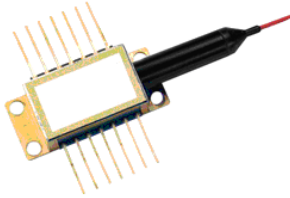


Laser Diode 1550nm 150mW

FNLD-150S-1550-BTF-FBG



FNLD-150S-1550-BTF-FBG is 1.55 μ m 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: 150mW ($I \leq 900$ mA)
- Narrow linewidth ($\Delta\nu < 10$ MHz)
- Wavelength: 1550 \pm 10nm
- Fiber: Polarization maintaining PMF ($\varnothing 0.9$ mm)
- 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	150		mW
Forward Voltage	V_F	$P_f=150$ mW			2.0	V
Threshold Current	I_{th}			40	60	mA
Forward Current (BOL)	I_F	$P_f=150$ mW		750	900	mA
Center Wavelength	λ_c	$P_f=150$ mW	1540	1550	1560	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	$P_f=150$ mW, $V_{RD}=5$ V	40		500	μ A
PD Dark Current	I_d	$V_{RD}=5$ V			0.1	μ A
Tracking Error	ΔP_F	$I_m=const$, $T_C= -20$ to 70°C			0.5	dB
Cooler Voltage	V_C	$I_F=EOL$, $TC=70^\circ$ C			5.0	V
Cooler Current	I_C	$I_F=EOL$, $TC=70^\circ$ C			1.5	A
Thermal Resistance	R_o	$T_{LD}=25^\circ$ C, $B=3900\pm 100$ K	9.5	10.0	10.5	k Ω
Extinction Ratio	X_P	$P_f=150$ mW	17			dB

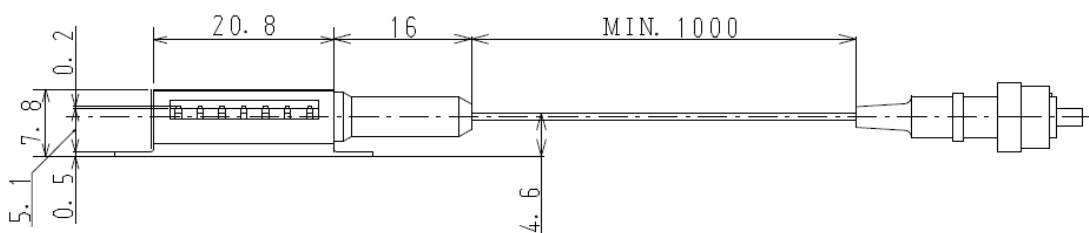
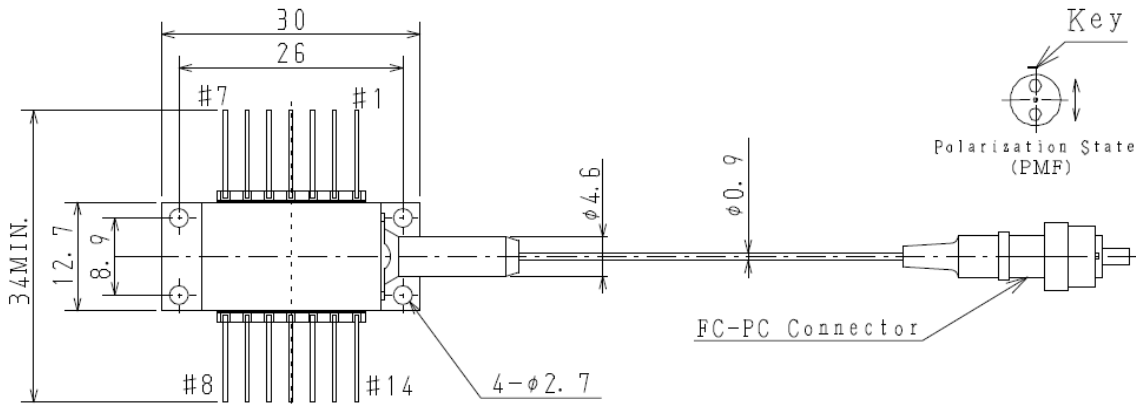
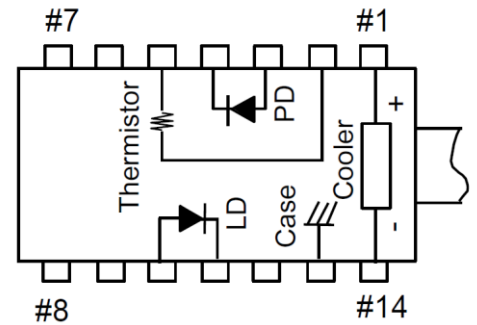
*Please specify when ordering

Absolute Maximum Ratings

Item	Symbol	Rating	Unit
LD Forward Current	I_f	1300	mA
LD Reverse Voltage	V_r	2	V
PD Forward Current	I_{FD}	5	mA
PD Reverse Voltage	V_{RD}	10	V
Operation Case Temperature	T_C	-40 to +70	°C
Storage Temperature	T_{stg}	-40 to +85	°C
Cooler Current	I_C	1.4	A

PACKAGING

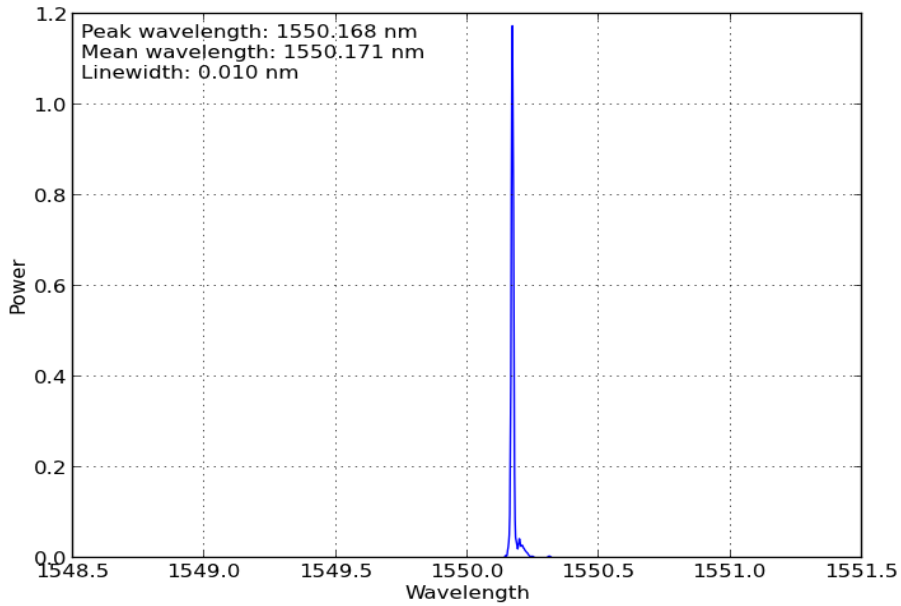
No.	FUNCTION	No.	FUNCTION
1	Cooler anode	8	NC
2	Thermistor	9	NC
3	PD anode	10	LD anode
4	PD cathode	11	LD cathode
5	Thermistor	12	NC
6	NC	13	Case
7	NC	14	Cooler cathode





TYPICAL PERFORMANCE

CW Spectrum at 1550nm



Power Forward Current Characteristics

