

# WDM1r Series

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## Features and Benefits

Bi-directional

High Isolation

Low Insertion Loss

Epoxy-Free Optical Path

Thin Film Filter Technology

Ultra Stable and Highly Reliable

Corning's WDM1r Series is designed for Next Generation Passive Optical Networks (NG-PON), a new optical access system that coexists with GPON on the same ODN. Our WDM1r devices, including GPON, Video, and OTDR, are designed to accommodate NGPON1 and NGPON2 TWDM wavelengths to maximize the density and enhance the speed of optical distribution network.

## Standards

<b>RoHS</b>	Free of hazardous substances according to RoHS2011/65/EU
<b>Design and Test Criteria</b>	Product is qualified to Telcordia GR-1209-CORE and GR-1221-CORE



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# WDM1r Series

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## Specifications – GPON + OTDR Cassette

Parameter	Minimum	Maximum
Operating Wavelength Range (nm)	1260	1660
GPON/NGA Channel Wavelength Range (nm)	1260 1480	1360 1581
1650 Channel Wavelength Range (nm) [OTDR]	1610	1660
GPON/NGA Channel Insertion Loss (dB)*		0.8
1650 Channel Insertion Loss (dB)*		0.8
GPON/NGA Port Isolation @ 1610-1660nm (dB)	30	
1650 Port Isolation @1260-1360nm & 1480-1581nm (dB)	30	
Return Loss (dB)	50	
Directivity (dB)	50	
PDL (dB)		0.2
PMD (ps)		0.2
Optical Power (mW)		500
Operating Temperature Range (°C) **	- 5	+70
Storage Temperature (°C)	- 40	+85

\*Specifications do not include connector loss

\*\* If requested, this can be extended to industrial operating temperature range -40°C ~ 85°C, but insertion loss will be slightly higher.

Packaging Dimensions	Fiber Type	Pigtail Length
100mm x 80mm x 10mm Cassette	Fiber Type: Corning® SMF-28e® or compatible, 900 µm	1.5 m

## Drawing - NG-PON/NGA-OTDR



# WDM1r Series



## Ordering Information – GPON + OTDR Cassette

WDM1r Series – GPON+OTDR Cassette

6 6 0 - P 2 1 3 - 1  0 0 0  
**1**

**1** Select Connector Type

- A: NONE
- K: LC/APC
- L: LC/PC
- P: FC/PC
- Q: FC/APC
- S: SC/PC
- T: SC/APC
- U: MU/PC

***These part numbers are specific to Corning Optical Communications OEM Solutions Business Unit. Please contact OEM sales at +1-408-736-6900 or [oemsales@corning.com](mailto:oemsales@corning.com) and visit [www.corning.com/opcomm/oem](http://www.corning.com/opcomm/oem) for sales support.***

