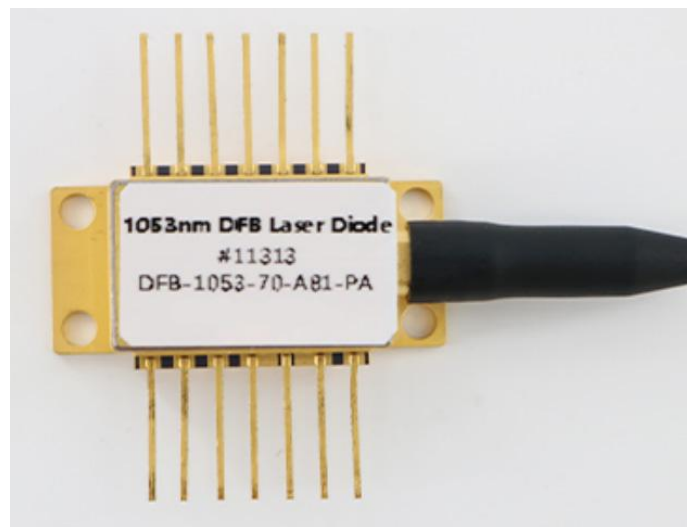


1053nm DFB Laser Diode 70mW



● Product Description

1053nm 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-1053-70-A81-PA

● Application area

Ultrafast laser SHG seed light

● Core parameters

Wavelength	Optical Power	Fiber Type
1053nm	50mW	PM980-XP

● General Parameters

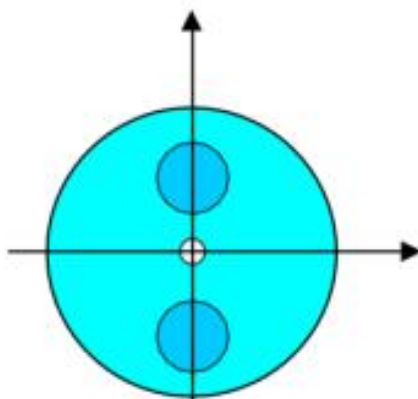
Optical-Electrical Characteristics (25°C)

Optical Electrical Characteristics (T _{CHIP} = 15 - 35 °C, T _{CASE} = 25 °C, I _{op} = 150 mA)				
Parameter	Min	Typ.	Max	Unit
Center Wavelength	1051	1053	1055	nm
SMSR	40	50	-	dB
Linewidth	-	5	-	MHz
Optical Power (inside fiber)	30	50	-	mW
Drive Voltage	-	2	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/°C
MPD Response Rate	-	0.5	-	A/W
Extinction Ratio	-	16	-	dB

Optical Fiber Characteristics:

Fiber Type	PM980-XP
Mode Field Diameter	6.6 ± 0.5 μm @ 980 nm
Numerical Aperture	0.10
Fiber Length	1.5 m
Connector	FC/APC (2.0 mm Narrow Key)
Loose Tube	Ø900 μm

