

**PASSIVES DATA SHEET**


# 8 Channel Dual Fiber DWDM Mux/Demux + Express for 8 Skip 1 Channel Plan

Champion ONE's DWDM passive networking products for inside and outside plant applications provide a cost-effective, high-reliability solution to fiber capacity challenges.

## Technical Specifications

**WAVELENGTH INFORMATION**

Express port: 1470nm – 1620nm (excl. channel ports)  
 DWDM channel wavelengths: ITU ch. 16–23, 25–32, 34–41, 43–50,  
 or 52–59; 100GHz spacing  
 Passband width: ITU ± 0.11nm

**FORM FACTOR AND CONNECTOR TYPES**

Single-wide LGX  
 LC/UPC connector (all ports)

**DIMENSIONS (LXWXH)**

Body: 100 x 100 x 28.5 mm  
 Faceplate: 130 x 28.5mm

**TEMPERATURE RANGE**

-40° C to 85° C

**WARRANTY**

All feature a limited 5-year warranty

**COMPLIANCES**

RoHS compliant  
 Telcordia GR-1209, GR-1221

| Parameter   | Value         |
|---|---------------|
| DWDM Channel Insertion Loss (dB)                          | ≤ 2.8         |
| Express Port Insertion Loss (dB)                          | ≤ 2.5         |
| MON Port Insertion Loss (mux/demux, dB)                   | ≤ 21.8 / 19.0 |
| Passband Ripple (dB)                                      | ≤ 0.5         |
| Adjacent Channel Isolation between DWDM Channels (dB)     | ≥ 30          |
| Non-Adjacent Channel Isolation Between DWDM Channels (dB) | ≥ 40          |

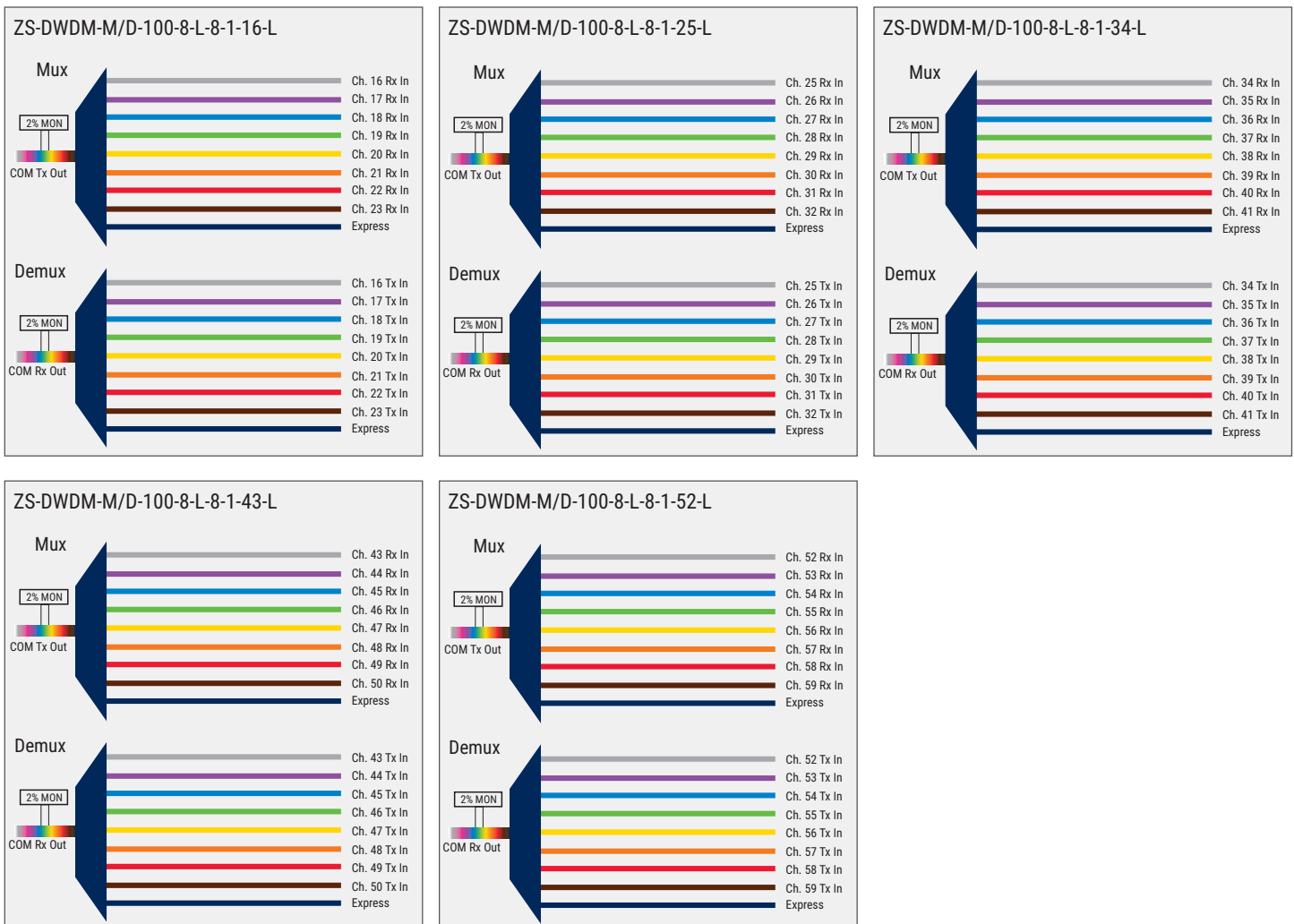
| Parameter                         | Value           |
|-----------------------------------|-----------------|
| Express Port Isolation (dB)       | ≥ 12            |
| Polarization Dependent Loss (dB)  | ≤ 0.2           |
| Directivity (dB)                  | ≥ 50            |
| Return Loss (dB)                  | ≥ 45            |
| Polarization Mode Dispersion (ps) | ≤ 0.2           |
| Fiber Type                        | SMF-28e+ 900 μm |
| Max Power Handling (mW)           | 300             |

