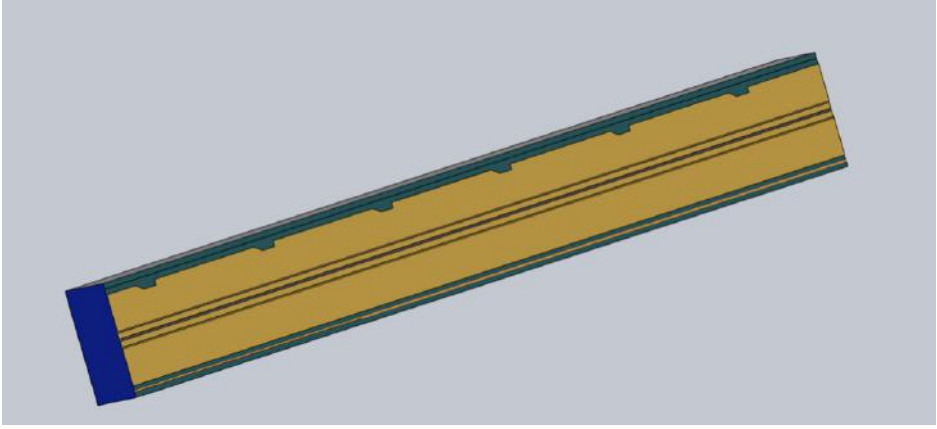
97x High Power FP Laser Chip for EDFA



Description

The laser is is a semiconductor InGaAsP FP laser working at 974nm wavelength. The device can be delivered in chip and laser bar forms. This high performance, and high reliability laser is suitable for applications in various fiber communication networks and data centers.

Features

- High Power (Kink off power up to 700mw)
- Chip size:3000um x 400um x 120um
- High Reliability
- Multi-quantum Well (MQW) active layer

Application

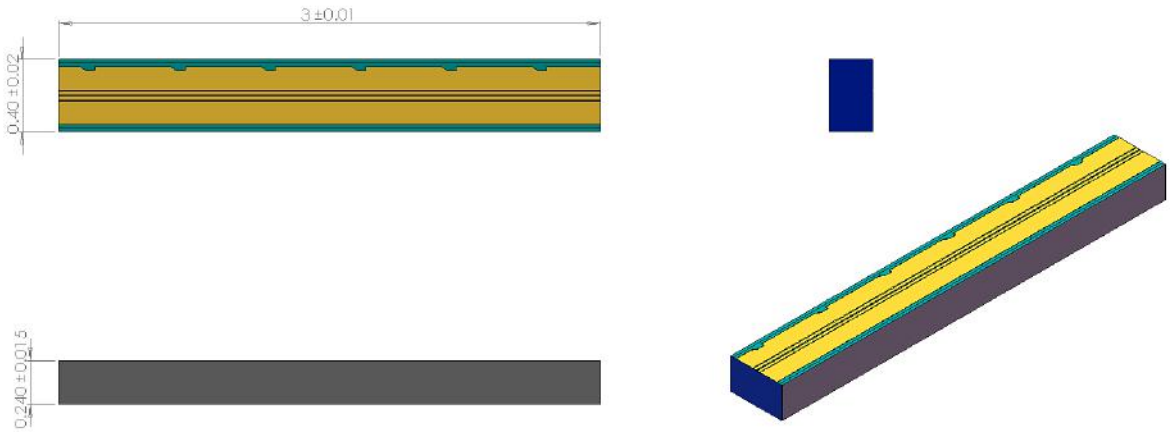
- Telecommunication
- Data Communication
- Storage area network
- MAN
- PON

Laser Specifications

Electrical/Optical Characteristics(Tsub=25°C, CW bias unless stated otherwise)

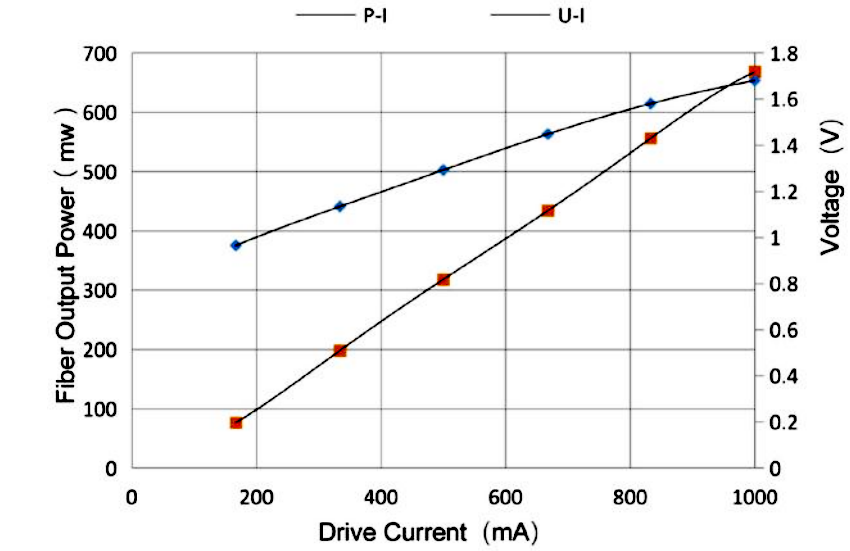
Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	λ	971	974	977	nm
Spectrum Width	FWHM	-	1	2	nm
Threshold Current	Ith		50	70	mA
Operating Current	Iop		570	650	mA
Chip output Power	Pf	450	500		mW
Forward Voltage	Vf		2.0	2.2	V
Kink deviation	KINK	30%			
Beam divergence angle (parallel)	ϑ//		40		Deg
Beam Divergence angle (perpendicular)	ϑ⊥		8		Deg

