

## 1060nm DFB Laser Diode 50mW

### Communication Type



- **Product Description**

1060nm 14PIN Butterfly Package DFB Laser, with built-in TEC, lens, thermistor, and PD integrated in the 14PIN butterfly package. The hermetically sealed design meets telecom-grade operational requirements, featuring narrow linewidth and high power (50mW). It supports PM980 or HI1060 fiber output and also supports custom pin definition as per customer requirements.



## ● Product features

14PIN butterfly sealed package、 Custom wavelengths from 1018-1200nm  
 with integrated TEC and thermistor 、 DFB chip, narrow linewidth 、  
 PM980/HI1060 fiber pigtail options available

## ● Part Number

MP-DFB-1060-50-A81-14BF-PA-2

## ● Application area

Ultrafast laser SHG seed light

## ● Core parameters

Wavelength	Optical Power	Fiber Type
1060nm	50mW	PM980-XP

## ● General Parameters

Optical-Electrical Characteristics (25°C)

Optical Electrical Characteristics ( $T_{CHIP} = 15 - 35 \text{ }^{\circ}\text{C}$ , $T_{CASE} = 25 \text{ }^{\circ}\text{C}$ , $I_{op} = 150 \text{ mA}$ )				
Parameter	Min	Typ.	Max	Unit
Central Wavelength	1058	1060	1062	nm
SMSR	40	50	-	dB
Linewidth	-	5	-	MHz
Optical Power (inside fiber)	30	50	-	mW
Drive Voltage	-	2	2.5	V

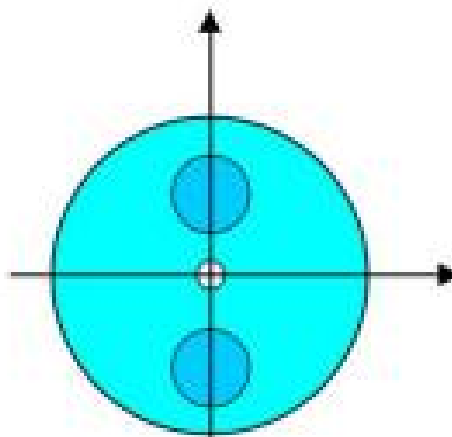


Optical Electrical Characteristics ( $T_{CHIP} = 15 - 35 \text{ }^{\circ}\text{C}$ , $T_{CASE} = 25 \text{ }^{\circ}\text{C}$ , $I_{op} = 150 \text{ mA}$ )				
Parameter	Min	Typ.	Max	Unit
Drive Current	-	150	250	mA
Mode Hop-Free Current Range	20	50	-	mA
Threshold Current	-	35	-	mA
Slope Efficiency	-	0.25	-	W/A
Current Wavelength Coefficient	-	0.002	-	nm/mA
Temperature Wavelength Coefficient	-	0.08	-	nm/ $^{\circ}\text{C}$
MPD Response Rate	-	0.5	-	A/W
Extinction Ratio	-	16	-	dB

## Optical Fiber Characteristics:

Fiber Type	PM980-XP
Mode Field Diameter	$6.6 \pm 0.5 \text{ } \mu\text{m}$ @ 980 nm
Numerical Aperture	0.10
Fiber Length	1.5 m
Connector	FC/APC (2.0 mm Narrow Key)
Loose Tube	$\text{\O}900 \text{ } \mu\text{m}$

