

# SWDM / CWDM 850-1610nm

850-1610 nm, ITU Wavelength, SM, MM, PM



## DATASHEET

[Return to the Webpage](#)



## Features

- 100/200GHz ITU Channel Spacing
- Low Insertion Loss
- Wide Pass Band
- High Channel Isolation
- High Stability and Reliability
- Epoxy Free Optical Path

## Applications

- Channel Add / Drop
- WDM Network
- Wavelength Routing
- Fiber Optical Amplifier
- CATV Fiberoptic System

The Coarse Wavelength Division Multiplexer (CWDM) employs thin-film coating technology and a proprietary non-flux metal-bonded micro-optics packaging design to enable optical add/drop functionality across ITU channel wavelengths from 850 to 1610 nm. It delivers low insertion loss and wide passbands at each ITU center wavelength, along with high channel isolation. The device features low temperature sensitivity and an epoxy-free optical path, ensuring high reliability and performance for polarization-maintaining systems.

## Specifications

| Parameter                        | Min         | Typical | Max  | Unit |
|----------------------------------|-------------|---------|------|------|
| Channel Number                   |             | 1       |      |      |
| Center Wavelength                | 850         |         | 1619 | nm   |
| CWDM Channel Passband            |             | -6.5    |      | nm   |
| Insertion Loss <sup>[1]</sup>    |             | 2       | 2.4  | dB   |
| Isolation (Adjacent Channel)     |             |         | 30   | dB   |
| Isolation (Non-Adjacent Channel) |             |         | 40   | dB   |
| Passband Ripple                  |             |         | 0.3  | dB   |
| Polarization Dependent Loss      |             |         | 0.1  | dB   |
| Polarization Mode Dispersion     |             |         | 0.1  | ps   |
| Maximum Optical Power            |             |         | 500  | mW   |
| Directivity                      |             |         | 50   | dB   |
| Operating Temperature            | -5          |         | 75   | °C   |
| Storage Temperature              | -40         |         | 85   | °C   |
| Package Dimension                | 90 x 76 x 8 |         |      | mm   |

### Notes:

[1]. Excluding connectors

**Note:** The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

**Legal notices:** All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 09/27/25

© Photonwares Corporation

P +1 781-935-1200

E [sales@photonwares.com](mailto:sales@photonwares.com)

W [www.agiltron.com](http://www.agiltron.com)

Information contained herein is deemed to be reliable and accurate as of the issue date. Photonwares reserves the right to change the design or specifications at any time without notice. Agiltron is a registered trademark of Photonwares Corporation in the U.S. and other countries.

# SWDM / CWDM 850-1610nm

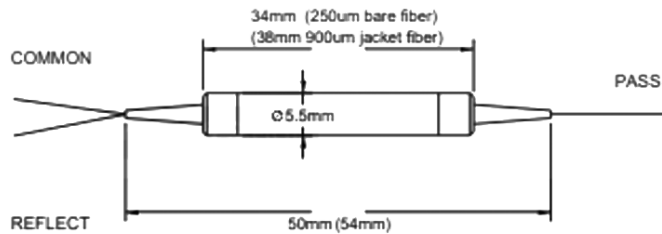
850-1610 nm, ITU Wavelength, SM, MM, PM



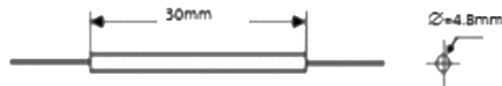
## DATASHEET

### Mechanical Dimensions (mm)

A package:



M package:



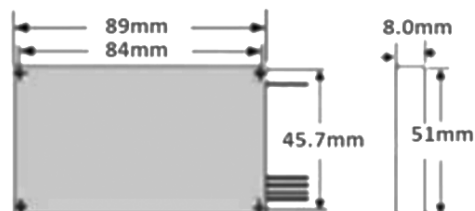
N package:



C package:



S package:



