700 Series

761R-DFB
Single Channel DFB Laser Source Module

Features

- Calibrated DFB laser wavelength tuning
- ±0.80nm tuning range
- 50pm absolute accuracy
- Less than 0.01nm deviation over 12 hours
- Precise tuning resolution: Between 10 and 20pm over entire range
- Stable output power: ±0.01dB over one hour, ±0.03dB over 12 hours
- 0dBm ±0.5dB output power (typical)
- +10dBm versions with standard or polarization-maintaining launch fibers available
- Output power is adjustable from zero to 100%
- Internal modulation up to 1kHz
- Modules can be built to customer specifications and for specialized applications
- Sources can be operated independently via the GPIB/IEEE-488 compliant RIFOCS 700R system controller
- Space efficient—up to 11 laser source modules and one system controller can be installed in a 19-inch rack

Key Specifications

Center wavelength	
Nominal	See wavelength table on back
Range	±0.050nm
Spectral width, max.	< 50MHz at -3dB
Power stability[1]:	
1 hour (typical)	±0.01dB
12 hours	±0.03dB
Output power[2]:	
Minimum	-1dBm
Typical	0dBm ±0.5dB

[1] After 20 minute warm-up, from +20°C to +25°C at rated power output.
[2] +10dBm version optional.

Applications

DWDM Component Testing

RIFOCS 761R-DFB laser source modules offer the precision required for multi-wavelength fiber optic tests and measurements, and the flexibility to keep pace with rapidly evolving DWDM technologies.

The 761R-DFB laser source modules incorporate a sophisticated temperature control system which enables them to provide calibrated output with a ±0.80nm tuning range and ±50pm (picometer) absolute wavelength accuracy. This temperature control system also ensures wavelength stability of 0.01nm, and output power stability of ±0.03dB, over 12 hours of operation for accurate long-term tests.

The output power of the 761R-DFB laser source modules can be quickly adjusted from zero to 100% using the RIFOCS 700R controller. With resolution between 10 and 20pm over the entire tuning range, the output wavelength of the 761R-DFB laser source modules can be adjusted in as little as one second.

The 761R-DFB laser source modules can also be operated remotely, or automated using RIFOCS *fiber*WORKS™ application software, via a GPIB/IEEE-488 interface incorporated in the 700R controller.

The 761R-DFB laser source modules are available in a comprehensive range of wavelengths and ITU channels to handle demanding DWDM and multi-wavelength measurement tasks. RIFOCS can also build 761R-DFB laser source modules to a customer's wavelength and output power specifications, and for other specialized applications.

RIFOCS Corporation
Fiber Optic Instruments & Components

NIST, ISO, IEC, ANSI, NCSL, MIL-STD by www.raeservices.com

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Ordering Information

Standard center wavelengths and product codes for the 761R-DFB laser source modules are listed below. Please specify the desired center wavelength when ordering using the corresponding code. Customer-specified wavelengths are also available. Please contact RIFOCS Corp. for more information.

One Universal Connector Interface, 8° angle-polished connector (UCI-APC) adapter is included with the 761R-DFB laser source. Please specify the desired connector adapter type when ordering using the UCI-APC Adapter Table, below. Additional UCI-APC adapters may also be ordered separately.

Part No.	Description
761R-DFB/wavelength code	Laser source module

UCI-APC Adapter Table

Part No.	Description
AD-108	DIN-APC
AE2-10	E-2000
APC-108	FC-APC, wide key
APC-109	FC-APC, narrow key
ASC-108	SC-APC
ATS-108	ST-APC

Specifications

Subject to change without notice

Center wavelength	Customer specified—see table below
Spectral width (max.)	< 50MHz at -3dB
Side mode suppression	> 33dB
Stability[1], 1 hr. (typical)	±0.01dB
12 hrs.	±0.03dB
Power output into 9/125 SM fiber[2]:	
Minimum	-1dBm
Typical	0dBm ±0.5dB
Wavelength tuning range	1.6nm (±100GHz)
Wavelength stability, 12 hrs.	0.01nm
Functions	Modulated output mode, continuous wave output mode,selectable frequency, optional external modulation up to 10kHz, GPIB/IEEE-488 control
Internal modulation	Continuous wave to 1kHz
Optical connector interface	Universal Connector Interface, 8° angle-polished connector (UCI-APC)
Dimensions	12.9 x 3 x 26.2 cm (5 x 1.17 x 10.22 in), one slot in RIFOCS 700 Series rack

[1] After 20 minute warm-up, from +30°C to +25°C at rated power output.
[2] +10dBm versions with standard or polarization-maintaining launch fibers available.

Standard Center Wavelengths and Codes

Code	Wavelength	Code	Wavelength	Code	Wavelength	Code	Wavelength
100	1527.99nm	126	1538.19nm	152	1548.51nm	178	1558.98nm
102	1528.77nm	128	1538.98nm	154	1549.32nm	180	1559.79nm
104	1529.55nm	130	1539.77nm	156	1550.12nm	182	1560.61nm
106	1530.33nm	132	1540.56nm	158	1550.92nm	184	1561.42nm
108	1531.12nm	134	1541.35nm	160	1551.72nm	186	1562.23nm
110	1531.90nm	136	1542.14nm	162	1552.52nm	188	1563.05nm
112	1532.68nm	138	1542.94nm	164	1553.33nm		
114	1533.47nm	140	1543.73nm	166	1554.12nm		
116	1534.25nm	142	1544.53nm	168	1554.94nm		
118	1535.04nm	144	1545.32nm	170	1555.75nm		
120	1535.82nm	146	1546.12nm	172	1556.55nm		
122	1536.61nm	148	1546.92nm	174	1557.36nm		
124	1537.40nm	150	1547.72nm	176	1558.17nm		

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