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OUR PRODUCTS

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[7900B Mainframe](#) : 79800D/315 Series : [79710 Fiber Optic Switch](#)

79800D/315 Series WDM DFB Fiber Optic Source Modules

Model 79800D/315 Series WDM DFB Fiber Optic Source Modules are designed for the most demanding WDM system and component test applications. The 315X1 Series Source Modules supply a minimum of 10 dBm output power, while the 315X2 Source Modules supply a minimum of 13 dBm. The modules permit user-selected center wavelengths from 1528 nm to 1610 nm on ITU grid points or the user's custom specification.



This fourth-generation source module platform provides high power, excellent stability and reliability, coherence control, and accurate attenuation. In addition, an optional source shutter simplifies tasks such as channel equalization. When installed in the 7900B Fiber Optic System Mainframe, module control is facilitated via simple front panel menu entries or a full-featured GPIB remote interface. Mainframe trigger capabilities allow the user to synchronize output modulation of multiple modules.

79800D/315 Series Modules Specifications

Model Number	79000D/315C1	79800D/315L1	79800D/315C2	79800D/315L2
Wavelength	1528-1564 nm	1564-1610 nm	1528-1564 nm	1564-1610 nm
Output Power	> or = 10 dBm	> or = 10 dBm	> or = 13 dBm	> or = 13 dBm
Level at full power: ¹				
Stability ²				
15 minutes (spec):	< or =0.005 dB rms	< or =0.005 dB rms	< or =0.005 dB rms	< or =0.005 dB rms
Typical:	< or =0.002 dB rms	< or =0.002 dB rms	< or =0.002 dB rms	< or =0.002 dB rms
24 hours:	±0.03 dB	±0.03 dB	±0.03 dB	±0.03 dB
with Source Shutter	±0.07 dB	±0.07 dB	±0.07 dB	±0.07 dB
Attenuation				
Calibrated Range:	10 dB	10 dB	10 dB	10 dB
Full Range (typical):	15 dB	15 dB	15 dB	15 dB
Accuracy: ³	±0.1 dB	±0.1 dB	±0.1 dB	±0.1 dB
Wavelength				
Available Center Wavelength: ⁴	C-band	L-band	C-band	L-band
Accuracy: ²	±0.05 nm	±0.05 nm	±0.05 nm	±0.05 nm
Stability ^{2,5}				
15 minutes:	±0.003 nm	±0.003 nm	±0.003 nm	±0.003 nm
24 hours:	±0.005 nm	±0.005 nm	±0.005 nm	±0.005 nm
Tuning Range:	±0.85 nm	±0.85 nm	±0.85 nm	±0.85 nm
Spectral Width				
Coherence Control OFF:	<30 MHz	<30 MHz	<30 MHz	<30 MHz
Coherence Control ON:	1 GHz (typical) ⁶	1 GHz (typical) ⁶	1 GHz (typical) ⁶	1 GHz (typical) ⁶
Transition Time				
Off to On:	30 ms	30 ms	30 ms	30 ms

Click to Return to the Product's Family Comparison

Multi-Channel Sources Family
7900B
Multi-Channel Fiber Optic Test System

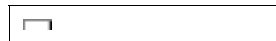
On to Off:	10 ms	10 ms	10 ms	10 ms
Repeatability:	±0.01 dB	±0.01 dB	±0.01 dB	±0.01 dB
Lifetime:	>10 million cycles	>10 million cycles	>10 million cycles	>10 million cycles
General				
SMSR: ⁸	>40 dB (>45 dB typical)	>40 dB (>45 dB typical)	>40 dB (>45 dB typical)	>40 dB (>45 dB typical)
Signal to Background: ⁹	>30 dB	>30 dB	>30 dB	>30 dB
Optical Isolation:	>30 dB	>30 dB	>30 dB	>30 dB
Relative intensity noise (RIN): ¹⁰	-145 dB/Hz	-145 dB/Hz	-145 dB/Hz	-145 dB/Hz
Modulation Frequency: ¹¹	1 to 500 kHz	1 to 500 kHz	1 to 500 kHz	1 to 500 kHz
Optical Connector: ¹²	FC/APC	FC/APC	FC/APC	FC/APC
Operating Temperature:	15°C to 35°C	15°C to 35°C	15°C to 35°C	15°C to 35°C

Ordering Information

FOM-7900B	Mainframe / Processor with 8 bay capacity (includes GPIB/IEEE 488.2 interface)
FOS-79800D/315C1	WDM DFB 10 mW Source Module (1527.98-1564.26 nm user specified wavelength)
FOS-79800D/315L1	WDM DFB 10 mW Source Module (1564.27 - 1610.06 nm user specified wavelength)
FOS-79800D/315C2	WDM DFB 20 mW Source Module (1527.98-1564.26 nm user specified wavelength)
FOS-79800D/315L2	WDM DFB 20 mW Source Module (1564.26 - 1610.06 nm user specified wavelength)
FOS-79800D/000	Customer Supplied Source Module
FOS-79710	Fiber Optic Switch Module
SS-810	Source Shutter Option (not compatible with PM alignment)
PM Alignment	Per Channel PM Alignment

Notes

- Other power levels available.
- After 1-hour warm-up. For short-term stability, assume constant ambient temperature ($\pm 0.1^\circ\text{C}$); for long-term stability, assume constant ambient temperature ($\pm 1^\circ\text{C}$).
- Defined as: $\text{DP}_{\text{meas}} - \text{DP}_{\text{set}}$, from maximum power to 5 dB down.
- "C-band" = 1527.99 - 1564.26 nm
"L-band" = 1564.27 - 1610.06 nm
- Measured at constant ambient temperature ($\pm 1^\circ\text{C}$) through 2-meter SM 9/125 fiber at full output power after 1-hour warm-up.
- Other linewidths available.
- Source shutter option not compatible with PM-aligned connectors.
- Measured at output connector, set to maximum power.
- ± 100 nm about center wavelength.
- Measured at output connector. Use angled connector patchcords to minimize noise.
- Modulation depth 100%, duty cycle 50%, rear panel TTL level input. Some rising edge ring above 100 kHz. See 7900B System Mainframe specifications for more information.
- Other connector types available. Some specifications may be degraded. Also available: PANDA PM fiber aligned to slow axis.



Last modified on Friday, 02-Feb-2001 09:17:20 PST