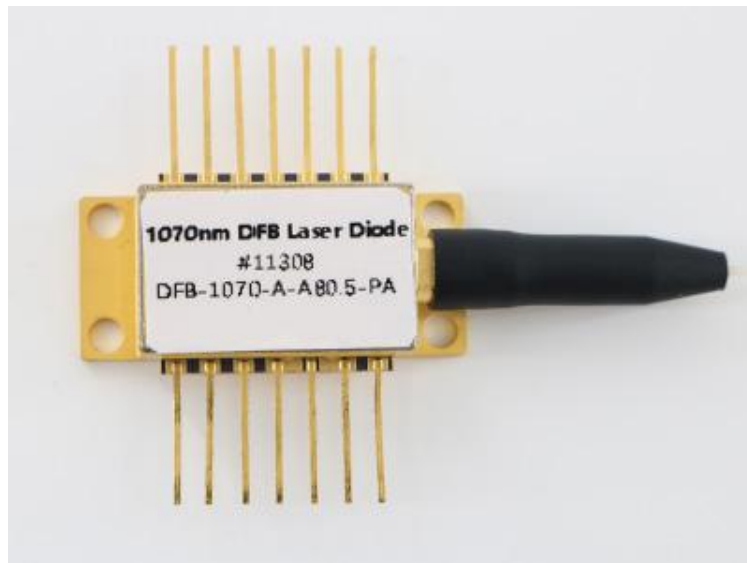


## 1070nm DFB Laser Diode 50mW



- **Product Description**

1070nm 14PIN Butterfly Package DFB Laser, with integrated TEC, lens, thermistor, and PD in a 14PIN butterfly package. The hermetically sealed design meets telecom-grade operating requirements, featuring narrow linewidth and high power (50mW). It supports PM980 or HI1060 fiber output, and also offers custom pin definitions as requested by the customer.



## ● 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-1070-50-A80.5-14BF-PA

## ● Application area

Ultrafast laser SHG seed light

## ● Core parameters

Wavelength	Optical Power	Fiber Type
1070nm	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	1068	1070	1072	nm
SMSR	40	50	-	dB
Linewidth	-	5	-	MHz
Optical Power (inside fiber)	30	50	-	mW

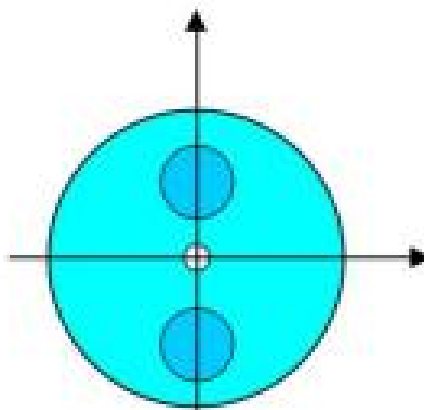


Optical Electrical Characteristics ( $T_{CHIP} = 15 - 35 \text{ }^{\circ}\text{C}$ , $T_{CASE} = 25 \text{ }^{\circ}\text{C}$ , $I_{op} = 150 \text{ mA}$ )				
Parameter	Min	Typ.	Max	Unit
Drive Voltage	-	2.0	2.5	V
Drive Current	-	150	250	mA
Mode Hop-Free Current Range	20	50	-	mA
Threshold Current	-	35	-	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	$\text{Ø}900 \text{ } \mu\text{m}$