## Ordering Information

| C1 Part Number               | Description  |
|------------------------------|--|
| ZS-DWDM-M/D-100-8-L-8-1-16-L | DWDM 100GHz spacing, Mux/Demux Pair (Dual Fiber), TFF Thin Film Filter (I-Temp), 8 Channel, L (LC/UPC), Channel 16 Start, Single module, LGX, Skip 0, Standard EXP, MON 2% M/D |
| ZS-DWDM-M/D-100-8-L-8-1-25-L | DWDM 100GHz spacing, Mux/Demux Pair (Dual Fiber), TFF Thin Film Filter (I-Temp), 8 Channel, L (LC/UPC), Channel 25 Start, Single module, LGX, Skip 0, Standard EXP, MON 2% M/D |
| ZS-DWDM-M/D-100-8-L-8-1-34-L | DWDM 100GHz spacing, Mux/Demux Pair (Dual Fiber), TFF Thin Film Filter (I-Temp), 8 Channel, L (LC/UPC), Channel 34 Start, Single module, LGX, Skip 0, Standard EXP, MON 2% M/D |
| ZS-DWDM-M/D-100-8-L-8-1-43-L | DWDM 100GHz spacing, Mux/Demux Pair (Dual Fiber), TFF Thin Film Filter (I-Temp), 8 Channel, L (LC/UPC), Channel 43 Start, Single module, LGX, Skip 0, Standard EXP, MON 2% M/D |
| ZS-DWDM-M/D-100-8-L-8-1-52-L | DWDM 100GHz spacing, Mux/Demux Pair (Dual Fiber), TFF Thin Film Filter (I-Temp), 8 Channel, L (LC/UPC), Channel 52 Start, Single module, LGX, Skip 0, Standard EXP, MON 2% M/D |

**NOTE:** Check transceiver channel availability before ordering. Tunables are preferred, but not required for all products.