\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

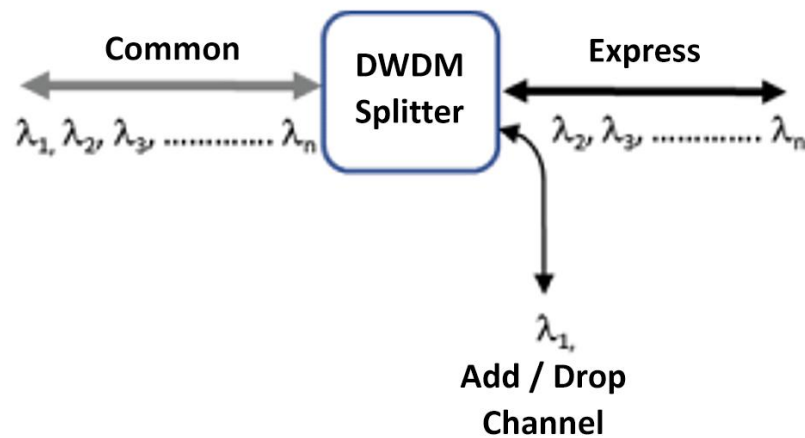
# SWDM / CWDM 850-1610nm



850-1610 nm, ITU Wavelength, SM, MM, PM

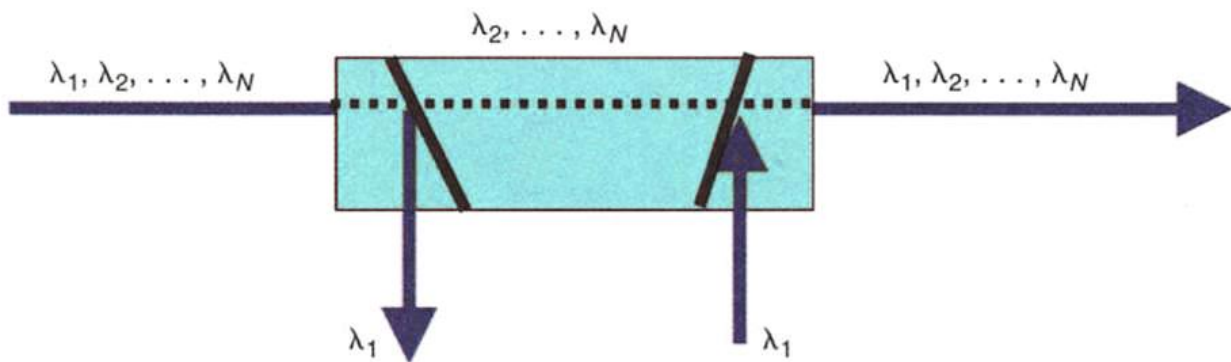
## DATASHEET

### Channel Configurations



### Optical Function Path Illustration

Wavelength multiplexing and Demultiplexing can be illustrated below in a single-channel optical add-drop case.



# SWDM / CWDM 850-1610nm



850-1610 nm, ITU Wavelength, SM, MM, PM

## DATASHEET

### Ordering Information (Part Number)

|        | <div><div></div><div></div></div>                                     | 1       | A                                                                                 | <div></div>                                                                | <div></div>                                                                               | <div></div>          | <div></div>                                                                                          | <div></div>                                                                                          |
|--------|-----------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Prefix | ITU Wavelength *                                                      | Channel | Package                                                                           | Fiber Type                                                                 | Fiber Cover                                                                               | Fiber Length         | Common Connector <sup>[1][3]</sup>                                                                   | Pass/Reflect Connector <sup>[1][3]</sup>                                                             |
| CWDM-  | 1270 nm = 27<br>1290 nm = 29<br>1310 nm = 31<br>1330 nm = 33<br>..... | 1 = 1   | A Package = A<br>M Package = M<br>N Package = N<br>C Package = C<br>S Package = S | SM28 = 1<br>50/125 = 2<br>PM1310 = 3<br>PM1550 = 4<br>F <sup>[2]</sup> = F | Bare fiber = 1<br>900 μm tube = 2<br>3mm jacket = 3<br>2mm jacket = 4<br>1.6mm jacket = 5 | 0.5m = 1<br>1.0m = 2 | None = 0<br>FC/APC = 1<br>FC/PC = 2<br>SC/APC = 3<br>SC/PC = 4<br>ST = 5<br>LC/UPC = 6<br>LC/APC = 7 | None = 0<br>FC/APC = 1<br>FC/PC = 2<br>SC/APC = 3<br>SC/PC = 4<br>ST = 5<br>LC/UPC = 6<br>LC/APC = 7 |

#### Note:

[1]. Regular fiber connector has PER ~22dB. Connector with PER >27 dB is available using special process

[2]. F fiber has core diameter 25 micron and NA0.09

- Select from below.

[3]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

### CWDM ITU Table following standard ITU-T G.694.2 defined center wavelengths:

| Channel # | Wavelength (nm) |
|-----------|-----------------|
| 23        | 850             |
| 24        | 880             |
| 25        | 910             |
| 26        | 940             |
| 27        | 1270            |
| 29        | 1290            |
| 31        | 1310            |
| 33        | 1330            |
| 35        | 1350            |
| 37        | 1370            |
| 39        | 1390            |
| 41        | 1410            |
| 43        | 1430            |
| 45        | 1450            |
| 47        | 1470            |
| 49        | 1490            |
| 51        | 1510            |
| 53        | 1530            |
| 55        | 1550            |
| 57        | 1570            |
| 59        | 1590            |
| 61        | 1610            |