Key Aligned to the Slow axis

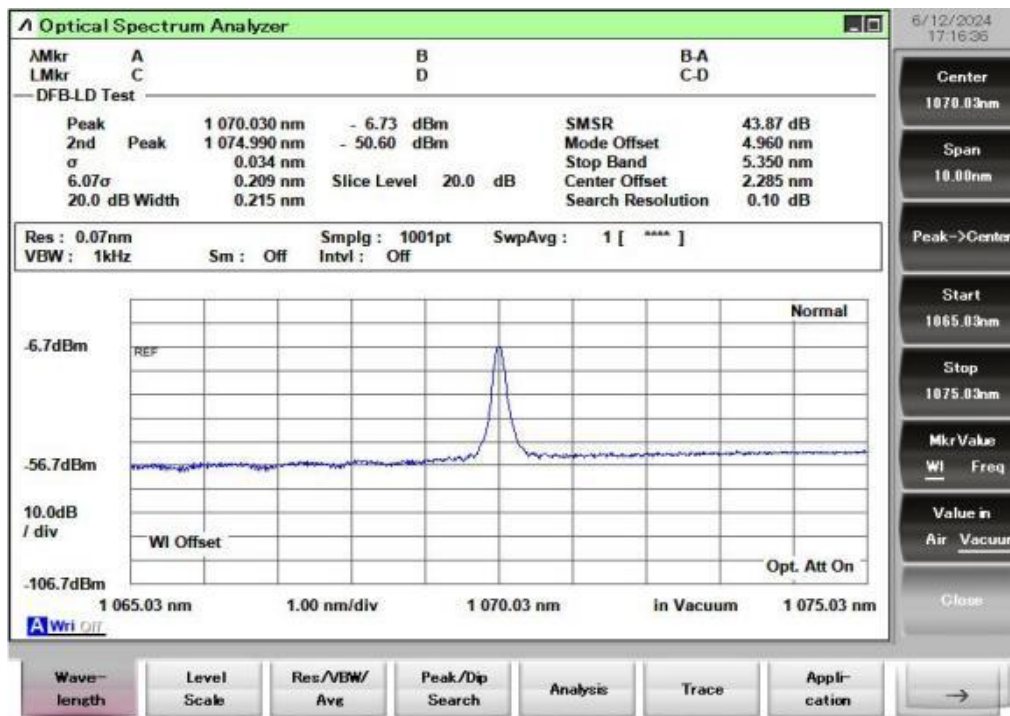




## Limiting Parameters

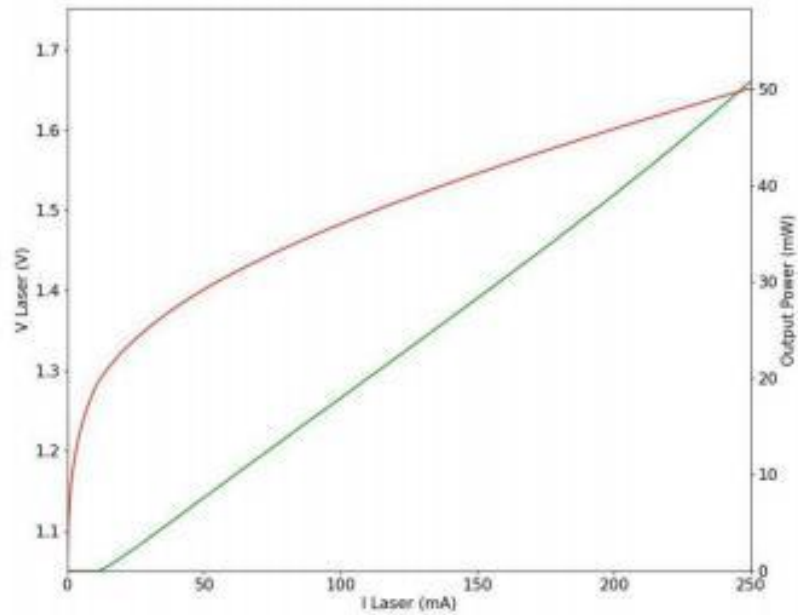
Parameter	Typical Value	Unit
Optical Fiber Power	50	mW
Operating Current	400	mA
LD Reverse Voltage	2	V
PD Reverse Voltage	15	V
Case Operating Temperature	0 to 50	°C
Storage Temperature	-10 to 65	°C
TEC Current	2.5	A
TEC Voltage	4.0	V
Thermistor Resistance	10	kOhms

