

WDM8-L-13B-20-NM - September 16, 2024

Item # WDM8-L-13B-20-NM was discontinued on September 16, 2024. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

PRO8 DWDM DFB LASER DIODE MODULES

- ▶ Complete Coverage of ITU Grid
- ▶ Wavelength Stability Better than 2 pm/24 h
- ▶ Output Power Stability Better than 0.01 dB/24 h



PRO8 DWDM Laser Modules



Easy to Read Display
No PC Required for Operation




PRO8000 Chassis
with 8 Modules



OVERVIEW

Features

- Center Wavelengths on 100 GHz ITU Grid
- Wavelengths in C and L Bands
- Output Power: 20 mW
- Wavelength Stability: < 2 pm / 24 hrs
- Extremely Stable Output Power < 0.01dB / 24 hrs
- Precise Wavelength Tuning: ± 0.85 nm
- Direct Display of Wavelength During Tuning
- Precise Power Attenuation: >6 dB (10 dB Typ.)
- Variable Coherence Control, Linewidths Adjustable up to 1 GHz
- Instrument Drivers for LabVIEW™ & LabWindows/CVI™
- FC/APC Connector

PRO8 Series Modules ^a	
Laser Diode Current Controllers (Up to 8 A)	
TEC Temperature Controllers (Up to 64 W)	
Combination Laser Diode Current (Up to 1 A) & TEC Temperature Controllers (Up to 16 W)	
DWDM DFB Laser Modules ^b	
Optical Switches	
Photocurrent Measurement Modules	

a. Our PRO8 Series Chassis can accommodate multiple PRO8 Series Modules, allowing for a customized telecom solution.

b. Please contact Tech Support for availability of desired wavelength.

These modules are distributed feedback (DFB) laser sources designed for use with our PRO8 Series Chassis. These sources have precise tunability as well as long-term wavelength and power stability. Provided with adjustable coherence control, these laser modules are ideally suited for all dense wavelength division multiplexing (DWDM) applications such as test systems for fiber optic DWDM components, EDFA manufacturing, and multi-laser optical sources for DWDM transmission experiments. The PRO8 Chassis can be ordered with these modules preinstalled; contact Tech Support prior to placing your order.

Stability, Accuracy, and Dependability

This DWDM laser platform is the ideal choice for demanding DWDM test and measurement applications with laser linewidths of less than 10 MHz, center wavelength stability of better than 0.002 nm per 24 hours, and wavelength accuracy of better than ± 0.025 nm. We use only telecom-rated, butterfly packaged DFB lasers with integrated TEC elements, optical isolators, and low back-reflection fiber pigtails. When combined with our sophisticated drive circuits, the result is an extremely stable, low-noise laser source that exhibits optical power stability better than 0.005 dB per 15 minutes and a relative intensity noise RIN figure of typ. -145 dB/Hz. All Thorlabs' instruments are backed by an extensive two-year warranty on materials and workmanship.

Extensive Inventories

Thorlabs' DWDM sources cover the ITU-T DWDM grid containing 100 wavelengths (100 GHz channels) spanning the C and L Bands. Many of these lasers ship directly from stock. Wavelengths on the 50 GHz and 25GHz grid are available on request. Thorlabs also offers the service of incorporating user-supplied lasers into our modules. Please contact Thorlabs for details. Our laser sources are supplied with PM fiber and a non-orientated FC/APC connector. For details on customized options, please contact Thorlabs.

Coherence Control, Internal Modulation

For high-precision power measurements, the narrow linewidth of a DFB laser can lead to interference effects caused by reflections from the multiple surfaces that are present in most optical systems. These multiple reflections, while extremely small, can accumulate due to the long coherence length of the laser light. Brillouin scattering is another effect that can lead to significant errors when making optical power measurements in fiber-based systems.

The magnitude of these effects can be significantly reduced by increasing the linewidths of the source. Therefore, all the DWDM-series laser sources provide an adjustable coherence length control. Here a small signal modulation on the laser current is used to broaden the DFB laser linewidth from a few MHz up to more than 1GHz. The PRO8 provides continuous adjustment of the linewidth over this entire range. An internal broadband noise source or an internal, freely running, sine wave/square wave generator is used to modulate the laser current. The modulation frequency range of the function generator is 20 Hz to 50 kHz with up to 100% modulation depths. Using these features, an ideal non-discrete Gaussian-shaped distribution or a discrete spectral distribution is generated.

External Digital Modulation, DC to 10 kHz

All laser modules within a chassis can be modulated synchronously by an external TTL signal. The modulation bandwidth ranges from DC to 10 kHz. The modulation signal input is on the back panel of the chassis and operates simultaneously on all laser modules of the chassis.

External Analog LF Modulation, DC to 50 kHz (Optional)

For applications where a precise LF modulation up to 50 kHz is required, the DWDM modules are available with an LF modulation option. With this option, the output power can be modulated via an optional SMA input. The laser remains fully protected due to a precise limit circuit located inside the module. To order the source with the external analog LF modulation option, please contact Tech Support.

Precision Wavelength Tuning

The wavelength is displayed with a resolution of 0.001 nm on the PRO8 front panel or can be read through the IEEE-488 interface with a resolution of 0.001 nm. By precisely controlling the temperature of the laser chip, the emitted wavelength can be tuned over a range of ± 0.85 nm (approximately ± 100 GHz). This range allows the central wavelength of the source to be shifted from one transmission channel to either of the adjacent channels for dense WDM systems with 100 GHz channel spacing or tuning over up to 8 channels for systems with 25 GHz channel spacing. This feature is useful for simulating crosstalk between channels. It can also be used to measure the profile of narrow band DWDM filters. Manual polarization controllers can be supplied as accessories for laser modules. They can be used to adapt the state of polarization in the fiber to polarization dependant external modulators.

