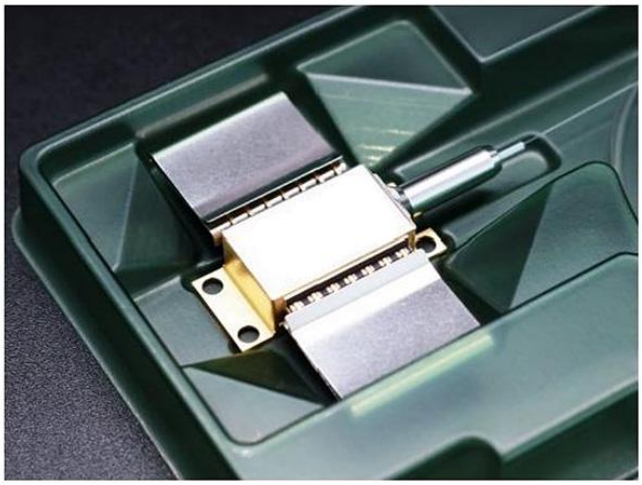
1435-1465-1475nm FP High-power Laser Diode with FBG 500mW



Product Description

The type is a pump Laser diode module in the 1.4μm band developed for Fiber Raman amplifier. The output power is up to 500mW with PM fiber output, and 14 Pin butterfly package. It has build-in TEC, PD and thermistor.

Product features

Optical output power: Type GB: 300-400mW、 Type GC:420-500mW、 Wavelength range: Type GB: λT=1420 to 1499nm、 Type GC: λT=1420 to 1485nm、 Polarization PM fiber (PMF: φ0.25mm UV-coated)、 14PIN butterfly package, build-in PD and TEC

Part Number

MP-FP-1435-400-14BF-PA-FBG

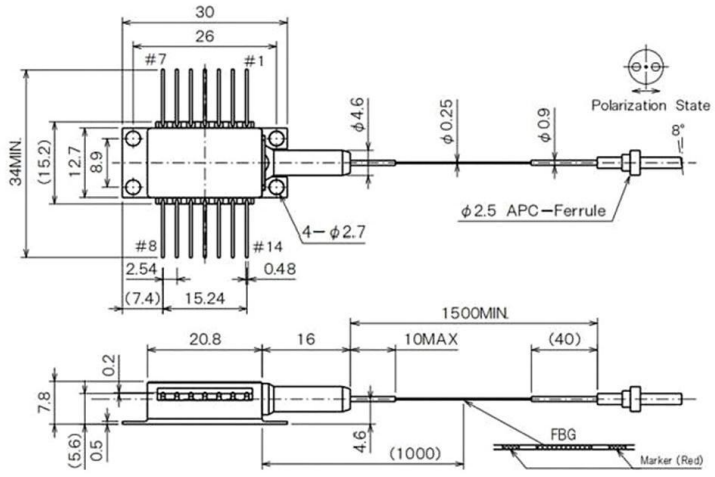
Application area

Raman amplifier

Core parameters

Wavelength Range	Extra output power	Spectral width
1.4μm band	300-500mW	3.5nm

Dimension Drawing



(Note) The Polarization direction of LD is parallel with slow axis of PMF

General Parameters

Parameters

Optoelectronic Characteristics (TFBG=25°C, TLD=25°C，TC=25°C)

Parameter	Sign	Test condition	Min.	Typical	Max.	Unit
Threshold current	I_{th}	-	-	-	180	mA
Operating wavelength	λ_C	at Rated power，RMS (- dB)	λT - 1.0	λT	λT + 1.0	nm
Spectral width	Δλ	at Rated power，- dB			3.5	nm
PD monitoring current	I_m	at Rated power，VRD= V	100		2000	mA
PD dark current	I_d	VRD= V			0.1	mA
Tracking error	ΔP_f	Im=const., Tc= --20 to 70°C	-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 Max. Parameters

Parameter	Sign	Value	Unit
LD Forward current	I_F	2200	mA
LD Backward current	V_R	2	V

Parameter	Sign	Value	Unit
PD Forward current	I_{FD}	10	mA
PD Backward current	V_{RD}	20	V
Operating body temperature	T_C	-20 to +70	°C
Storage temperature	T_{stg}	-40 to +85	°C
Cooler current	I_C	5.8	A

*It may cause malfunction if the value is more than absolute Max. Level

Optical Output Power, COOLER Characteristic and Power Consumption

Central wavelength	Extra output power	LD current	Forward voltage		Cooler current	Cooler voltage
λ_C	Pf	IF	VF		IC	VC
[nm]	[mW]	BOL [A]	BOL [V]	EOL [V]	EOL [A]	EOL [V]
1420 to 1499	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	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_BOLX1.2, Max.

PM Pigtail Parameters

Parameter	Min.	Typical	Max.	Unit
Cut-off wavelength	1300		1400	nm
Mode field diameter	10.0	10.5	11.0	mm
Clad diameter	124	125	126	mm
UV coat diameter	230	245	260	mm
FBG wavelength temperature characteristic		0.01	0.02	nm/℃
Bending	30			mm