## Spectral Analysis

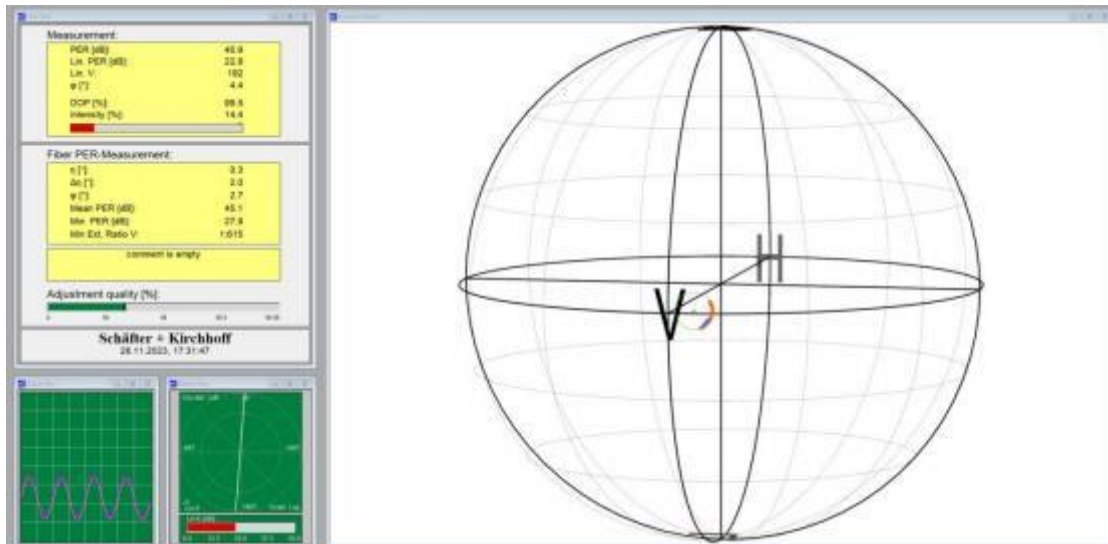




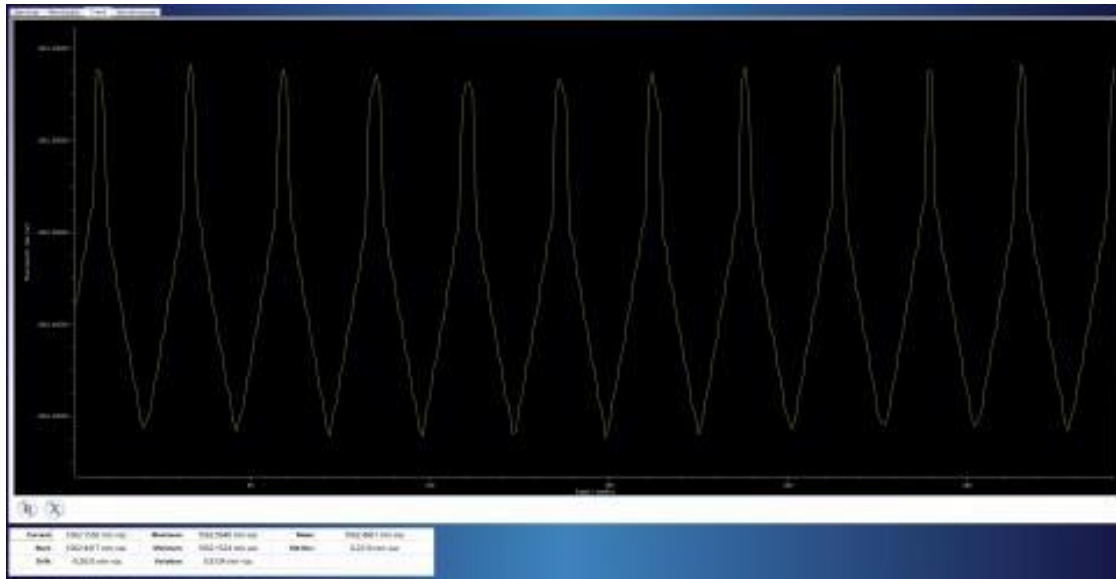
## L-I-V Curve



## Extinction Ratio Test (Polarization Maintaining Version)

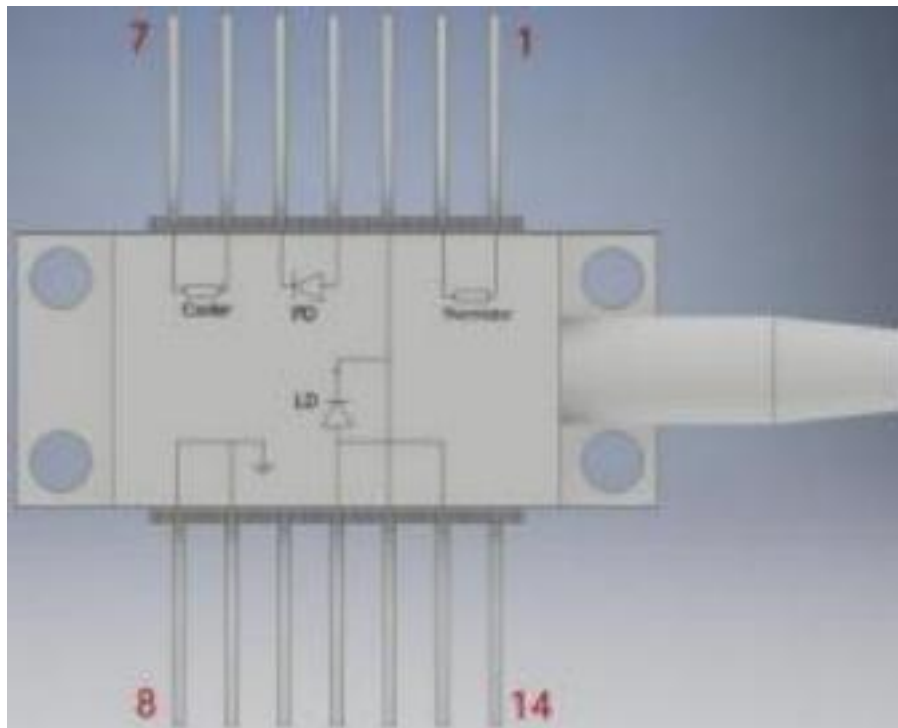


