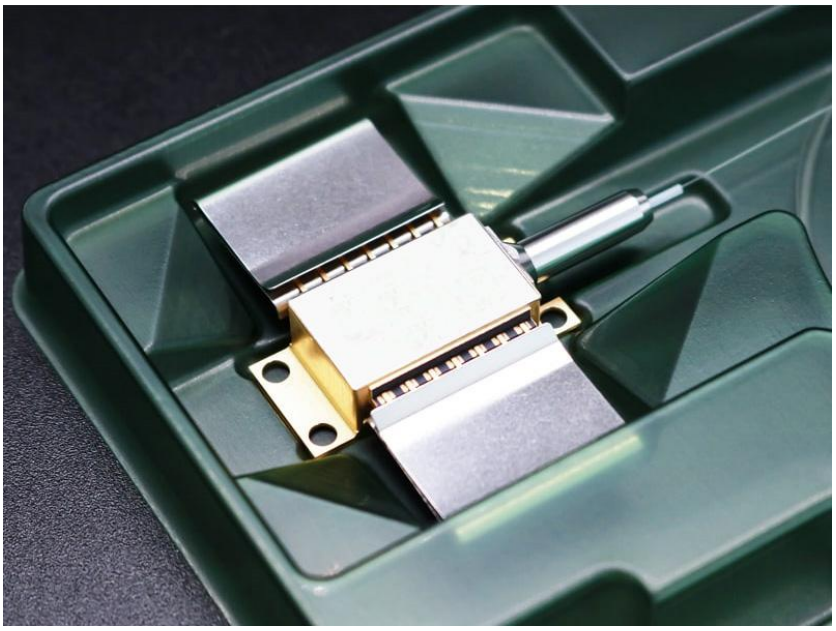
1465nm 400mW PM FP laser diode with FBG



Product Description

This series are 1.4μm band pump laser modules developed for fiber Raman amplifiers. With an output power of up to 500mW, they feature polarization-maintaining fiber output, 14-pin butterfly package, and integrate built-in TEC, PD, and thermistor.

Product features

High power output； FP laser structure； Integrated FBG wavelength stabilization；Low noise；Wide operating temperature range

