



INSIDE PLANT CWDM

PRODUCT OVERVIEW

Champion ONE offers CWDM passive filter modules and mounting chassis options to support a variety of connector types and form factors. Our components are designed to work within your existing infrastructure, yet ensure you have the flexibility to expand your network as needed.

Our inside plant product line features several form factors, including:

- Relay Rack (1RU, 19" or 23" chassis-mount)
- Rack mount (1,2, or 3RU 19" or 23" chassis)
- LGX modules (for 2RU, 4RU LGX-style cases, or shelf mounting if supported)
- High-density module (for use with our Dense Shelf)

In response to our service provider customers' need to save rack space, Champion ONE developed the highest density modular shelf. Our high-density shelf is designed to save space now but offers our customers the ability to grow and add services on all passive WDM deployments.

Features of our high-density modular shelf include:

- 1 RU (19" or 23" rack mountable) 'dense shelf' with a 8 module capacity
- Each module has a 24 connector capacity
- All front-panel accessible
- Available in CWDM filter modules and a variety of channel plans

Champion ONE offers the same filter module in a multitude of different packages, which enables smooth integration of our solutions into existing networks. Our optional configurations meet engineering requirements, such as mounting options, space and size constraints, connector type matching and uniformity of design. All Champion ONE CWDM filters provide very low insertion loss specification.

Features of our inside-plant, rack-mountable CWDM modules include:

- mux/demuxes, muxes, demuxes and OADMs
- modules are available in 1, 2, 4, 8, and 10 channel configurations
- modules are available in single-fiber or dual-fiber configurations
- Passband filters, monitor (tap) ports, and express/upgrade ports are optional features.
- Available with a variety of connector types (LC, SC, FC, etc.) as well as UPC or APC connectors
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The OADM modules are available in both unidirectional and east-west configurations to support ring topologies.

TECHNICAL SPECIFICATIONS

FEATURES

Mux/Demuxes, muxes, demuxes and OADMs
 Available in 1, 2, 4, 8, and 10, and 16 channel configurations*
 Available in single-fiber or dual-fiber configurations
 Pass band filters, monitor (tap) ports, and express/upgrade ports are optional features.
 Variety of connector types (LC, SC, FC, etc.)
 UPC or APC connectors
 OADM modules in both unidirectional and east-west configurations to support ring topologies

*16 channel configurations are recommended for short distances or campus environments using 10G.

FORM FACTORS

Relay Rack (1RU, 19" or 23" chassis-mount)
 Rack mount (1,2, or 3RU 19" or 23" chassis)
 LGX module
 High-density module

WARRANTY

All feature a limited 5-year warranty

Parameter (unit)	Single Ch. OADM (E/W w/ monitor)	4 ch. mux, demux, OR mux/demux pair (w/ or w/o express)	4 ch. mux, demux, OR mux/demux pair (w/ or w/o express and monitor)	Single fiber mux, demux, OR mux/demux pair (1470-1610nm)	6 ch. mux, demux, OR mux/demux pair 1470-1510nm 1550 pass-band 1590-1610nm	8 ch. mux, demux, OR mux/demux pair (w/ or w/o express)	8 ch. mux, demux, OR mux/demux pair (w/ or w/o monitor)	16 ch. mux, demux, OR mux/demux pair w/ monitor
Pass-band width (nm, min)	$\lambda_{ITU} \pm 6.0$	$\lambda_{ITU} \pm 6.5$ (min) $\lambda_{ITU} \pm 7.5$ (typ)	$\lambda_{ITU} \pm 6.0$	$\lambda_{ITU} \pm 7.0$	$\lambda_{ITU} \pm 6.5$	$\lambda_{ITU} \pm 6.5$ (min) $\lambda_{ITU} \pm 7.5$ (typ)	$\lambda_{ITU} \pm 6.0$	$\lambda_{ITU} \pm 7.0$
Add/Drop Channel Insertion Loss (dB, max)	1.5	1.0 (typ) 1.5 (max)	1.8	3.0	2.5	1.0 (typ) 1.5 (max)	2.2	2.9
Express Channel Insertion Loss (dB, max)	1.7	1.5	2.1	n/a	n/a	1.0	n/a	n/a
Adjacent Channel Isolation (dB)	n/a	30	30	30	30	30	30 (min) 40 (typ)	30
Non-Adjacent Channel Isolation (dB, min)	n/a	45	45	45	n/a	45 (min) 50 (typ)	45	45
Return Loss (dB, min)	45	48	45	45	45	45	45	45
Directivity (dB, min)	50	55	50	50	50	55	50	50
PDL (dB, max)	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2
PMD (ps, max)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

NOTES: (1) The above specifications are for TYPICAL CWDM configurations only. For other available filter configurations, consult the ordering guide below.
 (2) Contact your Champion ONE account manager for operating and storage temperature ranges for your order.