For further information, please contact Tech Support.

SPECS

Technical Data PRO8 DWDM Laser Modules	
Wavelength	
Options	100 Wavelengths within 100 GHz ITU Grid in C and L-Band ^a
Tuning Range	±0.85 nm
Accuracy	±0.025 nm, Typ. <±0.01 nm
Stability (Typ.)	<0.002 nm over 24 hrs
Resolution	1 pm
Laser Linewidth	<10 MHz
Output Power	
Optical Power	20 mW
Accuracy (Abs. / Rel.)	0.6 dB / 0.4 dB
Stability (Coherence Control Active)	<0.002 dB over 15 s, <0.005 dB over 15 minutes, <0.01 dB over 24 hours
Attenuation Range	>6 dB; 10 dB Typ. (Continuously Variable)
Resolution	0.01 dB
Side Mode Suppression Ratio (SMSR)	>40 dB Typ. (>36 dB Min.) at Max. Power
Relative Intensity Noise (RIN)	-145 dB/Hz Typ.
Optical Isolation	>35 dB
Coherence Control (Standard Feature, All Models)	
Linewidth	Up to 1 GHz (Adjustable)
Shape	Noise, Sine & Square (Triangle Upon Request)
Bandwidth (Noise)	~ 0.2 to 5 kHz
Frequency (Sine, Square)	0.02 to up to 50 kHz
Modulation Depth (Noise)	0.1 to 10 %
Modulation Depth (Sine, Square)	0.1 to 100 %
Modulation	
ON/OFF Modulation	0.02 to up to 50 kHz
Synchronous TTL	0 to 10 kHz (All Lasers Within Mainframe Simultaneously via Common BNC Input)
Analog LF Modulation	DC to 50 kHz (Option, via SMA Input at the Module)
General Data	
Optical Output (Standard)	FC/APC ^b
Fiber	PMF ^c
Operating Temperature	0 to +35 °C (Non-Condensing)
Storing Temperature	-40 to +60 °C
Warm-Up Time for Rated Accuracy	15 min
Module Width	1 PRO8 Slot
Weight	<0.5 kg
Laser Safety Class	1M

- a. Subject to DFB laser diode availability, 25 GHz and 50 GHz grid on request
 - b. Other connector styles (SC, E2000...) and non-angled (PC) ferrule on request
 - c. Connector key aligned to slow axis upon request
- (All technical data is valid at 23 ± 5°C and 45 ±15% rel. humidity)

SHIPPING LIST

The following parts are included together with each of our PRO8 WDM Sources:

- WDM8000 Laser Source Module DWDM (WDM8-X-XXX-20-NM)
- Operating Manual

PRO8 DWDM DFB Laser Diode Modules

Part Number	Description	Price	Availability
WDM8-C-01A-20-NM	PRO8000 DWDM source, 191.00 THz/1569.59 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-01B-20-NM	PRO8000 DWDM source, 191.05 THz/1569.18 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-01C-20-NM	PRO8000 DWDM source, 191.025 THz/1569.39 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-01D-20-NM	PRO8000 DWDM source, 191.075 THz/1568.98 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-02A-20-NM	PRO8000 DWDM source, 191.10 THz/1568.77 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-02B-20-NM	PRO8000 DWDM source, 191.15 THz/1568.36 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-02C-20-NM	PRO8000 DWDM source, 191.125 THz/1568.57 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-02D-20-NM	PRO8000 DWDM source, 191.175 THz/1568.16 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-03A-20-NM	PRO8000 DWDM source, 191.20 THz/1567.95 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-03B-20-NM	PRO8000 DWDM source, 191.25 THz/1567.54 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-03C-20-NM	PRO8000 DWDM source, 191.225 THz/1567.75 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-03D-20-NM	PRO8000 DWDM source, 191.275 THz/1567.34 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-04A-20-NM	PRO8000 DWDM source, 191.30 THz/1567.13 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-04B-20-NM	PRO8000 DWDM source, 191.35 THz/1566.72 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-04C-20-NM	PRO8000 DWDM source, 191.325 THz/1566.93 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-04D-20-NM	PRO8000 DWDM source, 191.375 THz/1566.52 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-05A-20-NM	PRO8000 DWDM source, 191.40 THz/1566.31 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-05B-20-NM	PRO8000 DWDM source, 191.45 THz/1565.90 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-05C-20-NM	PRO8000 DWDM source, 191.425 THz/1566.11 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-05D-20-NM	PRO8000 DWDM source, 191.475 THz/1565.7 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-06A-20-NM	PRO8000 DWDM source, 191.50 THz/1565.50 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-06B-20-NM	PRO8000 DWDM source, 191.55 THz/1565.09 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-06C-20-NM	PRO8000 DWDM source, 191.525 THz/1565.29 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-06D-20-NM	PRO8000 DWDM source, 191.575 THz/1564.88 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-07A-20-NM	PRO8000 DWDM source, 191.60 THz/1564.68 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-07B-20-NM	PRO8000 DWDM source, 191.65 THz/1564.27 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-07C-20-NM	PRO8000 DWDM source, 191.625 THz/1564.47 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-07D-20-NM	PRO8000 DWDM source, 191.675 THz/1564.07 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-08A-20-NM	PRO8000 DWDM source, 191.70 THz/1563.86 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-08B-20-NM	PRO8000 DWDM source, 191.75 THz/1563.45 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-08C-20-NM	PRO8000 DWDM source, 191.725 THz/1563.66 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-08D-20-NM	PRO8000 DWDM source, 191.775 THz/1563.25 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-09A-20-NM	PRO8000 DWDM source, 191.80 THz/1563.05 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-09B-20-NM	PRO8000 DWDM source, 191.85 THz/1562.64 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-09C-20-NM	PRO8000 DWDM source, 191.825 THz/1562.84 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-09D-20-NM	PRO8000 DWDM source, 191.875 THz/1562.44 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-10A-20-NM	PRO8000 DWDM source, 191.90 THz/1562.23 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-10B-20-NM	PRO8000 DWDM source, 191.95 THz/1561.83 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-10C-20-NM	PRO8000 DWDM source, 191.925 THz/1562.03 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-10D-20-NM	PRO8000 DWDM source, 191.975 THz/1561.62 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-11A-20-NM	PRO8000 DWDM source, 192.00 THz/1561.42 nm, 20mW,	\$3,481.80	7-10 Days
WDM8-C-11B-20-NM	PRO8000 DWDM source, 192.05 THz/1561.01 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-11C-20-NM	PRO8000 DWDM source, 192.025 THz/1561.22 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-11D-20-NM	PRO8000 DWDM source, 192.075 THz/1560.81 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-12A-20-NM	PRO8000 DWDM source, 192.10 THz/1560.61 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-12B-20-NM	PRO8000 DWDM source, 192.15 THz/1560.20 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-12C-20-NM	PRO8000 DWDM source, 192.125 THz/1560.4 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-12D-20-NM	PRO8000 DWDM source, 192.175 THz/1560 nm, 20mW, FC	\$3,481.80	Lead Time