Part Number

MP-FP-1465-400-14BF-PA-FBG

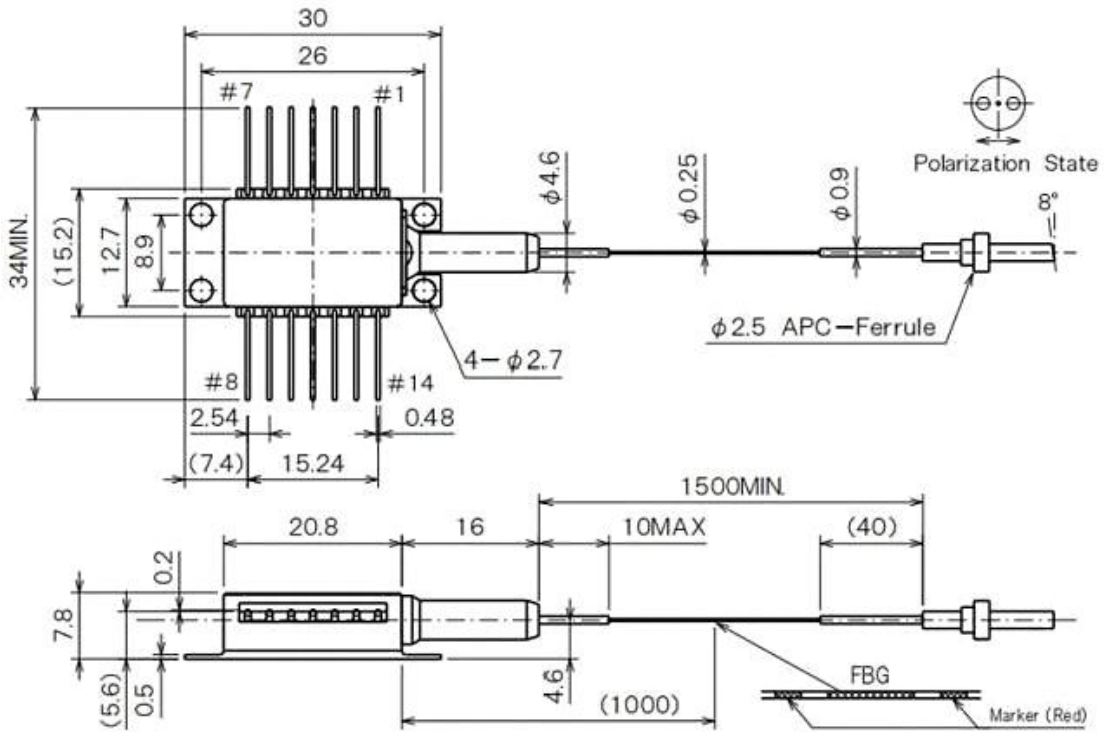
Application area

Fiber Optic Sensing (BOTDA/BOTDR) | Gas Detection | Laser Pump Source | Scientific Research Experiments | Industrial Measurement

Core parameters

Central Wavelength	Output Power
1465nm	400mW

Dimension Drawing



General Parameters

Detailed Specifications

Technical Parameters:

Electro-Optical Characteristics (TFBG=25°C, TLD=25°C, TC=25°C)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Threshold Current	I_{th}	-	-	-	180	mA
Center Wavelength	λC	at Rated power, RMS (-20dB)	λ_T -1.0	λ_T	λ T+1.0	nm
Spectral Width	Δλ	at Rated power, -10dB			3.5	nm
PD Monitor Current	I_m	at Rated power, VRD=5V	100		2000	mA
PD Dark Current	I_d	V_{RD}=5V			0.1	mA
Tracking Error	ΔP_f	I_m=const., T_c=-20 to 70℃	-0.5		0.5	dB
Thermistor	R_{th}	TLD=25° C, B=3900± 100K	9.5	10	10.5	kW
Extinction Ratio	X_p	at Pated power	17			dB

Absolute Maximum Ratings:

Parameter	Symbol	Value	Unit
LD Forward Current	I_F	2200	mA
LD Reverse Voltage	V_R	2	V
PD Forward Current	I_{FD}	10	mA
PD Reverse Voltage	V_{RD}	20	V
Case Operating Temperature	T_C	-20 to +70	°C
Storage Temperature	T_{stg}	-40 to +85	°C
Cooler Current	I_C	5.8	A

*Exceeding absolute maximum ratings may cause device failure.

Optical Output Power, COOLER Characteristics and Power Consumption (TLD=25°C)

Center Wavelength λC	Rated Output Power Pf [mW]	LD Current IF BOL [A]	Forward Voltage VF		Cooler Current IC EOL [A]	Cooler Voltage VC EOL [V]

			BOL [V]	EOL [V]		
1420 to 1499 nm	300	1150	2.0	2.3	2.20	2.70
	320	1200	2.0	2.3	2.20	2.70
	340	1300	2.0	2.3	2.30	2.80
	350	1400	2.0	2.3	2.35	2.85
	360	1400	2.0	2.3	2.40	2.90
	380	1400	2.0	2.3	2.45	2.95
	400	1400	2.0	2.3	2.50	3.00
1420 to 1485 nm	420	1600	2.2	2.5	2.60	3.10
	450	1700	2.2	2.5	2.70	3.20
	500	1800	2.2	2.5	2.90	3.40

*Note: IF_EOL=IF_BOL×1.2, Maximum Value.

Polarization-Maintaining Pigtail Parameters

Parameter	Min.	Typ.	Max.	Unit
Cutoff Wavelength	1300	-	1400	nm
Mode Field Diameter (MFD) @1550nm	10.0	10.5	11.0	μm
Cladding Diameter	124	125	126	μm
UV Coating Diameter	230	245	260	μm
FBG Wavelength Temperature Coefficient	-	0.01	0.02	nm/°C
Bend Radius	30	-	-	mm