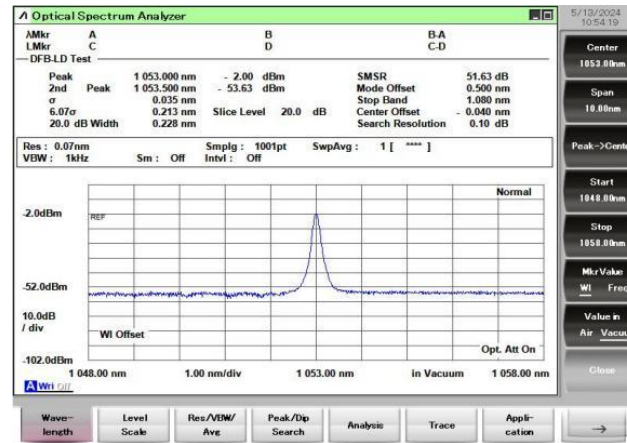
Key Aligned to the Slow axis



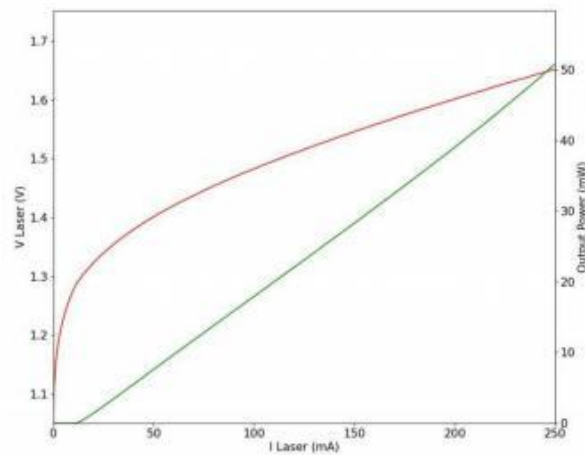
Limiting Parameters

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

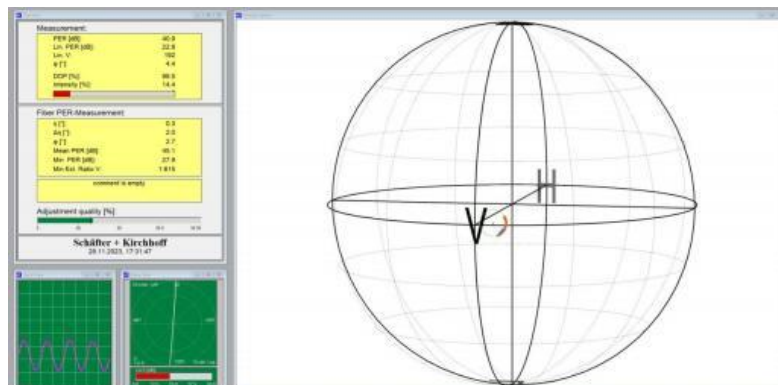
Spectral Analysis



L-I-V Curve

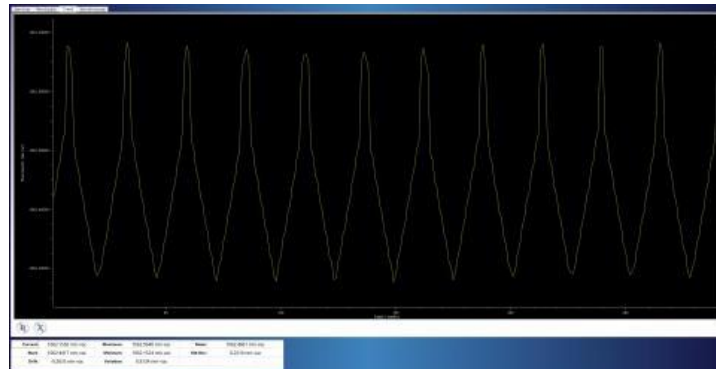


Extinction Ratio Test (Polarization Maintaining Version)

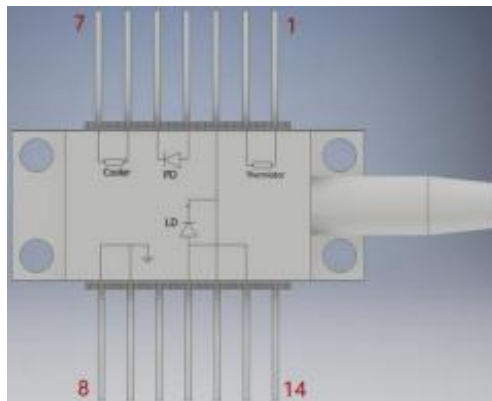




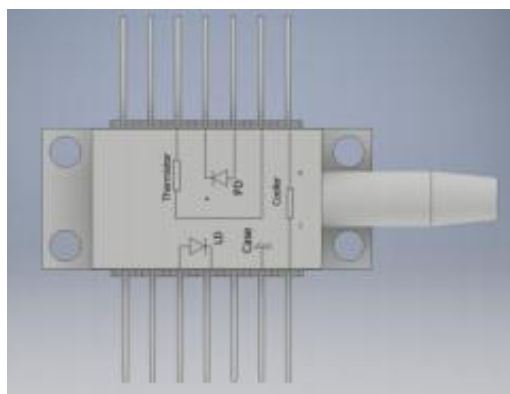
Mode hope tuning Range



Pin Definition: Standard A



Standard B



Current-illumination characteristic ($T_{CHIP} = 15 - 35\text{ }^{\circ}\text{C}$, $T_{CASE} = 25\text{ }^{\circ}\text{C}$, $I_{op} = 150\text{ mA}$)				
Parameter	Min	Typ.	Max	Unit
Central wavelength	1026	1028	1030	nm
	1034	1036	1038	
	1058	1060	1062	
	1062	1064	1066	
	1066	1068	1070	
	1082	1084	1086	
SMSR	40	50	-	dB
Linewidth	-	5	-	MHz
Optical power(inside the fiber)	30	50	-	mW
Drive voltage	-	2	2.5	V
Drive current	-	150	250	mA
Mode-hop free 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 Responsivity	-	0.5	-	A/W
Extinctive ratio	-	16	-	dB

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-1053-B-A81-PA-ISO