WDM8-C-13A-20-NM	PRO8000 DWDM source, 192.20 THz/1559.79 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-13B-20-NM	PRO8000 DWDM source, 192.25 THz/1559.39 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-13C-20-NM	PRO8000 DWDM source, 192.225 THz/1559.59 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-13D-20-NM	PRO8000 DWDM source, 192.275 THz/1559.19 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-14A-20-NM	PRO8000 DWDM source, 192.30 THz/1558.98 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-14B-20-NM	PRO8000 DWDM source, 192.35 THz/1558.58 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-14C-20-NM	PRO8000 DWDM source, 192.325 THz/1558.78 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-14D-20-NM	PRO8000 DWDM source, 192.375 THz/1558.38 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-15A-20-NM	PRO8000 DWDM source, 192.40 THz/1558.17 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-15B-20-NM	PRO8000 DWDM source, 192.45 THz/1557.77 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-15C-20-NM	PRO8000 DWDM source, 192.425 THz/1557.97 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-15D-20-NM	PRO8000 DWDM source, 192.475 THz/1557.57 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-16A-20-NM	PRO8000 DWDM source, 192.50 THz/1557.36 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-16B-20-NM	PRO8000 DWDM source, 192.55 THz/1556.96 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-16C-20-NM	PRO8000 DWDM source, 192.525 THz/1557.16 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-16D-20-NM	PRO8000 DWDM source, 192.575 THz/1556.76 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-17A-20-NM	PRO8000 DWDM source, 192.60 THz/1556.55 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-17B-20-NM	PRO8000 DWDM source, 192.65 THz/1556.15 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-17C-20-NM	PRO8000 DWDM source, 192.625 THz/1556.35 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-17D-20-NM	PRO8000 DWDM source, 192.675 THz/1555.95 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-18A-20-NM	PRO8000 DWDM source, 192.70 THz/1555.75 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-18B-20-NM	PRO8000 DWDM source, 192.75 THz/1555.34 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-18C-20-NM	PRO8000 DWDM source, 192.725 THz/1555.55 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-18D-20-NM	PRO8000 DWDM source, 192.775 THz/1555.14 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-19A-20-NM	PRO8000 DWDM source, 192.80 THz/1554.94 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-19B-20-NM	PRO8000 DWDM source, 192.85 THz/1554.54 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-19C-20-NM	PRO8000 DWDM source, 192.825 THz/1554.74 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-19D-20-NM	PRO8000 DWDM source, 192.875 THz/1554.34 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-20A-20-NM	PRO8000 DWDM source, 192.90 THz/1554.13 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-20B-20-NM	PRO8000 DWDM source, 192.95 THz/1553.73 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-20C-20-NM	PRO8000 DWDM source, 192.925 THz/1553.93 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-20D-20-NM	PRO8000 DWDM source, 192.975 THz/1553.53 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-21A-20-NM	PRO8000 DWDM source, 193.00 THz/1553.33 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-21B-20-NM	PRO8000 DWDM source, 193.05 THz/1552.93 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-21C-20-NM	PRO8000 DWDM source, 193.025 THz/1553.13 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-21D-20-NM	PRO8000 DWDM source, 193.075 THz/1552.73 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-22A-20-NM	PRO8000 DWDM source, 193.10 THz/1552.52 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-22B-20-NM	PRO8000 DWDM source, 193.15 THz/1552.12 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-22C-20-NM	PRO8000 DWDM source, 193.125 THz/1552.32 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-22D-20-NM	PRO8000 DWDM source, 193.175 THz/1551.92 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-23A-20-NM	PRO8000 DWDM source, 193.20 THz/1551.72 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-23B-20-NM	PRO8000 DWDM source, 193.25 THz/1551.32 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-23C-20-NM	PRO8000 DWDM source, 193.225 THz/1551.52 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-23D-20-NM	PRO8000 DWDM source, 193.275 THz/1551.12 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-24A-20-NM	PRO8000 DWDM source, 193.30 THz/1550.92 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-24B-20-NM	PRO8000 DWDM source, 193.35 THz/1550.52 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-24C-20-NM	PRO8000 DWDM source, 193.325 THz/1550.72 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-24D-20-NM	PRO8000 DWDM source, 193.375 THz/1550.32 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-25A-20-NM	PRO8000 DWDM source, 193.40 THz/1550.12 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-25B-20-NM	PRO8000 DWDM source, 193.45 THz/1549.72 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-25C-20-NM	PRO8000 DWDM source, 193.425 THz/1549.92 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-25D-20-NM	PRO8000 DWDM source, 193.475 THz/1549.52 nm, 20mW,	\$3,469.91	Lead Time

