 1550nm



Power/Voltage Forward Current Characteristics

