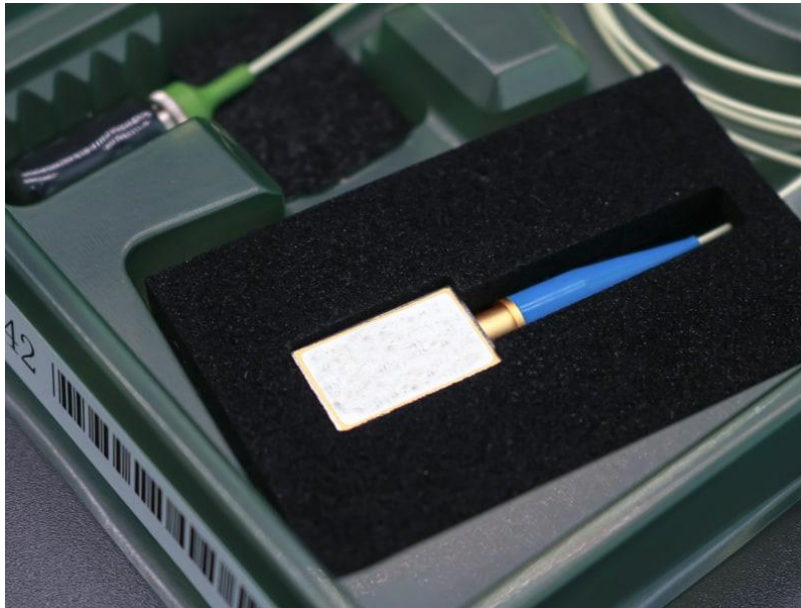




1680nm 10mW DFB Laser Diode



● Product Description

1680nm DFB laser diode is a 14-pin butterfly-packaged laser diode with optional wavelengths within the 1670 – 1690 nm UL(+) band and a continuous-wave (CW) output power of 10 mW. It integrates a built-in TEC (thermoelectric cooler) and thermistor.

● Product features

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



● Part Number

MP-DFB-1680-10-A81-14BF-ISO

● Application area

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

● Core parameters

Central Wavelength	Output Power
1680nm	10mW

● General Parameters

Technical Parameters

Electrical/Optical Characteristics (Tsub=25° C)

Parameter	Sym bol	Test Condition	Min.	Typi cal	Ma x.	Unit
Forward Voltage	VF	IF=30mA	-	1.2	1.6	V
Threshold Current	ITH	CW	-	15	20	mA
Fiber Output	fe	CW, IF=130mA	10	-		mW



Power						
Peak Wavelength	Ip	CW, fe=15mW	167 0	-	169 0	nm
Spectral Linewidth	Dn	CW, fe=15mW	-	2	-	MHz
Side Mode Suppression Ratio (SMSR)	SMS	CW, fe=15mW	35	-	-	dB
Monitor Current (PD)	IR(E)	CW, fe=15mW	0.1	-	-	mA
Dark Current (PD)	Ir(0)	CW, VDR=5V	-	-	100	nA
Tracking Error	ER	IR(E)=constant	-0.5	-	+0. 5	dB
Cooling Capacity	DTP E	fe=15mW, Tcase=7 0° C	45	-	-	deg.
Peltier Current	IPE	Tcase=-5 to 70° C	-	-	1	A
Peltier Voltage	VPE	Tcase=-5 to 70° C	-	-	2	V



Thermistor Resistance	R	Tsub=25° C	-	10	-	kΩ (original typo kW corrected)
Isolation	Is	Tsub=25° C	-	30	-	dB

Note: $DT = |T_{case} - T_{sub}|$

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