# WDM1r Series



## Specifications – WDMr1 + OTDR Cassette

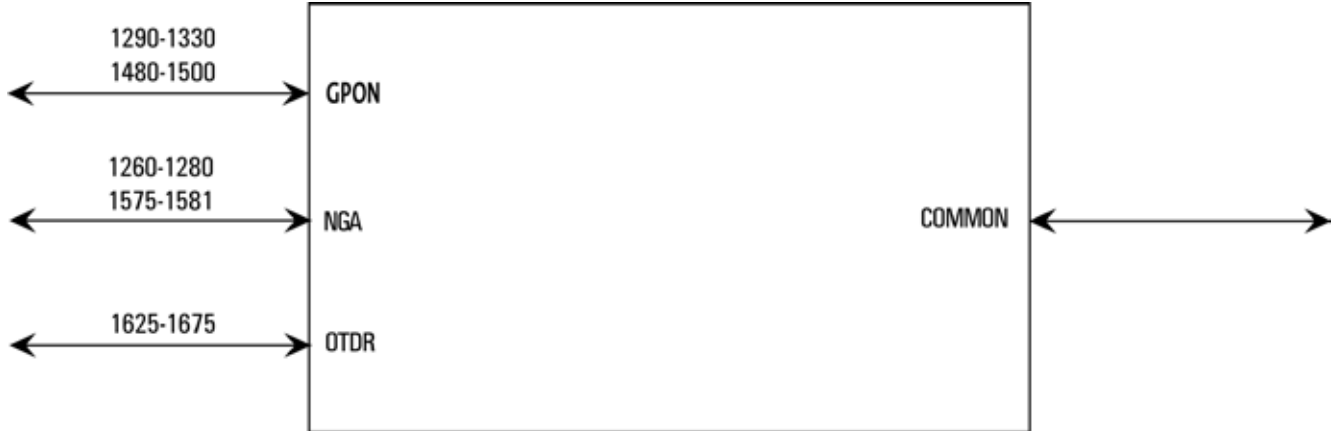
Parameter	Minimum	Maximum
Operating Wavelength Range (nm)	1260	1675
1270+1575 Channel Wavelength Range (nm) [NGA]	1260 1575	1280 1581
1310+1490 Channel Wavelength Range (nm) [GPON-OLT]	1290 1480	1330 1500
1650 Channel Wavelength Range (nm) [OTDR]	1625	1675
1270+1575 Channel Insertion Loss (dB) *		1.5
1310+1490 Channel Insertion Loss (dB) *		1.6
1650 Channel Insertion Loss (dB) *		1.0
1270+1575 Port Isolation @ 1290-1330 & 1480-1500 & 1625-1675nm (dB)	30	
1310+1490 Port Isolation @ 1260-1280nm & 1575-1581nm & 1625-1675nm (dB)	30	
1650 Port Isolation @ 1260-1330nm & 1480-1500 & 1575-1581nm (dB)	30	
Return Loss (dB)	50	
Directivity (dB)	50	
PDL (dB)		0.2
PMD (ps)		0.2
Optical Power (mW)		500
Operating Temperature Range (°C) **	- 5	+70
Storage Temperature (°C)	- 40	+85
*Specifications do not include connector loss		
** If requested, this can be extended to industrial operating temperature range -40°C ~ 85°C, but insertion loss will be slightly higher.		

Packaging Dimensions	Fiber Type	Pigtail Length
100mm x 80mm x 10mm Cassette	Fiber Type: Corning® SMF-28e® or compatible, 900 μm	1.5 m

# WDM1r Series

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## Drawing – WDMr1 + OTDR Cassette



## Ordering Information– WDMr1 + OTDR Cassette

WDM1r Series – WDM1r+OTDR Cassette

6 6 0 - P 2 1 3 - 1  1 0 0  
**1**

### **1** Select Connector Type

- A: NONE
- K: LC/APC
- L: LC/PC
- P: FC/PC
- Q: FC/APC
- S: SC/PC
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# WDM1r Series



## Specifications – WDM1r+OTDR+Video Cassette

Parameter	Minimum	Maximum
Operating Wavelength Range (nm)	1260	1675
1270+1575 Channel Wavelength Range (nm) [NGA]	1260 1575	1280 1581
1310+1490 Channel Wavelength Range (nm) [GPON-OLT]	1290 1480	1330 1500
1550 Channel Wavelength Range (nm) [VIDEO]	1550	1560
1650 Channel Wavelength Range (nm) [OTDR]	1625	1675
1270+1575 Channel Insertion Loss (dB) *		1.3
1310+1490 Channel Insertion Loss (dB) *		1.0
1550 Channel Insertion Loss (dB) *		1.6
1650 Channel Insertion Loss (dB) *		1.9
1270+1575 Port Isolation @ 1290-1330 & 1480-1500 & 1550-1560nm & 1625-1675nm (dB)	30	
1310+1490 Port Isolation @ 1260-1280nm & 1550-1560nm & 1575-1581nm & 1625-1675nm (dB)	30	
1550 Port Isolation @ 1260-1330nm & 1480-1500nm & 1575-1581nm & 1625-1675nm (dB)	30	
1650 Port Isolation @ 1260-1330nm & 1480-1500 & 1550-1560nm & 1575-1581nm (dB)	30	
Return Loss (dB)	50	
Directivity (dB)	50	
PDL (dB)		0.2
PMD (ps)		0.2
Optical Power (mW)		500
Operating Temperature Range (°C) **	- 5	+70
Storage Temperature (°C)	- 40	+85

\*Specifications do not include connector loss

\*\* If requested, this can be extended to industrial operating temperature range -40°C ~ 85°C, but insertion loss will be slightly higher.