ORDERING INFORMATION

PART NUMBER SCHEME: **CWDM-FYYYO-BT**

F	Module Operation
A	Mux/Demux (Dual Fiber)
B	Multiplexer (mux)
C	Demultiplexer (demux)
D	Single Fiber Mux/Demux <i>Same optical configuration as demux, but labeled for SF usage</i>
E	OADM East-West (Add and Drop)
E1	OADM Single Direction
F	Double Mux <i>2 modules in one package</i>
F1	Double Demux <i>2 modules in one package</i>
G	Single Fiber OADM

Y	Filter Configuration and Description
Oxx	xx=43(1430nm) to 61(1610nm) 20nm spacing Single channel filter
F01	1470-1530nm 4 channel, 20nm spacing
F02	1550-1610nm 4 channel, 20nm spacing
F03	1470-1610nm 8 channel, 20nm spacing
F04	1490-1550nm 4 channel, 20nm spacing
F05	1470-1590nm 4 channel, 40nm spacing
F06	1490-1610nm 4 channel, 40nm spacing

Y	Filter Config./Desc. (continued)
F07	1470-1510, 1590-1610nm + 1550nm PB 5 channel + 1550nm pass band
F08	1430-1610nm 10 channel, 20nm spacing
F09	1510-1550nm 3 channel, 20nm spacing
F10	1470, 1480nm
F11	1510, 1530nm
F12	1430-1510, 1570-1610nm 8 channel, C-band open
F13	1430-1450nm
F14	1430-1510, 1570-1610nm, +1550nm PB 8 channel + 1550nm pass band
F16	1270-1310nm, 1430-1610nm 16 channels
F17	1550-1570nm
F18	1260-1620 w/ 2% MON
F20	1470-1510nm 3 channel, 20nm spacing
F27	1270-1310, 1430-1450nm (8 channels)
F28	1470-1490, 1590-1610, 1310PB, 1550PB
F30	1511, 1531, 1551, 1571nm
W01	1310nm, 1550nm
Other Channel Configurations Available. Contact your Champion ONE sales representative for assistance.	

O	Optional Port(s)
M	Monitor Port (2% Tap)
E	Express (or Expansion) Port Wide band port for cascading filters
C	Both Monitor and Express Ports
31	1310nm pass band Narrow filter for 1310nm service
MM	Dual Monitor Port Used in single fiber configurations
0	No optional ports

B	Packaging
R	Relay Rack 1/2 width appliance, or rack unit style
L	LGX module Varying widths depending on port count ²
D	Dense Shelf Module High Density Shelf - LC connectors only 12 connectors per singlewide module, 24 connectors per doublewide module

T	Connector Type
L	LC/UPC
LA	LC/APC
S	SC/UPC
SA	SC/APC
F	FC/UPC
FA	FC/APC
T	ST/UPC
TA	ST/APC

SERVICE AND SUPPORT

Running a network or selling network services and products can be a highly competitive endeavor. To help differentiate your business and enable you to provide more cost effective infrastructure, you require a partner that provides competitive pricing and vertical market expertise. At Champion ONE we understand your needs. We leverage our skills and relationships to:

- Provide network design services and help you explore alternative network designs you may not have considered
- Provide technical and sales support when you need it
- Accept orders for same day shipment up to 3:00 PM EST
- Offer some of the longest warranties in the industry
- Offer a 30-day return policy
- Build a long- term supplier partnership with you

You can rely on Champion ONE, not only for the highest levels of availability for the products you need, but the technical support, customer service and cost consideration you deserve. Our goal is your complete satisfaction.

THE CHAMPION ONE COMMITMENT



For over twenty years, we at Champion ONE have been delivering great value to our customers through high-quality products at competitive prices. As one of the leading OEMs of compatible optical transceivers and a major supplier of optical networking solutions, we take great pride in building long-term relationships as a trusted partner. In this spirit, everything we bring to market bears the Champion ONE Shield™, which strengthens this trust through five core promises: Performance, Availability, Compatibility, Protection, and Value.

GLOBAL HEADQUARTERS

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