OSICS DFB DWDM

DISTRIBUTED FEEDBACK LASER

SPEC SHEET

The OSICS DFB DWDM modules are based on high-performance distributed feedback laser diodes.

KEY FEATURES

- External and internal LF modulation
- 13 dBm optical power
- The internal wavelength calibration yields a ±30 pm accuracy
- Stimulated Brillouin scattering suppression
- Each module can be controlled from the front panel
- Wavelength grid matched to ITU-T 50 GHz channels with 1.8 nm typical tuning range

KEY FEATURES

External and internal LF modulation

13 dBm optical power coupled in a polarization maintaining fiber with a remarkable 5 pm wavelength stability over one hour

The internal wavelength calibration yields a ±30 pm accuracy and the wavelength can be finely tuned over 1.8 nm (typical) with the internal temperature control

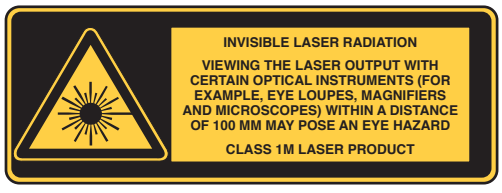
Stimulated Brillouin scattering suppression is available for minimizing signal degradation due to non linearity in long distance transmission experiments

Each module can be controlled from the front panel of the mainframe or through the remote interface. The modules and the mainframe offer a full suite of internal and external modulation capabilities.

SPECIFICATIONS

Models [a]	Channels		ITU-T 50 GHz grid
	First channel		186.000 THz / 1611.787 nm
	Last channel		196.000 THz / 1529.553 nm
Wavelength	Channel center		Grid matched
	Tuning range (nm) [b]		1.6 nm (1.8 nm typical)
	Accuracy (nm)		±0.03
	Stability over 1 hour (nm) [c, d, e]		±0.005
	Stability over 24 hours (nm) [c, d, e]		±0.005 (typical)
Power	Maximum (dBm)		13
	Stability over 1 hour (dB) [c, d, e]		±0.01
	Stability over 24 hours (dB) [c, d, e]		±0.01 (typical)
	Optical isolation (dB)		> 30
	RIN (dB/Hz) [f]		< –140
Spectrum	Laser line width (MHz)		< 10 MHz
	SMSR (dB) [c]		> 35 (45 typical)
Modulations	TTL (internal and external)		1 Hz to 890 kHz
	Analog (external/front panel)		150 Hz to 150 MHz
	SBS [g] suppression (internal)	Waveform Frequency range (kHz) Modulation depth (%)	Sine 10 to 100 0 to 15
Interfaces on module front panel [g]	Enable key with status LED		Power up laser
	Optical fiber		PM15
	Optical connector		FC/APC narrow key
	Fiber alignment to connector key		Slow axis
	Polarization extinction ratio (PER)		> 17 dB
	Electrical connector (analog modulation)		Coaxial SMB – 50 Ω
Others	Laser safety		Class 1 M
	Dimensions (W x H x D)		35 mm x 128 mm x 230 mm (1 3/8 in x 5 in x 9 in)
	Weight		1.1 kg (2.43 lb)

LASER SAFETY



a. See the table on following page for complete overview of selectable channels at order
b. Location of channel center: lower boundary of the range + 0.4 nm < channel center < upper boundary of the range - 0.4 nm.
c. After warm-up and at maximum power.
d. At a constant temperature.
e. Measured with an APC terminated jumper on a powermeter.
f. RIN within the range 100 MHz-20 GHz measured at 10 dBm output power with RBW = 30 kHz.
g. SBS = Stimulated brillouin scattering.
h. See OSICS mainframe specifications sheet for details on OSICS common specifications and interfaces on the rear panel.