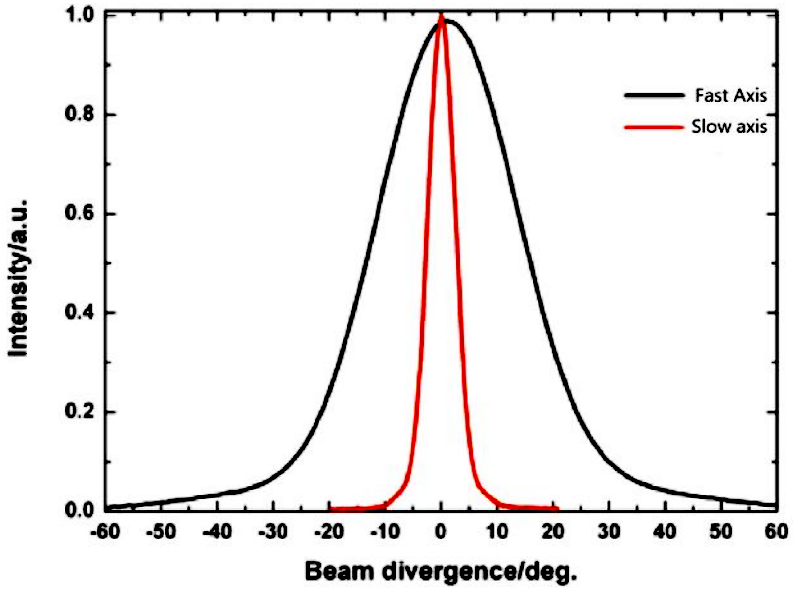
Outline Drawing



Dimension	Symbol	Min Value	Typ Value	Max Value	Unit
Emitter Area	-		5X1	-	um
Chip width	W	380	400	420	um
Chip Length	L	2990	3000	3010	um
Chip Thickness	H	105	120	135	um

Typical Testing Curve





ABSOLUTE MAXIMUM RATINGS

Item	Unit	Min	Typ	Max
Case Temperature	°C	-5	25	50
Chip Temperature	°C	+10	25	50
Operating Current	mA	0	800	1000
Forward Voltage	V	0.8	1.2	2.0
Back Current	uA	-	-	10
Back Voltage	V	-	-	2.0
Suggest TEC Current	A	-	-	1.2
ESD Voltage	V	1000	-	-
Reverse Voltage(PD)	V	-	-	20

Note

1. Stresses which exceed the absolute maximum ratings can cause permanent damage to the device.

2. These are only absolute stress ratings . Functional operation of the device is not implied at conditions exceeding those given in the operational sections of the data sheet.

3. Exposure to absolute maximum ratings for extended periods can affect device reliability adversely.

Ordering Info

FP-Pump Chips-☆-A8▽-W□□□□

☆ ：Output Power

A：500mW

▽：Wavelength Tolerance

1：±1nm

2：±2nm

□□□□：Wavelength

974:974nm

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980：980nm

Handling Procedures

1. Suggested bonding condition

- Bonding temperature: 350°C
- Bonding force: 30 grams (not exceed 40 grams)
- Bonding force and temperature should be applied in a gradual fashion
- Bonding time: <= 10 seconds

2. Suggested burn-in conditions:

Conditions 1：

- Chip heatsink temperature: 100°C
- Current: 100mA
- Time: 24 hours
- Pass Criteria: BI 0hrs LIV1； BI 24hrs LIV2 Compare LIV2 to LIV1
- Delta Ith (T=25°C) ⩽1mA and Delta Pf(T=25°C) ⩽10%

Conditions 2：

- Chip heatsink temperature: 100°C
- Current: 100mA
- Time: 24 hours+48hrs
- Pass Criteria: BI 24hrs LIV1； BI 24hrs+48hrs LIV2 Compare LIV2 to LIV1
- Delta Ith (T=25°C) ⩽0.7mA and Delta Pf (T=25°C) ⩽5%