WDM8-C-26A-20-NM	PRO8000 DWDM source, 193.50 THz/1549.32 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-26B-20-NM	PRO8000 DWDM source, 193.55 THz/1548.91 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-26C-20-NM	PRO8000 DWDM source, 193.525 THz/1549.11 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-26D-20-NM	PRO8000 DWDM source, 193.575 THz/1548.71 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-27A-20-NM	PRO8000 DWDM source, 193.60 THz/1548.51 nm, 20mW,	\$3,481.80	7-10 Days
WDM8-C-27B-20-NM	PRO8000 DWDM source, 193.65 THz/1548.11 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-27C-20-NM	PRO8000 DWDM source, 193.625 THz/1548.31 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-27D-20-NM	PRO8000 DWDM source, 193.675 THz/1547.92 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-28A-20-NM	PRO8000 DWDM source, 193.70 THz/1547.72 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-28B-20-NM	PRO8000 DWDM source, 193.75 THz/1547.32 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-28C-20-NM	PRO8000 DWDM source, 193.725 THz/1547.52 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-28D-20-NM	PRO8000 DWDM source, 193.775 THz/1547.12 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-29A-20-NM	PRO8000 DWDM source, 193.80 THz/1546.92 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-29B-20-NM	PRO8000 DWDM source, 193.85 THz/1546.52 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-29C-20-NM	PRO8000 DWDM source, 193.825 THz/1546.72 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-29D-20-NM	PRO8000 DWDM source, 193.875 THz/1546.32 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-30A-20-NM	PRO8000 DWDM source, 193.90 THz/1546.12 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-30B-20-NM	PRO8000 DWDM source, 193.95 THz/1545.72 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-30C-20-NM	PRO8000 DWDM source, 193.925 THz/1545.92 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-30D-20-NM	PRO8000 DWDM source, 193.975 THz/1545.52 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-31A-20-NM	PRO8000 DWDM source, 194.00 THz/1545.32 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-31B-20-NM	PRO8000 DWDM source, 194.05 THz/1544.92 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-31C-20-NM	PRO8000 DWDM source, 194.025 THz/1545.12 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-31D-20-NM	PRO8000 DWDM source, 194.075 THz/1544.72 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-32A-20-NM	PRO8000 DWDM source, 194.10 THz/1544.53 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-32B-20-NM	PRO8000 DWDM source, 194.15 THz/1544.13 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-32C-20-NM	PRO8000 DWDM source, 194.125 THz/1544.33 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-32D-20-NM	PRO8000 DWDM source, 194.175 THz/1543.93 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-33A-20-NM	PRO8000 DWDM source, 194.20 THz/1543.73 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-33B-20-NM	PRO8000 DWDM source, 194.25 THz/1543.33 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-33C-20-NM	PRO8000 DWDM source, 194.225 THz/1543.53 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-33D-20-NM	PRO8000 DWDM source, 194.275 THz/1543.13 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-34A-20-NM	PRO8000 DWDM source, 194.30 THz/1542.94 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-34B-20-NM	PRO8000 DWDM source, 194.35 THz/1542.54 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-34C-20-NM	PRO8000 DWDM source, 194.325 THz/1542.74 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-34D-20-NM	PRO8000 DWDM source, 194.375 THz/1542.34 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-35A-20-NM	PRO8000 DWDM source, 194.40 THz/1542.14 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-35B-20-NM	PRO8000 DWDM source, 194.45 THz/1541.75 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-35C-20-NM	PRO8000 DWDM source, 194.425 THz/1541.94 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-35D-20-NM	PRO8000 DWDM source, 194.475 THz/1541.55 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-36A-20-NM	PRO8000 DWDM source, 194.50 THz/1541.35 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-36B-20-NM	PRO8000 DWDM source, 194.55 THz/1540.95 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-36C-20-NM	PRO8000 DWDM source, 194.525 THz/1541.15 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-36D-20-NM	PRO8000 DWDM source, 194.575 THz/1540.76 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-37A-20-NM	PRO8000 DWDM source, 194.60 THz/1540.56 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-37B-20-NM	PRO8000 DWDM source, 194.65 THz/1540.16 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-37C-20-NM	PRO8000 DWDM source, 194.625 THz/1540.36 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-37D-20-NM	PRO8000 DWDM source, 194.675 THz/1539.96 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-38A-20-NM	PRO8000 DWDM source, 194.70 THz/1539.77 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-38B-20-NM	PRO8000 DWDM source, 194.75 THz/1539.37 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-38C-20-NM	PRO8000 DWDM source, 194.725 THz/1539.57 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-38D-20-NM	PRO8000 DWDM source, 194.775 THz/1539.17 nm, 20mW,	\$3,469.91	Lead Time