SPECIFICATIONS

Frequency (THz)	Wavelength (nm)	Frequency (THz)	Wavelength (nm)	Frequency (THz)	Wavelength (nm)	Frequency (THz)	Wavelength (nm)	Frequency (THz)	Wavelength (nm)
186.00	1611.787	188.05	1594.217	190.10	1577.025	192.15	1560.200	194.20	1543.730
186.05	1611.354	188.10	1593.793	190.15	1576.610	192.20	1559.794	194.25	1543.333
186.10	1610.921	188.15	1593.369	190.20	1576.196	192.25	1559.389	194.30	1542.936
186.15	1610.489	188.20	1592.946	190.25	1575.782	192.30	1558.983	194.35	1542.539
186.20	1610.056	188.25	1592.523	190.30	1575.368	192.35	1558.578	194.40	1542.142
186.25	1609.624	188.30	1592.100	190.35	1574.954	192.40	1558.173	194.45	1541.746
186.30	1609.192	188.35	1591.678	190.40	1574.540	192.45	1557.768	194.50	1541.349
186.35	1608.760	188.40	1591.255	190.45	1574.127	192.50	1557.363	194.55	1540.953
186.40	1608.329	188.45	1590.833	190.50	1573.714	192.55	1556.959	194.60	1540.557
186.45	1607.897	188.50	1590.411	190.55	1573.301	192.60	1556.555	194.65	1540.162
186.50	1607.466	188.55	1589.989	190.60	1572.888	192.65	1556.151	194.70	1539.766
186.55	1607.035	188.60	1589.568	190.65	1572.476	192.70	1555.747	194.75	1539.371
186.60	1606.605	188.65	1589.146	190.70	1572.063	192.75	1555.343	194.80	1538.976
186.65	1606.174	188.70	1588.725	190.75	1571.651	192.80	1554.940	194.85	1538.581
186.70	1605.744	188.75	1588.304	190.80	1571.239	192.85	1554.537	194.90	1538.186
186.75	1605.314	188.80	1587.884	190.85	1570.828	192.90	1554.134	194.95	1537.792
186.80	1604.885	188.85	1587.463	190.90	1570.416	192.95	1553.731	195.00	1537.397
186.85	1604.455	188.90	1587.043	190.95	1570.005	193.00	1553.329	195.05	1537.003
186.90	1604.026	188.95	1586.623	191.00	1569.594	193.05	1552.926	195.10	1536.609
186.95	1603.597	189.00	1586.203	191.05	1569.183	193.10	1552.524	195.15	1536.216
187.00	1603.168	189.05	1585.784	191.10	1568.773	193.15	1552.122	195.20	1535.822
187.05	1602.740	189.10	1585.365	191.15	1568.362	193.20	1551.721	195.25	1535.429
187.10	1602.311	189.15	1584.946	191.20	1567.952	193.25	1551.319	195.30	1535.036
187.15	1601.883	189.20	1584.527	191.25	1567.542	193.30	1550.918	195.35	1534.643
187.20	1601.455	189.25	1584.108	191.30	1567.133	193.35	1550.517	195.40	1534.250
187.25	1601.028	189.30	1583.690	191.35	1566.723	193.40	1550.116	195.45	1533.858
187.30	1600.600	189.35	1583.271	191.40	1566.314	193.45	1549.715	195.50	1533.465
187.35	1600.173	189.40	1582.854	191.45	1565.905	193.50	1549.315	195.55	1533.073
187.40	1599.746	189.45	1582.436	191.50	1565.496	193.55	1548.915	195.60	1532.681
187.45	1599.320	189.50	1582.018	191.55	1565.087	193.60	1548.515	195.65	1532.290
187.50	1598.893	189.55	1581.601	191.60	1564.679	193.65	1548.115	195.70	1531.898
187.55	1598.467	189.60	1581.184	191.65	1564.271	193.70	1547.715	195.75	1531.507
187.60	1598.041	189.65	1580.767	191.70	1563.863	193.75	1547.316	195.80	1531.116
187.65	1597.615	189.70	1580.35	191.75	1563.455	193.80	1546.917	195.85	1530.725
187.70	1597.189	189.75	1579.934	191.80	1563.047	193.85	1546.518	195.90	1530.334
187.75	1596.764	189.80	1579.518	191.85	1562.640	193.90	1546.119	195.95	1529.944
187.80	1596.339	189.85	1579.102	191.90	1562.233	193.95	1545.720	196.00	1529.553
187.85	1595.914	189.90	1578.686	191.95	1561.826	194.00	1545.322		
187.90	1595.489	189.95	1578.270	192.00	1561.419	194.05	1544.924		
187.95	1595.065	190.00	1577.855	192.05	1561.013	194.10	1544.526		
188.00	1594.641	190.05	1577.440	192.10	1560.606	194.15	1544.128		

ORDERING INFORMATION

OS-DFB-D-XX-P-58

Channel number
F = 184,65 THz + 50 GHz x Channel number
027-227

Connector
58 = FC/APC

Fiber type
P = PM15 polarization maintaining fiber

Example: OS-DFB-D-125-P-58

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SPOSDFBD.2AN

Printed in Canada 19/08