Key Aligned to the Slow axis

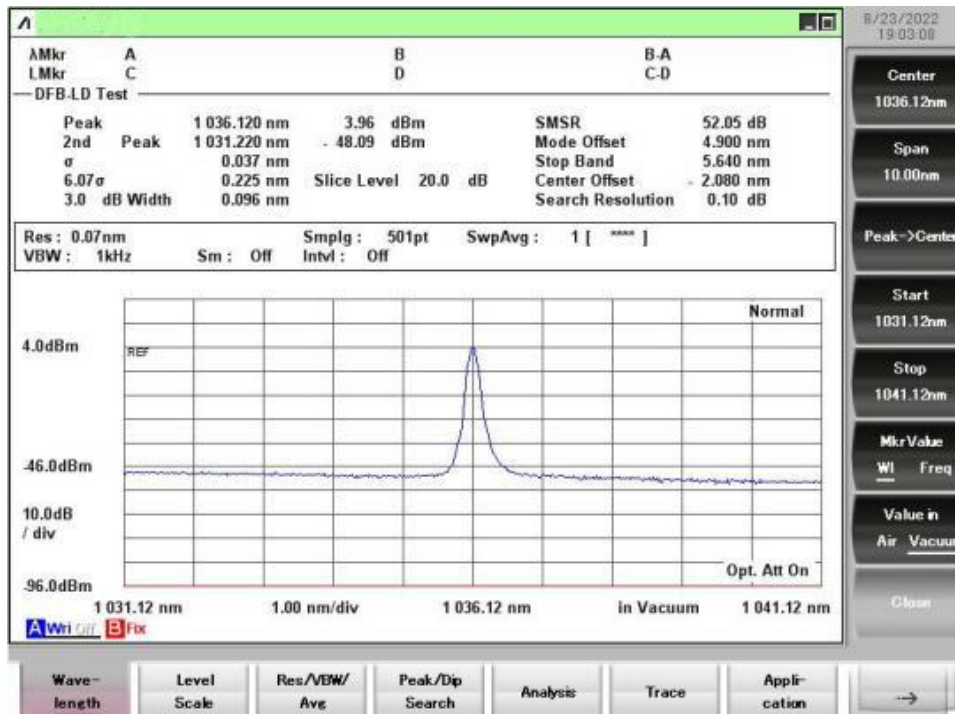




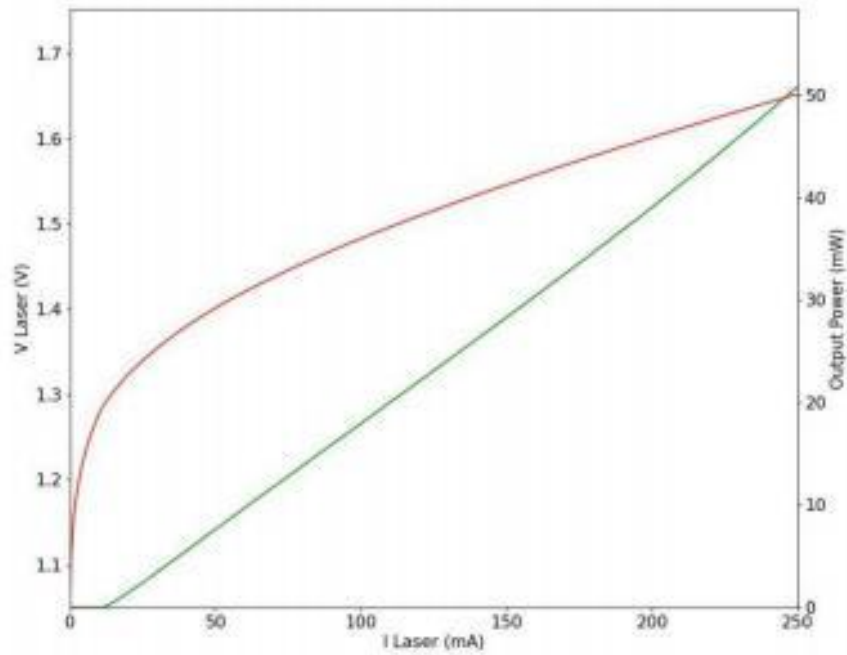
## Limiting Parameters

Parameter	Typical Value	Unit
Optical Fiber Power	50	mW
Operating Current	400	mA
LD Reverse Voltage	2	V
PD Reverse Voltage	15	V
Case Operating Temperature	0 to 50	°C
Storage Temperature	-10 to 65	°C
TEC Current	2.5	A
TEC Voltage	4.0	V
Thermistor Resistance	10	kOhms

