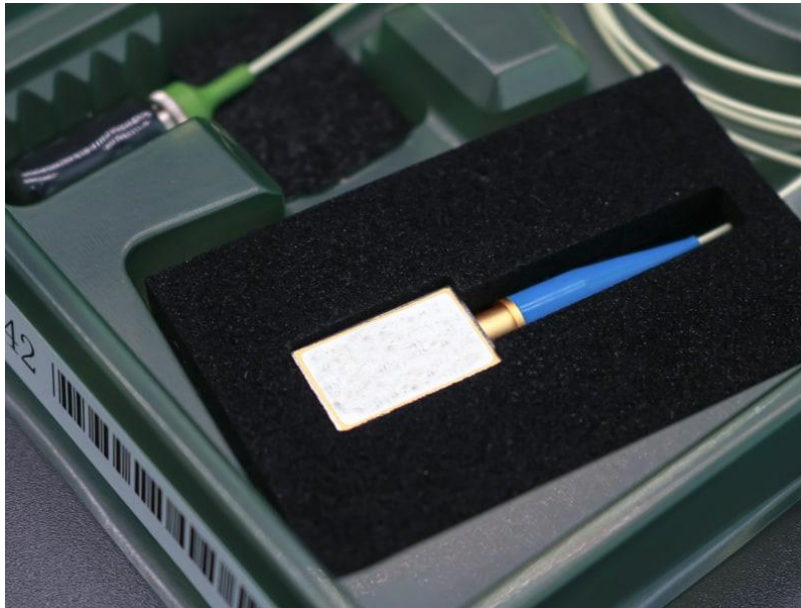




## 1653.74nm 15mW DFB Laser Diode



### ● Product Description

1653.74nm DFB laser diode is a 14-pin butterfly-packaged laser diode with a wavelength range of 1625 to 1670 nm, continuous-wave (CW) output power of 15 mW, and threshold current of 15 to 20 mA.

### ● Product features

Precise wavelength ; Stable output ; Single-longitudinal-mode narrow linewidth; Low-noise design; Industrial-grade package



## ● Part Number

MP-DFB-1653.74-15-A81-14BF-ISO

## ● Application area

Fiber laser pumping | Biomedical imaging | Spectral analysis | Cold atom physics | Industrial sensing

## ● Core parameters

Central Wavelength	Output Power
1653.74nm	15mW

## ● General Parameters

Technical Parameters

Electrical/Optical Characteristics (Tsub=25° C)

Parameter	Symbol	Test Condition	Min.	Typical	Max.	Unit
Forward Voltage	VF	IF=30mA	-	1.2	1.6	V
Threshold Current	ITH	CW	-	15	20	mA
Fiber Output Power	fe	CW, IF=130mA	15	-	25	mW
Peak Wavelength	lp	CW, fe=15mW	162 5	-	1655	nm



<b>Spectral Linewidth</b>	<b>Dn</b>	<b>CW, fe=15mW</b>	-	2	-	<b>MHz</b>
<b>Side Mode Suppression Ratio (SMSR)</b>	<b>SMS</b>	<b>CW, fe=15mW</b>	35	-	-	<b>dB</b>
<b>Monitor Current (PD)</b>	<b>IR(E)</b>	<b>CW, fe=15mW</b>	0.1	-	-	<b>mA</b>
<b>Dark Current (PD)</b>	<b>Ir(0)</b>	<b>CW, VDR=5V</b>	-	-	100	<b>nA</b>
<b>Tracking Error</b>	<b>ER</b>	<b>IR(E)=constant</b>	-0.5	-	+0.5	<b>dB</b>
<b>Cooling Capacity</b>	<b>DTPE</b>	<b>fe=15mW, Tcase =70° C</b>	45	-	-	<b>deg.</b>
<b>Peltier Current</b>	<b>IPE</b>	<b>Tcase=-5 to 70 ° C</b>	-	-	1	<b>A</b>
<b>Peltier Voltage</b>	<b>VPE</b>	<b>Tcase=-5 to 70 ° C</b>	-	-	2	<b>V</b>
<b>Thermistor Resistance</b>	<b>R</b>	<b>Tsub=25° C</b>	-	10	-	<b>kW</b>
<b>Isolation</b>	<b>Is</b>	<b>Tsub=25° C</b>	-	30	-	<b>dB</b>

Note: DT= | Tcase-Tsub |



## Absolute Maximum Ratings (Tsub=25° C)

Parameter	Symbol	Value	Unit
Laser Diode Reverse Voltage	VR	2.0	V
Laser Diode Forward Current	IF	225	mA
Operating Case Temperature	Tcase	-5 to 70	°C
Storage Temperature	Tstg	-40 to 85	°C
PD Reverse Voltage	VDR	10	V
PD Forward Current	IDF	10	mA
Peltier Current	IP	1.4	A