

# 8 Channel DFB Laser Source, Rackmount

The Optilab DFB-8R series 8-channel DFB Laser Source is designed for laboratory applications where multiple, precise, stable and cost effective Distributed Feedback (DFB) laser sources are needed.

DFB-8R-R 8 Channel DFB Laser Source, Rackmount



## Product Description

The Optilab DFB-8R series 8-channel DFB Laser Source is designed for laboratory applications where multiple, precise, stable and cost effective Distributed Feedback (DFB) laser sources are needed. Applications for the DFB-8R Source Bank include Dense Wavelength Division Multiplexing (DWDM), as well as component testing and qualification. With Optilab's comprehensive inventory of high quality DFB laser diodes, DFB-8R series can be ordered from a large variety of ITU wavelengths. With its simple and intuitive front panel interface, the user can control the DFB laser source output power level and fine tune the wavelength ( $\pm 0.01$  nm step) via precise temperature control of TEC.

## Features

- Up to 8 DFB lasers in one 2U model
- 10mW output power each channel, high output of 20mW optional
- Stability Wavelength to 0.002 nm
- Over 80 DWDM Wavelengths

Available

- PM output available
- Front panel monitoring and control: output power and DFB wavelength
- Three Year Limited Warranty

## Applications

- Laboratory Testing and Measurement
- DWDM Networks
- Seed Laser
- Fiber Optics Components
- Fiber Sensors

## PRODUCT SPECIFICATIONS

### Technical Specifications

Number of DFB	Up to 8 Channels standard
Standard Wavelength Range	C-Band Wavelengths, and others including CWDM and L-Band
Wavelength Accuracy for Customization	$\pm 10$ pm
Output Power	10 mW: 10 dBm typ., 20 mW: 13 dBm typ.
Output Power Stability	$\pm 0.02$ dB over 8 Hours
Wavelength Accuracy	$\pm 0.002$ nm over 8 Hours
Standard Laser Linewidth	2 MHz typ., 3 MHz max.
Narrow Laser Linewidth	< 1 MHz DFB Available
Side Mode Suppression Ratio	45 dB typ.
Optical Isolator	30 dB min.
Relative Intensity Noise	-145 dB/Hz max.
Polarization Extinction Ratio	20 dB typ. (with PM fiber Option)

### Adjustable Features and Output

Channel Output Control	On/Off for each laser
Power Output Level	Up to 6 dB Adjustment of Peak Power Output
Wavelength Tuning Resolution	0.01 nm each step
Wavelength Tuning Range	$\pm 1.0$ nm from the center of the wavelength

### Ordering Information

#### DFB-8R-xx-y-zzzz

x	Output Power Level (mW) 10, 20
y	Fiber Type S, SMF-28 Fiber; P, PM Fiber
z <sub>1</sub> , z <sub>2</sub> , z <sub>3</sub> , ...	Wavelength: C-Band



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Product specifications and description are subject to change without notice.  
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## Additional Information

All Optilab DFB-8R products are constructed with 100% Telcordia-qualified components to ensure 15+ years of continuous operating life, backed by a three year limited warranty on complete system functionality. Our customer service team provides technical support for any inquires for the operation of the DFB-8R Source Bank.

## Available DWDM Wavelengths for DFB-8R

100 GHz Grid		50 GHz Offset		100 GHz Grid		50 GHz Offset	
nm	THz	nm	THz	nm	THz	nm	THz
1528.77	196.10	1529.16	196.05	1546.12	193.90	1546.52	193.85
1529.55	196.00	1529.94	195.95	1546.92	193.80	1547.32	193.75
1530.33	195.90	1530.72	195.85	1547.72	193.70	1548.11	193.65
1531.12	195.80	1531.51	195.75	1548.51	193.60	1548.91	193.55
1531.90	195.70	1532.29	195.65	1549.32	193.50	1549.72	193.45
1532.68	195.60	1533.07	195.55	1550.12	193.40	1550.52	193.35
1533.47	195.50	1533.86	195.45	1550.92	193.30	1551.32	193.25
1534.25	195.40	1534.64	195.35	1551.72	193.20	1552.12	193.15
1535.04	195.30	1535.43	195.25	1552.52	193.10	1552.93	193.05
1535.82	195.20	1536.22	195.15	1553.33	193.00	1553.73	192.95
1536.61	195.10	1537.00	195.05	1554.13	192.90	1554.54	192.85
1537.40	195.00	1537.79	194.95	1554.94	192.80	1555.34	192.75
1538.19	194.90	1538.58	194.85	1555.75	192.70	1556.15	192.65
1538.98	194.80	1539.37	194.75	1556.55	192.60	1556.96	192.55
1539.77	194.70	1540.16	194.65	1557.36	192.50	1557.77	192.45
1540.56	194.60	1540.95	194.55	1558.17	192.40	1558.58	192.35
1541.35	194.50	1541.75	194.45	1558.98	192.30	1559.39	192.25
1542.14	194.40	1542.54	194.35	1559.79	192.20	1560.20	192.15
1542.94	194.30	1543.33	194.25	1560.61	192.10	1561.01	192.05
1543.73	194.20	1544.13	194.15	1561.42	192.00	1561.83	191.95
1544.53	194.10	1544.92	194.05	1562.23	191.90	1562.64	191.85
1545.32	194.00	1545.72	193.95	1563.05	191.80	1563.45	191.75

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### Mechanical Specifications

Temperature Range	10° C to +50° C (operating), -30° C to +85° C (storage)
Operating Humidity	0% to 85% Relative Humidity
Power Supply	80 – 240 V, 43 – 63 Hz AC or 40 - 58 V DC (Optional)
Power Consumption	80 W max.
Housing Dimensions	2U Rackmount: 19" x 16" x 3.5"
Control / Monitoring	Current, Output Power, Wavelength
Display	Current, Output Power, Wavelength
SM Optical Connectors	FC/APC, FC/UPC, SC/APC, SC/UPC
PM Optical Connectors	PM FC/APC, PM FC/UPC
Optical Fiber Type	SMF-28 (Standard), PANDA for PM Output
Housing	Solid Cast Aluminum