Packaging Dimensions	Fiber Type	Pigtail Length
100mm x 80mm x 10mm Cassette	Fiber Type: Corning® SMF-28e® or compatible, 900 μm	1.5 m

# WDM1r Series

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## Drawing – WDM1r+OTDR+Video Cassette



## Ordering Information – WDM1r+OTDR+Video Cassette

WDM1r Series – WDM1r+OTDR+Video Cassette

6 6 0 - P 2 1 3 - 1  2 0 0  
**1**

### 1 Select Connector Type

- A: NONE
- K: LC/APC
- L: LC/PC
- P: FC/PC
- Q: FC/APC
- S: SC/PC
- T: SC/APC
- U: MU/PC

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## Specifications – WDM1r+Video Cassette

Parameter	Minimum	Maximum
Operating Wavelength Range (nm)	1260	1625
1310+1490 Channel Wavelength Range (nm) [GPON-OLT]	1290 1480	1330 1500
1550 Channel Wavelength Range (nm) [Video]	1550	1560
1270+1575 Channel Wavelength Range (nm) * [NGA]	1260 1575	1280 1625
1310+1490 Channel Insertion Loss (dB) *		1.0
1550 Channel Insertion Loss (dB) *		1.7
1270+1575 Channel Insertion Loss (dB) *		1.5
1310+1490 Port Isolation @ 1260-1280nm & 1550-1625nm (dB)	30	
1550 Port Isolation @ 1260-1330nm & 1480-1500nm & 1575-1625nm (dB)	30	
1270+1575 Port Isolation @ 1290-1330nm & 1480-1500nm & 1550-1560nm (dB)	30	
Return Loss (dB)	50	
Directivity (dB)	50	
PDL (dB)		0.2
PMD (ps)		0.2
Optical Power (mW)		300
Operating Temperature Range (°C) **	- 5	+70
Storage Temperature (°C)	- 40	+85
*Specifications do not include connector loss		
** If requested, this can be extended to industrial operating temperature range -40°C ~ 85°C, but insertion loss will be slightly higher.		

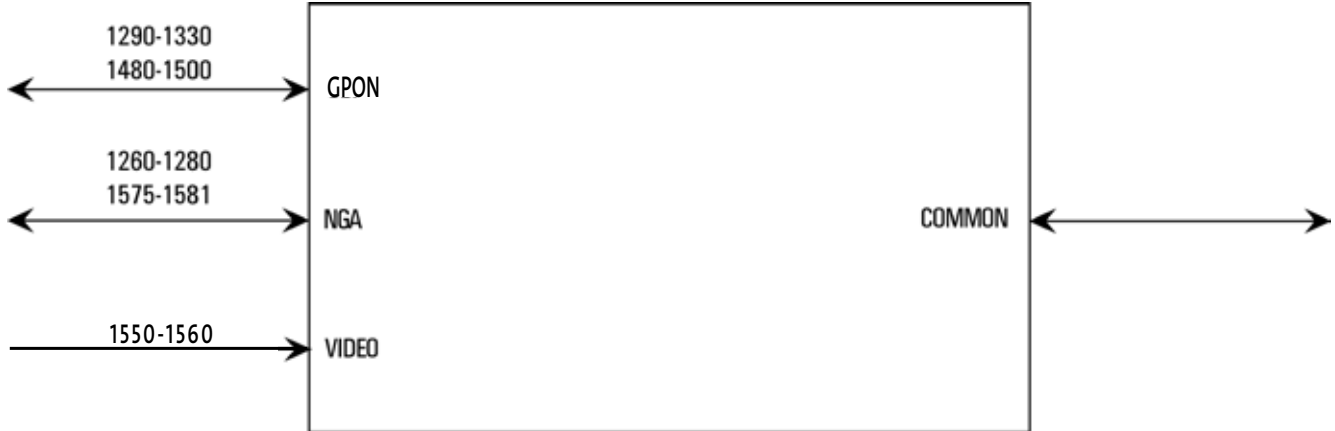
Packaging Dimensions	Fiber Type	Pigtail Length
100mm x 80mm x 10mm Cassette	Fiber Type: Corning® SMF-28e® or compatible, 900 µm	1.5 m