WDM8-C-39A-20-NM	PRO8000 DWDM source, 194.80 THz/1538.98 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-39B-20-NM	PRO8000 DWDM source, 194.85 THz/1538.58 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-39C-20-NM	PRO8000 DWDM source, 194.825 THz/1538.78 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-39D-20-NM	PRO8000 DWDM source, 194.875 THz/1538.38 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-40A-20-NM	PRO8000 DWDM source, 194.90 THz/1538.19 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-40B-20-NM	PRO8000 DWDM source, 194.95 THz/1537.79 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-40C-20-NM	PRO8000 DWDM source, 194.925 THz/1537.99 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-40D-20-NM	PRO8000 DWDM source, 194.975 THz/1537.59 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-41A-20-NM	PRO8000 DWDM source, 195.00 THz/1537.40 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-41B-20-NM	PRO8000 DWDM source, 195.05 THz/1537.00 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-41C-20-NM	PRO8000 DWDM source, 195.025 THz/1537.2 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-41D-20-NM	PRO8000 DWDM source, 195.075 THz/1536.81 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-42A-20-NM	PRO8000 DWDM source, 195.10 THz/1536.61 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-42B-20-NM	PRO8000 DWDM source, 195.15 THz/1536.22 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-42C-20-NM	PRO8000 DWDM source, 195.125 THz/1536.41 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-42D-20-NM	PRO8000 DWDM source, 195.175 THz/1536.02 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-43A-20-NM	PRO8000 DWDM source, 195.20 THz/1535.82 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-43B-20-NM	PRO8000 DWDM source, 195.25 THz/1535.43 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-43C-20-NM	PRO8000 DWDM source, 195.225 THz/1535.63 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-43D-20-NM	PRO8000 DWDM source, 195.275 THz/1535.23 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-44A-20-NM	PRO8000 DWDM source, 195.30 THz/1535.04 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-44B-20-NM	PRO8000 DWDM source, 195.35 THz/1534.64 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-44C-20-NM	PRO8000 DWDM source, 195.325 THz/1534.84 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-44D-20-NM	PRO8000 DWDM source, 195.375 THz/1534.45 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-45A-20-NM	PRO8000 DWDM source, 195.40 THz/1534.25 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-45B-20-NM	PRO8000 DWDM source, 195.45 THz/1533.86 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-45C-20-NM	PRO8000 DWDM source, 195.425 THz/1534.05 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-45D-20-NM	PRO8000 DWDM source, 195.475 THz/1533.66 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-46A-20-NM	PRO8000 DWDM source, 195.50 THz/1533.47 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-46B-20-NM	PRO8000 DWDM source, 195.55 THz/1533.07 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-46C-20-NM	PRO8000 DWDM source, 195.525 THz/1533.27 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-46D-20-NM	PRO8000 DWDM source, 195.575 THz/1532.88 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-47A-20-NM	PRO8000 DWDM source, 195.60 THz/1532.68 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-47B-20-NM	PRO8000 DWDM source, 195.65 THz/1532.29 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-47C-20-NM	PRO8000 DWDM source, 195.625 THz/1532.49 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-47D-20-NM	PRO8000 DWDM source, 195.675 THz/1532.09 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-48A-20-NM	PRO8000 DWDM source, 195.70 THz/1531.90 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-48B-20-NM	PRO8000 DWDM source, 195.75 THz/1531.51 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-48C-20-NM	PRO8000 DWDM source, 195.725 THz/1531.7 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-48D-20-NM	PRO8000 DWDM source, 195.775 THz/1531.31 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-49A-20-NM	PRO8000 DWDM source, 195.80 THz/1531.12 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-49B-20-NM	PRO8000 DWDM source, 195.85 THz/1530.72 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-49C-20-NM	PRO8000 DWDM source, 195.825 THz/1530.92 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-49D-20-NM	PRO8000 DWDM source, 195.875 THz/1530.53 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-50A-20-NM	PRO8000 DWDM source, 195.90 THz/1530.33 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-50B-20-NM	PRO8000 DWDM source, 195.95 THz/1529.94 nm, 20mW,	\$3,481.80	Lead Time
WDM8-C-50C-20-NM	PRO8000 DWDM source, 195.925 THz/1530.14 nm, 20mW,	\$3,469.91	Lead Time
WDM8-C-50D-20-NM	PRO8000 DWDM source, 195.975 THz/1529.75 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-01A-20-NM	PRO8000 DWDM source, 186.00 THz/1611.79 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-01B-20-NM	PRO8000 DWDM source, 186.05 THz/1611.35 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-01C-20-NM	PRO8000 DWDM source, 186.025 THz/1611.57 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-01D-20-NM	PRO8000 DWDM source, 186.075 THz/1611.14 nm, 20mW,	\$3,469.91	Lead Time