## Mode hoppe tuning Range



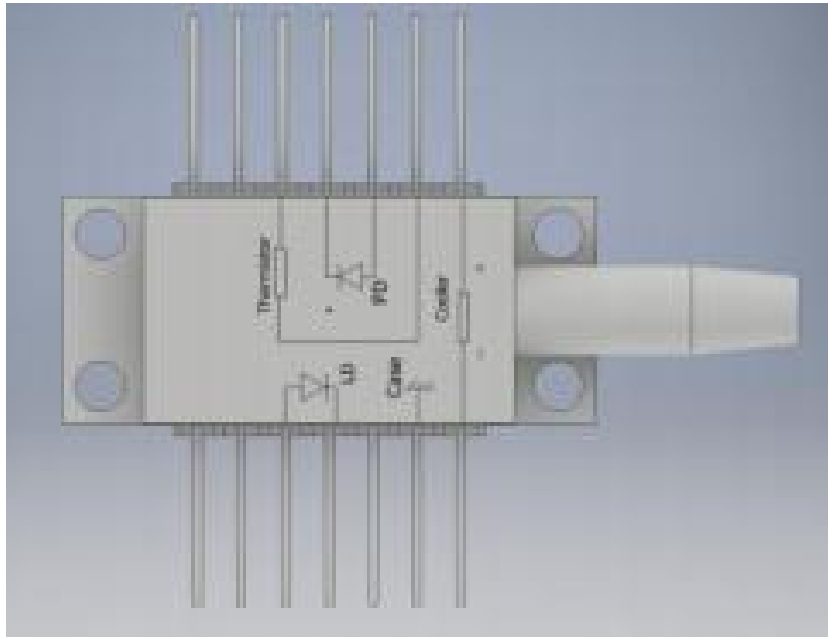
## Pin Definition:

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: ±1nm**

**2: ±2nm**

**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:MP-PN#DFB-1070-B-A81-PA-ISO