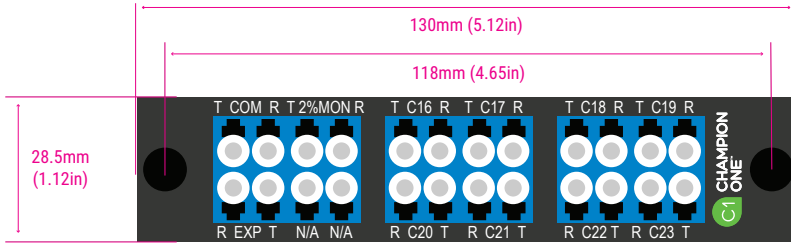
## Network Diagram



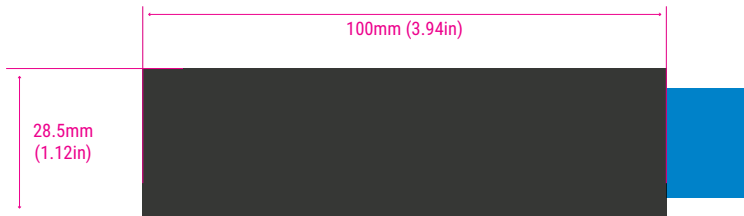


## Physical Diagrams and Extended Loss Specifications

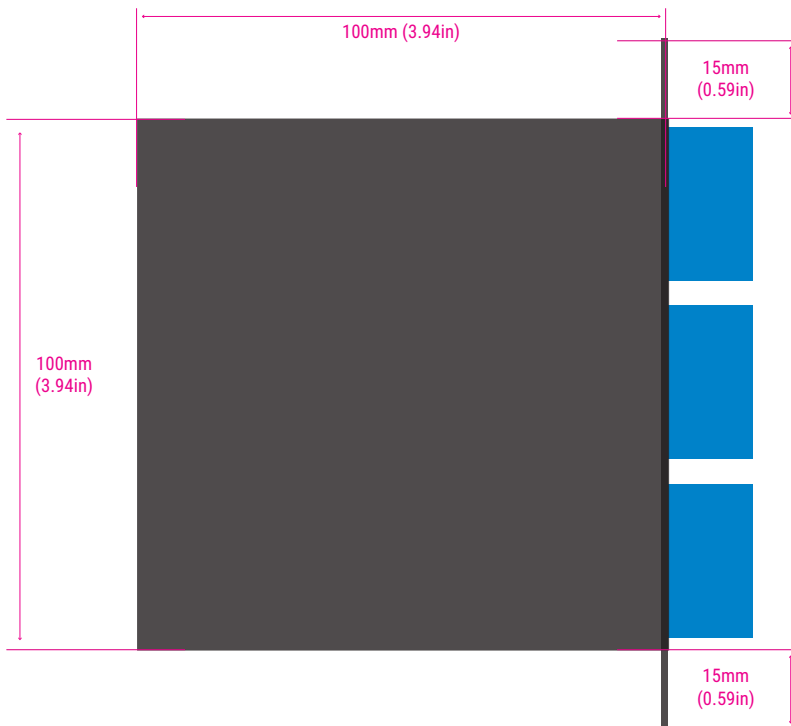
ZS-DWDM-M/D-100-8-L-8-1-16-L



Front View



Side View

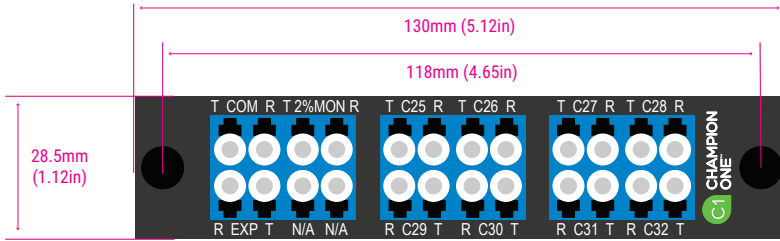


Top View

| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| 2%MON      | 21.6        | 19.0        | 21.8        | 19.0        |
| ITU ch. 16 | 1.1         | 2.6         | 1.2         | 2.8         |
| ITU ch. 17 | 1.3         | 2.4         | 1.5         | 2.6         |
| ITU ch. 18 | 1.6         | 2.2         | 1.8         | 2.4         |
| ITU ch. 19 | 1.8         | 2.0         | 2.0         | 2.2         |

| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| ITU ch. 20 | 2.0         | 1.8         | 2.2         | 2.0         |
| ITU ch. 21 | 2.2         | 1.6         | 2.4         | 1.8         |
| ITU ch. 22 | 2.4         | 1.3         | 2.6         | 1.5         |
| ITU ch. 23 | 2.6         | 1.1         | 2.8         | 1.2         |
| EXP        | 2.3         |             | 2.5         |             |

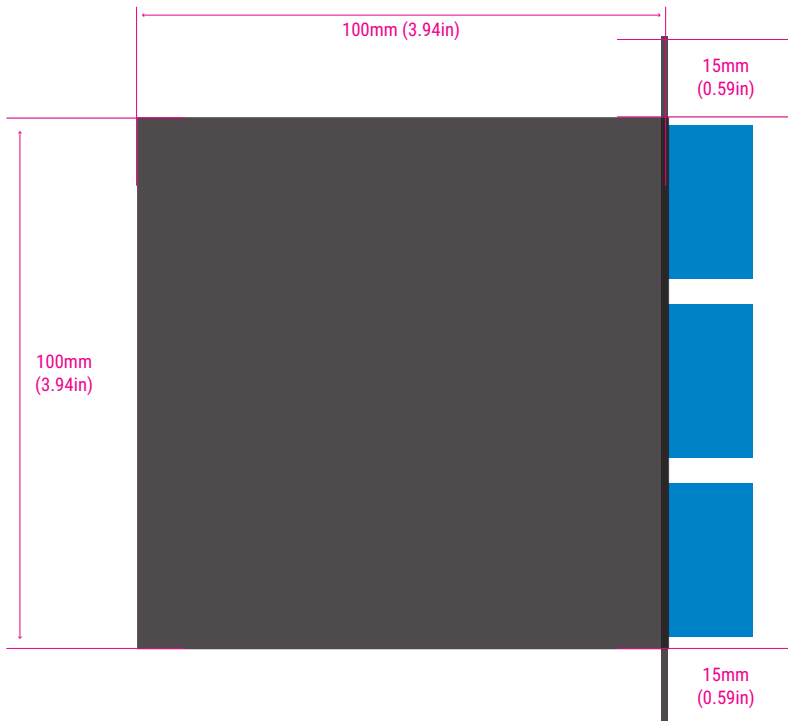
ZS-DWDM-M/D-100-8-L-8-1-25-L



Front View



Side View

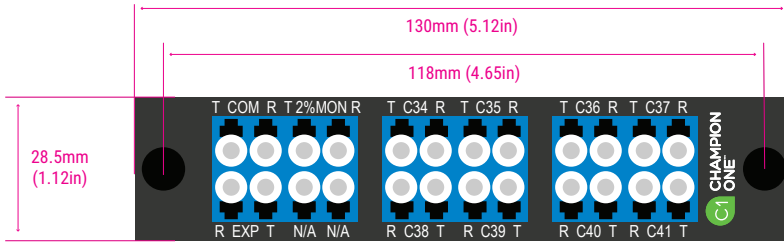


Top View

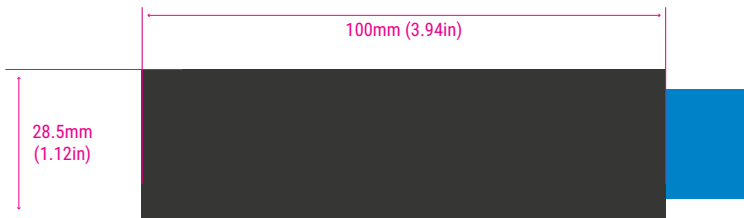
| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| 2%MON      | 21.6        | 19.0        | 21.8        | 19.0        |
| ITU ch. 25 | 1.1         | 2.6         | 1.2         | 2.8         |
| ITU ch. 26 | 1.3         | 2.4         | 1.5         | 2.6         |
| ITU ch. 27 | 1.6         | 2.2         | 1.8         | 2.4         |
| ITU ch. 28 | 1.8         | 2.0         | 2.0         | 2.2         |

| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| ITU ch. 29 | 2.0         | 1.8         | 2.2         | 2.0         |
| ITU ch. 30 | 2.2         | 1.6         | 2.4         | 1.8         |
| ITU ch. 31 | 2.4         | 1.3         | 2.6         | 1.5         |
| ITU ch. 32 | 2.6         | 1.1         | 2.8         | 1.2         |
| EXP        | 2.3         |             | 2.5         |             |

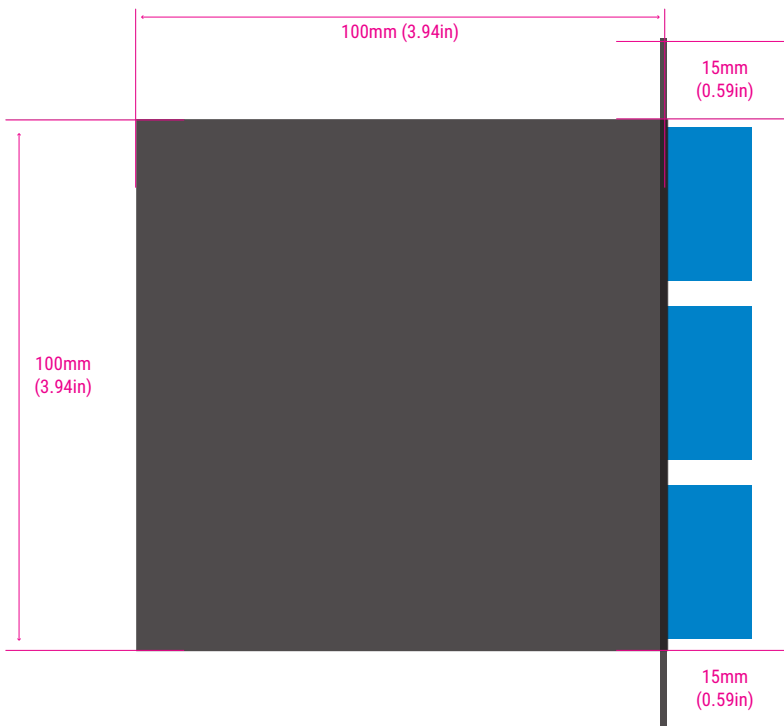
ZS-DWDM-M/D-100-8-L-8-1-34-L



Front View



Side View

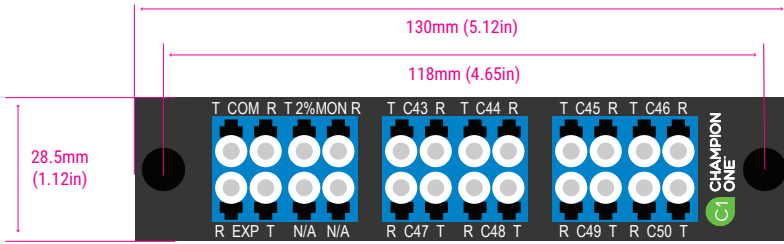


Top View

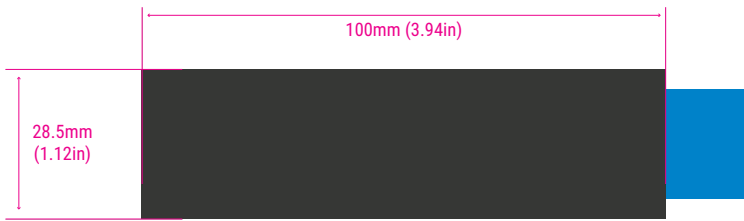
| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| 2%MON      | 21.6        | 19.0        | 21.8        | 19.0        |
| ITU ch. 34 | 1.1         | 2.6         | 1.2         | 2.8         |
| ITU ch. 35 | 1.3         | 2.4         | 1.5         | 2.6         |
| ITU ch. 36 | 1.6         | 2.2         | 1.8         | 2.4         |
| ITU ch. 37 | 1.8         | 2.0         | 2.0         | 2.2         |

| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| ITU ch. 38 | 2.0         | 1.8         | 2.2         | 2.0         |
| ITU ch. 39 | 2.2         | 1.6         | 2.4         | 1.8         |
| ITU ch. 40 | 2.4         | 1.3         | 2.6         | 1.5         |
| ITU ch. 41 | 2.6         | 1.1         | 2.8         | 1.2         |
| EXP        | 2.3         |             | 2.5         |             |

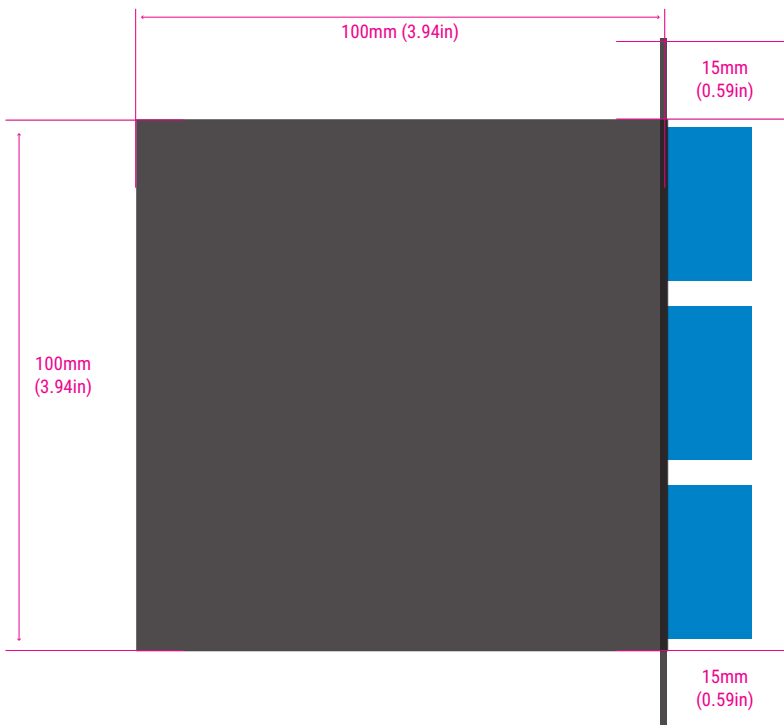
ZS-DWDM-M/D-100-8-L-8-1-43-L



Front View



Side View

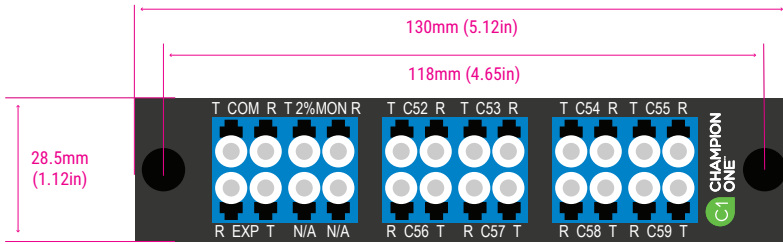


Top View

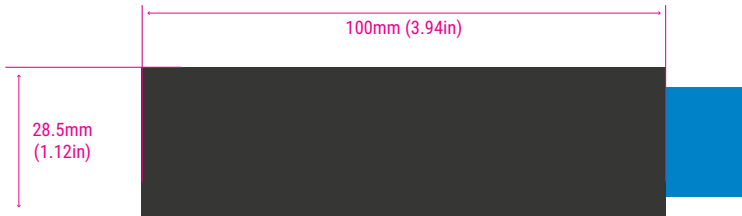
| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| 2%MON      | 21.6        | 19.0        | 21.8        | 19.0        |
| ITU ch. 43 | 1.1         | 2.6         | 1.2         | 2.8         |
| ITU ch. 44 | 1.3         | 2.4         | 1.5         | 2.6         |
| ITU ch. 45 | 1.6         | 2.2         | 1.8         | 2.4         |
| ITU ch. 46 | 1.8         | 2.0         | 2.0         | 2.2         |

| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| ITU ch. 47 | 2.0         | 1.8         | 2.2         | 2.0         |
| ITU ch. 48 | 2.2         | 1.6         | 2.4         | 1.8         |
| ITU ch. 49 | 2.4         | 1.3         | 2.6         | 1.5         |
| ITU ch. 50 | 2.6         | 1.1         | 2.8         | 1.2         |
| EXP        | 2.3         |             | 2.5         |             |

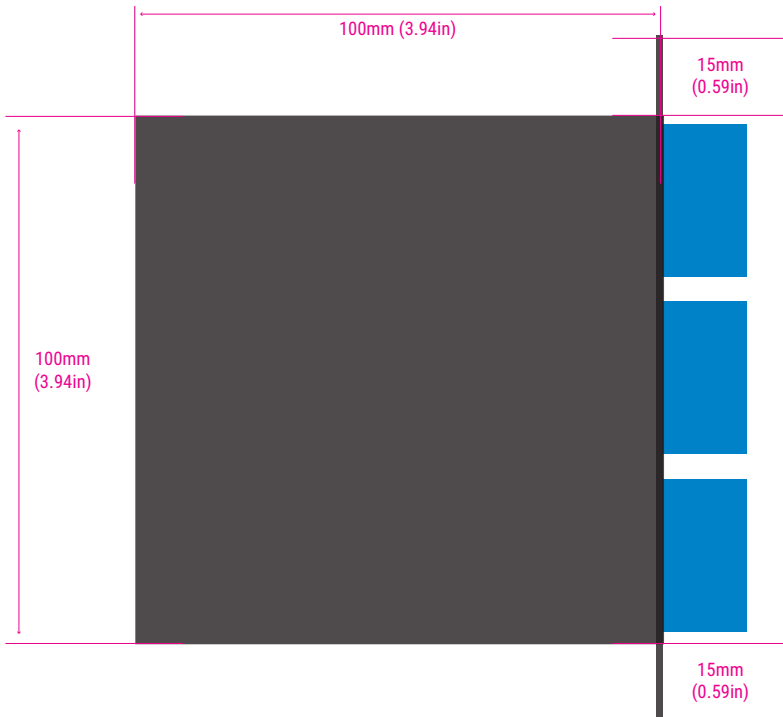
ZS-DWDM-M/D-100-8-L-8-1-52-L



Front View



Side View



Top View

| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| 2%MON      | 21.6        | 19.0        | 21.8        | 19.0        |
| ITU ch. 52 | 1.1         | 2.6         | 1.2         | 2.8         |
| ITU ch. 53 | 1.3         | 2.4         | 1.5         | 2.6         |
| ITU ch. 54 | 1.6         | 2.2         | 1.8         | 2.4         |
| ITU ch. 55 | 1.8         | 2.0         | 2.0         | 2.2         |

| Channel    | Typical     |             | Max         |             |
|------------|-------------|-------------|-------------|-------------|
|            | Mux IL (dB) | Dmx IL (dB) | Mux IL (dB) | Dmx IL (dB) |
| ITU ch. 56 | 2.0         | 1.8         | 2.2         | 2.0         |
| ITU ch. 57 | 2.2         | 1.6         | 2.4         | 1.8         |
| ITU ch. 58 | 2.4         | 1.3         | 2.6         | 1.5         |
| ITU ch. 59 | 2.6         | 1.1         | 2.8         | 1.2         |
| EXP        | 2.3         |             | 2.5         |             |

6.15.2021 - REV 3.4