WDM8-L-02A-20-NM	PRO8000 DWDM source, 186.10 THz/1610.92 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-02B-20-NM	PRO8000 DWDM source, 186.15 THz/1610.49 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-02C-20-NM	PRO8000 DWDM source, 186.125 THz/1610.7 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-02D-20-NM	PRO8000 DWDM source, 186.175 THz/1610.27 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-03A-20-NM	PRO8000 DWDM source, 186.20 THz/1610.06 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-03B-20-NM	PRO8000 DWDM source, 186.25 THz/1609.62 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-03C-20-NM	PRO8000 DWDM source, 186.225 THz/1609.84 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-03D-20-NM	PRO8000 DWDM source, 186.275 THz/1609.41 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-04A-20-NM	PRO8000 DWDM source, 186.30 THz/1609.19 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-04B-20-NM	PRO8000 DWDM source, 186.35 THz/1608.76 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-04C-20-NM	PRO8000 DWDM source, 186.325 THz/1608.98 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-04D-20-NM	PRO8000 DWDM source, 186.375 THz/1608.54 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-05A-20-NM	PRO8000 DWDM source, 186.40 THz/1608.33 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-05B-20-NM	PRO8000 DWDM source, 186.45 THz/1607.90 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-05C-20-NM	PRO8000 DWDM source, 186.425 THz/1608.11 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-05D-20-NM	PRO8000 DWDM source, 186.475 THz/1607.68 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-06A-20-NM	PRO8000 DWDM source, 186.50 THz/1607.47 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-06B-20-NM	PRO8000 DWDM source, 186.55 THz/1607.04 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-06C-20-NM	PRO8000 DWDM source, 186.525 THz/1607.25 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-06D-20-NM	PRO8000 DWDM source, 186.575 THz/1606.82 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-07A-20-NM	PRO8000 DWDM source, 186.60 THz/1606.60 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-07B-20-NM	PRO8000 DWDM source, 186.65 THz/1606.17 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-07C-20-NM	PRO8000 DWDM source, 186.625 THz/1606.39 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-07D-20-NM	PRO8000 DWDM source, 186.675 THz/1605.96 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-08A-20-NM	PRO8000 DWDM source, 186.70 THz/1605.74 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-08B-20-NM	PRO8000 DWDM source, 186.75 THz/1605.31 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-08C-20-NM	PRO8000 DWDM source, 186.725 THz/1605.53 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-08D-20-NM	PRO8000 DWDM source, 186.775 THz/1605.1 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-09A-20-NM	PRO8000 DWDM source, 186.80 THz/1604.88 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-09B-20-NM	PRO8000 DWDM source, 186.85 THz/1604.46 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-09C-20-NM	PRO8000 DWDM source, 186.825 THz/1604.67 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-09D-20-NM	PRO8000 DWDM source, 186.875 THz/1604.24 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-10A-20-NM	PRO8000 DWDM source, 186.90 THz/1604.03 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-10B-20-NM	PRO8000 DWDM source, 186.95 THz/1603.60 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-10C-20-NM	PRO8000 DWDM source, 186.925 THz/1603.81 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-10D-20-NM	PRO8000 DWDM source, 186.975 THz/1603.38 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-11A-20-NM	PRO8000 DWDM source, 187.00 THz/1603.17 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-11B-20-NM	PRO8000 DWDM source, 187.05 THz/1602.74 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-11C-20-NM	PRO8000 DWDM source, 187.025 THz/1602.95 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-11D-20-NM	PRO8000 DWDM source, 187.075 THz/1602.53 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-12A-20-NM	PRO8000 DWDM source, 187.10 THz/1602.31 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-12B-20-NM	PRO8000 DWDM source, 187.15 THz/1601.88 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-12C-20-NM	PRO8000 DWDM source, 187.125 THz/1602.1 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-12D-20-NM	PRO8000 DWDM source, 187.175 THz/1601.67 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-13A-20-NM	PRO8000 DWDM source, 187.20 THz/1601.46 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-13B-20-NM	PRO8000 DWDM source, 187.25 THz/1601.03 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-13C-20-NM	PRO8000 DWDM source, 187.225 THz/1601.24 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-13D-20-NM	PRO8000 DWDM source, 187.275 THz/1600.81 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-14A-20-NM	PRO8000 DWDM source, 187.30 THz/1600.60 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-14B-20-NM	PRO8000 DWDM source, 187.35 THz/1600.17 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-14C-20-NM	PRO8000 DWDM source, 187.325 THz/1600.39 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-14D-20-NM	PRO8000 DWDM source, 187.375 THz/1599.96 nm, 20mW,	\$3,469.91	Lead Time

WDM8-L-15A-20-NM	PRO8000 DWDM source, 187.40 THz/1599.75 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-15B-20-NM	PRO8000 DWDM source, 187.45 THz/1599.32 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-15C-20-NM	PRO8000 DWDM source, 187.425 THz/1599.53 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-15D-20-NM	PRO8000 DWDM source, 187.475 THz/1599.11 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-16A-20-NM	PRO8000 DWDM source, 187.50 THz/1598.89 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-16B-20-NM	PRO8000 DWDM source, 187.55 THz/1598.47 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-16C-20-NM	PRO8000 DWDM source, 187.525 THz/1598.68 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-16D-20-NM	PRO8000 DWDM source, 187.575 THz/1598.25 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-17A-20-NM	PRO8000 DWDM source, 187.60 THz/1598.04 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-17B-20-NM	PRO8000 DWDM source, 187.65 THz/1597.62 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-17C-20-NM	PRO8000 DWDM source, 187.625 THz/1597.83 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-17D-20-NM	PRO8000 DWDM source, 187.675 THz/1597.4 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-18A-20-NM	PRO8000 DWDM source, 187.70 THz/1597.19 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-18B-20-NM	PRO8000 DWDM source, 187.75 THz/1596.76 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-18C-20-NM	PRO8000 DWDM source, 187.725 THz/1596.98 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-18D-20-NM	PRO8000 DWDM source, 187.775 THz/1596.55 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-19A-20-NM	PRO8000 DWDM source, 187.80 THz/1596.34 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-19B-20-NM	PRO8000 DWDM source, 187.85 THz/1595.91 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-19C-20-NM	PRO8000 DWDM source, 187.825 THz/1596.13 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-19D-20-NM	PRO8000 DWDM source, 187.875 THz/1595.7 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-20A-20-NM	PRO8000 DWDM source, 187.90 THz/1595.49 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-20B-20-NM	PRO8000 DWDM source, 187.95 THz/1595.06 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-20C-20-NM	PRO8000 DWDM source, 187.925 THz/1595.28 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-20D-20-NM	PRO8000 DWDM source, 187.975 THz/1594.85 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-21A-20-NM	PRO8000 DWDM source, 188.00 THz/1594.64 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-21B-20-NM	PRO8000 DWDM source, 188.05 THz/1594.22 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-21C-20-NM	PRO8000 DWDM source, 188.025 THz/1594.43 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-21D-20-NM	PRO8000 DWDM source, 188.075 THz/1594 nm, 20mW, FC	\$3,469.91	Lead Time
WDM8-L-22A-20-NM	PRO8000 DWDM source, 188.10 THz/1593.79 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-22B-20-NM	PRO8000 DWDM source, 188.15 THz/1593.37 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-22C-20-NM	PRO8000 DWDM source, 188.125 THz/1593.58 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-22D-20-NM	PRO8000 DWDM source, 188.175 THz/1593.16 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-23A-20-NM	PRO8000 DWDM source, 188.20 THz/1592.95 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-23B-20-NM	PRO8000 DWDM source, 188.25 THz/1592.52 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-23C-20-NM	PRO8000 DWDM source, 188.225 THz/1592.73 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-23D-20-NM	PRO8000 DWDM source, 188.275 THz/1592.31 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-24A-20-NM	PRO8000 DWDM source, 188.30 THz/1592.10 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-24B-20-NM	PRO8000 DWDM source, 188.35 THz/1591.68 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-24C-20-NM	PRO8000 DWDM source, 188.325 THz/1591.89 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-24D-20-NM	PRO8000 DWDM source, 188.375 THz/1591.47 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-25A-20-NM	PRO8000 DWDM source, 188.40 THz/1591.26 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-25B-20-NM	PRO8000 DWDM source, 188.45 THz/1590.83 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-25C-20-NM	PRO8000 DWDM source, 188.425 THz/1591.04 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-25D-20-NM	PRO8000 DWDM source, 188.475 THz/1590.62 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-26A-20-NM	PRO8000 DWDM source, 188.50 THz/1590.41 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-26B-20-NM	PRO8000 DWDM source, 188.55 THz/1589.99 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-26C-20-NM	PRO8000 DWDM source, 188.525 THz/1590.2 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-26D-20-NM	PRO8000 DWDM source, 188.575 THz/1589.78 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-27A-20-NM	PRO8000 DWDM source, 188.60 THz/1589.57 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-27B-20-NM	PRO8000 DWDM source, 188.65 THz/1589.15 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-27C-20-NM	PRO8000 DWDM source, 188.625 THz/1589.36 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-27D-20-NM	PRO8000 DWDM source, 188.675 THz/1588.94 nm, 20mW,	\$3,469.91	Lead Time