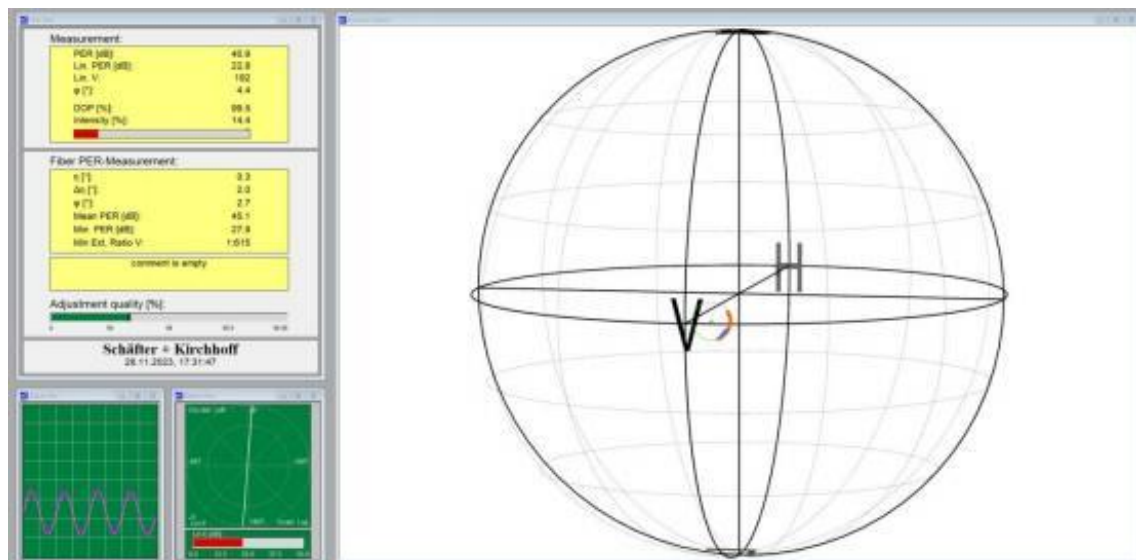
## Spectral Analysis



## L-I-V Curve

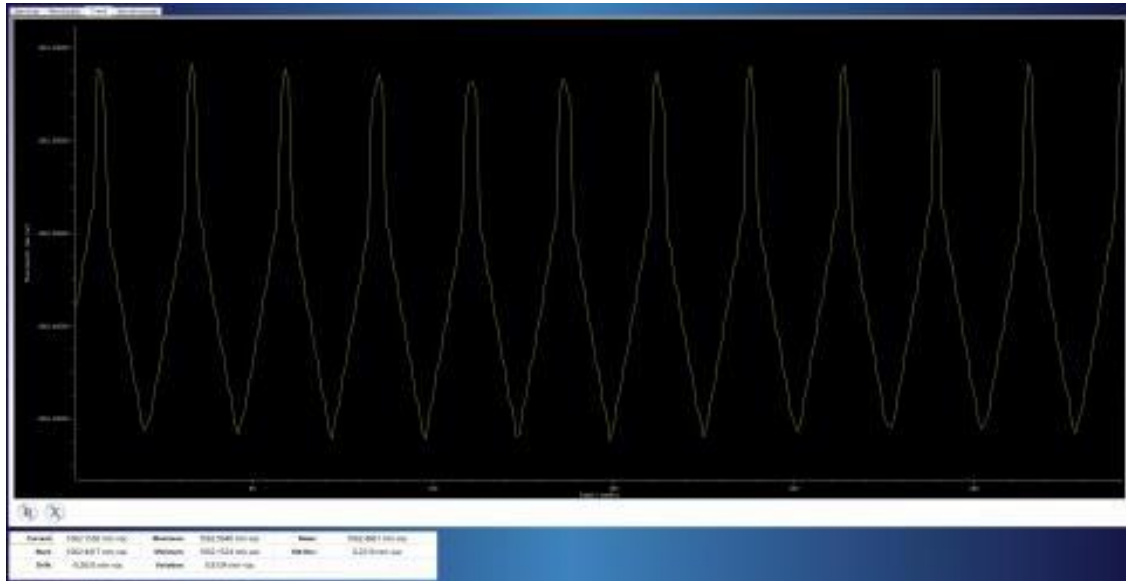


## Extinction Ratio Test (Polarization Maintaining Version)



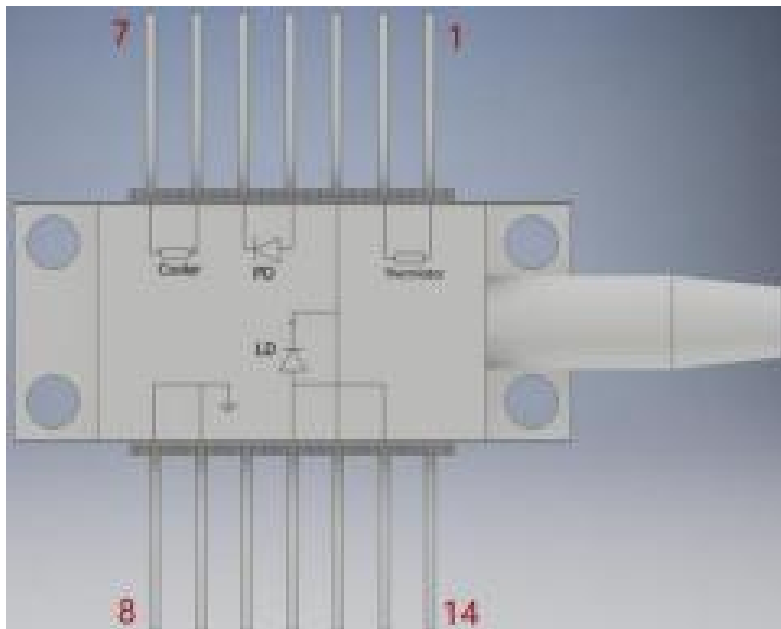


## Mode hope tuning Range



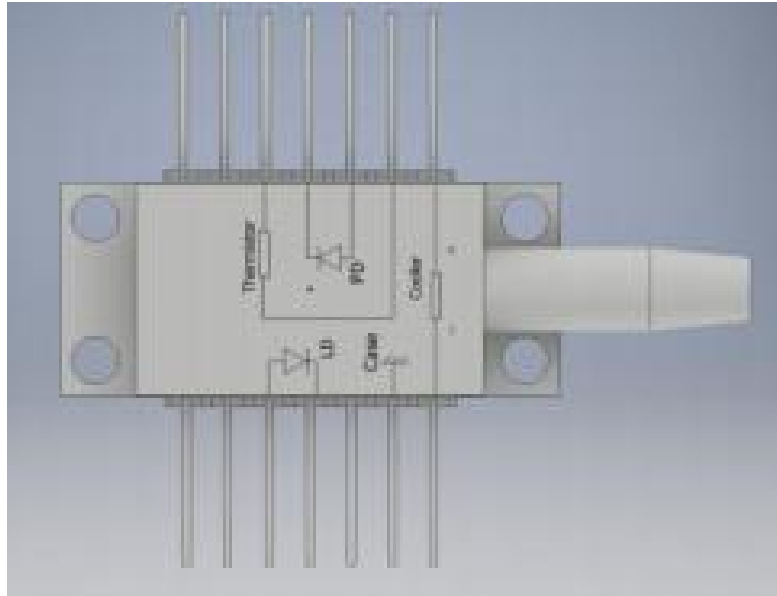
## Pin Definition:

Standard A





**Standard B**



**Ordering Information:**

**MP-DFB- □□□□-☆-A8▽-XX**

**□□□□: Wavelength**

**1018: 1018nm**

**1030: 1030nm**

**1053: 1053nm**

**1064: 1064nm**

**1084: 1084nm**

**\*\*\*\*\***

**1120: 1120nm**

**☆: Pin Definition**

**A: Telecom A**

**B: Pump B**



▽: Wavelength Tolerance

1:  $\pm 1\text{nm}$

2:  $\pm 2\text{nm}$

XX: Fiber and Connector Type

SA=HI1060+ FC/APC

SP=HI1060+ FC/PC

PA=PM980 Fiber+ FC/APC

PP=PM980 Fiber+ FC/PC

Our default packaging does not include an isolator. If the customer requires an isolator, please add "-ISO" at the end of the model number. The output power with the isolator is guaranteed to be 30mW+.

Eg:

PN#MP-DFB-1060-B-A81-PA-ISO