WDM8-L-28A-20-NM	PRO8000 DWDM source, 188.70 THz/1588.73 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-28B-20-NM	PRO8000 DWDM source, 188.75 THz/1588.30 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-28C-20-NM	PRO8000 DWDM source, 188.725 THz/1588.51 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-28D-20-NM	PRO8000 DWDM source, 188.775 THz/1588.09 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-29A-20-NM	PRO8000 DWDM source, 188.80 THz/1587.88 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-29B-20-NM	PRO8000 DWDM source, 188.85 THz/1587.46 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-29C-20-NM	PRO8000 DWDM source, 188.825 THz/1587.67 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-29D-20-NM	PRO8000 DWDM source, 188.875 THz/1587.25 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-30A-20-NM	PRO8000 DWDM source, 188.90 THz/1587.04 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-30B-20-NM	PRO8000 DWDM source, 188.95 THz/1586.62 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-30C-20-NM	PRO8000 DWDM source, 188.925 THz/1586.83 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-30D-20-NM	PRO8000 DWDM source, 188.975 THz/1586.41 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-31A-20-NM	PRO8000 DWDM source, 189.00 THz/1586.20 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-31B-20-NM	PRO8000 DWDM source, 189.05 THz/1585.78 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-31C-20-NM	PRO8000 DWDM source, 189.025 THz/1585.99 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-31D-20-NM	PRO8000 DWDM source, 189.075 THz/1585.57 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-32A-20-NM	PRO8000 DWDM source, 189.10 THz/1585.36 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-32B-20-NM	PRO8000 DWDM source, 189.15 THz/1584.95 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-32C-20-NM	PRO8000 DWDM source, 189.125 THz/1585.16 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-32D-20-NM	PRO8000 DWDM source, 189.175 THz/1584.74 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-33A-20-NM	PRO8000 DWDM source, 189.20 THz/1584.53 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-33B-20-NM	PRO8000 DWDM source, 189.25 THz/1584.11 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-33C-20-NM	PRO8000 DWDM source, 189.225 THz/1584.32 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-33D-20-NM	PRO8000 DWDM source, 189.275 THz/1583.9 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-34A-20-NM	PRO8000 DWDM source, 189.30 THz/1583.69 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-34B-20-NM	PRO8000 DWDM source, 189.35 THz/1583.27 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-34C-20-NM	PRO8000 DWDM source, 189.325 THz/1583.48 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-34D-20-NM	PRO8000 DWDM source, 189.375 THz/1583.06 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-35A-20-NM	PRO8000 DWDM source, 189.40 THz/1582.85 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-35B-20-NM	PRO8000 DWDM source, 189.45 THz/1582.44 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-35C-20-NM	PRO8000 DWDM source, 189.425 THz/1582.64 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-35D-20-NM	PRO8000 DWDM source, 189.475 THz/1582.23 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-36A-20-NM	PRO8000 DWDM source, 189.50 THz/1582.02 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-36B-20-NM	PRO8000 DWDM source, 189.55 THz/1581.60 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-36C-20-NM	PRO8000 DWDM source, 189.525 THz/1581.81 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-36D-20-NM	PRO8000 DWDM source, 189.575 THz/1581.39 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-37A-20-NM	PRO8000 DWDM source, 189.60 THz/1581.18 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-37B-20-NM	PRO8000 DWDM source, 189.65 THz/1580.77 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-37C-20-NM	PRO8000 DWDM source, 189.625 THz/1580.98 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-37D-20-NM	PRO8000 DWDM source, 189.675 THz/1580.56 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-38A-20-NM	PRO8000 DWDM source, 189.70 THz/1580.35 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-38B-20-NM	PRO8000 DWDM source, 189.75 THz/1579.93 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-38C-20-NM	PRO8000 DWDM source, 189.725 THz/1580.14 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-38D-20-NM	PRO8000 DWDM source, 189.775 THz/1579.73 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-39A-20-NM	PRO8000 DWDM source, 189.80 THz/1579.52 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-39B-20-NM	PRO8000 DWDM source, 189.85 THz/1579.10 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-39C-20-NM	PRO8000 DWDM source, 189.825 THz/1579.31 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-39D-20-NM	PRO8000 DWDM source, 189.875 THz/1578.89 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-40A-20-NM	PRO8000 DWDM source, 189.90 THz/1578.69 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-40B-20-NM	PRO8000 DWDM source, 189.95 THz/1578.27 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-40C-20-NM	PRO8000 DWDM source, 189.925 THz/1578.48 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-40D-20-NM	PRO8000 DWDM source, 189.975 THz/1578.06 nm, 20mW,	\$3,469.91	Lead Time

WDM8-L-41A-20-NM	PRO8000 DWDM source, 190.00 THz/1577.86 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-41B-20-NM	PRO8000 DWDM source, 190.05 THz/1577.44 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-41C-20-NM	PRO8000 DWDM source, 190.025 THz/1577.65 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-41D-20-NM	PRO8000 DWDM source, 190.075 THz/1577.23 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-42A-20-NM	PRO8000 DWDM source, 190.10 THz/1577.03 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-42B-20-NM	PRO8000 DWDM source, 190.15 THz/1576.61 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-42C-20-NM	PRO8000 DWDM source, 190.125 THz/1576.82 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-42D-20-NM	PRO8000 DWDM source, 190.175 THz/1576.4 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-43A-20-NM	PRO8000 DWDM source, 190.20 THz/1576.20 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-43B-20-NM	PRO8000 DWDM source, 190.25 THz/1575.78 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-43C-20-NM	PRO8000 DWDM source, 190.225 THz/1575.99 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-43D-20-NM	PRO8000 DWDM source, 190.275 THz/1575.57 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-44A-20-NM	PRO8000 DWDM source, 190.30 THz/1575.37 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-44B-20-NM	PRO8000 DWDM source, 190.35 THz/1574.95 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-44C-20-NM	PRO8000 DWDM source, 190.325 THz/1575.16 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-44D-20-NM	PRO8000 DWDM source, 190.375 THz/1574.75 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-45A-20-NM	PRO8000 DWDM source, 190.40 THz/1574.54 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-45B-20-NM	PRO8000 DWDM source, 190.45 THz/1574.13 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-45C-20-NM	PRO8000 DWDM source, 190.425 THz/1574.33 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-45D-20-NM	PRO8000 DWDM source, 190.475 THz/1573.92 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-46A-20-NM	PRO8000 DWDM source, 190.50 THz/1573.71 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-46B-20-NM	PRO8000 DWDM source, 190.55 THz/1573.30 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-46C-20-NM	PRO8000 DWDM source, 190.525 THz/1573.51 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-46D-20-NM	PRO8000 DWDM source, 190.575 THz/1573.09 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-47A-20-NM	PRO8000 DWDM source, 190.60 THz/1572.89 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-47B-20-NM	PRO8000 DWDM source, 190.65 THz/1572.48 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-47C-20-NM	PRO8000 DWDM source, 190.625 THz/1572.68 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-47D-20-NM	PRO8000 DWDM source, 190.675 THz/1572.27 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-48A-20-NM	PRO8000 DWDM source, 190.70 THz/1572.06 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-48B-20-NM	PRO8000 DWDM source, 190.75 THz/1571.65 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-48C-20-NM	PRO8000 DWDM source, 190.725 THz/1571.86 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-48D-20-NM	PRO8000 DWDM source, 190.775 THz/1571.45 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-49A-20-NM	PRO8000 DWDM source, 190.80 THz/1571.24 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-49B-20-NM	PRO8000 DWDM source, 190.85 THz/1570.83 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-49C-20-NM	PRO8000 DWDM source, 190.825 THz/1571.03 nm, 20mW,	\$3,481.80	Lead Time
WDM8-L-49D-20-NM	PRO8000 DWDM source, 190.875 THz/1570.62 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-50A-20-NM	PRO8000 DWDM source, 190.90 THz/1570.42 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-50B-20-NM	PRO8000 DWDM source, 190.95 THz/1570.01 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-50C-20-NM	PRO8000 DWDM source, 190.925 THz/1570.21 nm, 20mW,	\$3,469.91	Lead Time
WDM8-L-50D-20-NM	PRO8000 DWDM source, 190.975 THz/1569.8 nm, 20mW,	\$3,469.91	Lead Time

Recalibration Service for WDM Modules for PRO8 Series Chassis

Thorlabs offers a calibration service for the WDM Series Laser Diode Modules for our PRO8 Series Chassis. To ensure accurate measurements, we recommend recalibrating the devices every 24 months.

Requesting a Calibration

Thorlabs provides two options for requesting a calibration:

1. Complete the Returns Material Authorization (RMA) form. When completing the RMA form, please enter your name, contact information, the Part #, and the Serial # of the item being returned for calibration; in the *Reason for Return* field, select "I would like an item to be calibrated." All other fields are optional. Once the form has been submitted, a member of our RMA team will reach out to provide an RMA Number, return instructions, and to verify billing and payment information.

[Submit Calibration Request](#)

2. Enter the Part # and Serial # of the item that requires recalibration below and then Add to Cart. A member of our RMA team will reach out to coordinate return of the item for calibration. Should you have other items in your cart, note that the calibration request will be split off from your order for RMA processing.

Please Note: To ensure your item being returned for calibration is routed appropriately once it arrives at our facility, please do not ship it prior to being provided an RMA Number and return instructions by a member of our team.

Part Number	Description	Price	Availability
CAL-WDM8	Recalibration Service for the WDM Series Modules for PRO8 Chassis	\$355.68	Lead Time