# WDM1r Series

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## Drawing – WDM1r+Video Cassette



## Ordering Information – WDM1r+Video Cassette

WDM1r Series – WDM1r + Video Cassette

6 6 0 - P 2 1 3 - 1  3 0 0  
**1**

### 1 Select Connector Type

- A: NONE
- K: LC/APC
- L: LC/PC
- P: FC/PC
- Q: FC/APC
- S: SC/PC
- T: SC/APC
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## Specifications – WDM1r Cassette

Parameter	Minimum	Maximum
Operating Wavelength Range (nm)	1260	1625
Reflect Channel Wavelength Range (nm)	1260 1524	1280 1625
Pass Channel Wavelength Range (nm)	1290 1480	1330 1500
Pass Channel Insertion Loss (dB) *		1.0
Reflect Channel Insertion Loss (dB) *		1.0
Pass Port Isolation @ 1260-1280nm & 1524-1625nm (dB)	30	
Reflect Port Isolation @ 1290-1330nm & 1480-1500nm (dB)	30	
Return Loss (dB)	50	
Directivity (dB)	50	
PDL (dB)		0.2
PMD (ps)		0.2
Optical Power (mW)		300
Operating Temperature Range (°C) **	- 5	+70
Storage Temperature (°C)	- 40	+85

\*Specifications do not include connector loss

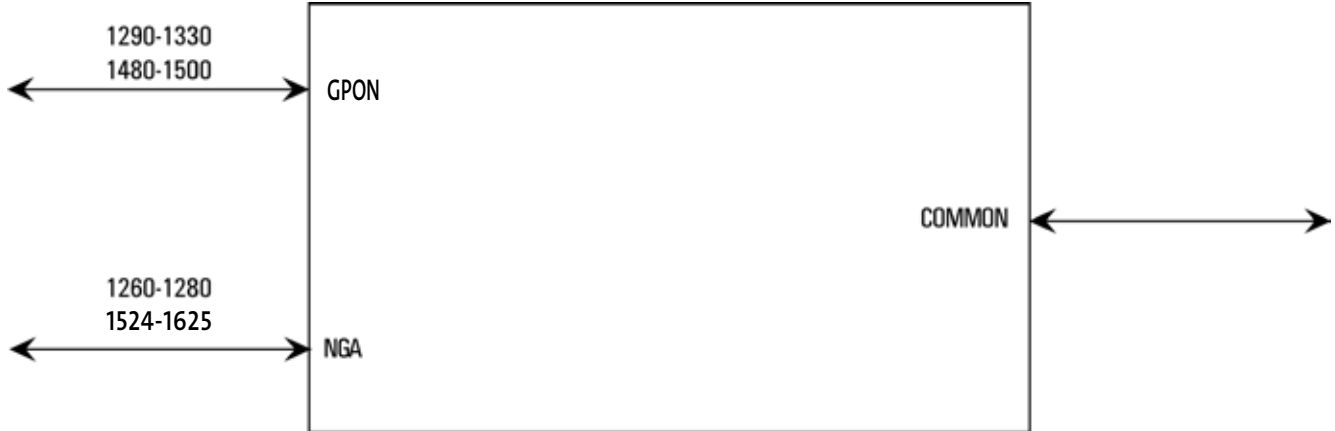
\*\* If requested, this can be extended to industrial operating temperature range -40°C ~ 85°C, but insertion loss will be slightly higher.

Packaging Dimensions	Fiber Type	Pigtail Length
100mm x 80mm x 10mm Cassette	Fiber Type: Corning® SMF-28e® or compatible, 900 μm	1.5 m

# WDM1r Series

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## Drawing - WDM1r Cassette



## Ordering Information

WDM1r Series – WDM1r Cassette

6 6 0 - P 2 1 3 - 1  4 0 0  
**1**

### 1 Select Connector Type

- A: NONE
- K: LC/APC
- L: LC/PC
- P: FC/PC
- Q: FC/APC
- S: SC/PC
- T: SC/APC
- U: MU/PC

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# WDM1r Series



## Specifications – WDM1r+TWDMPON+Video Cassette

Parameter	Minimum	Maximum
Operating Wavelength Range (nm)	1260	1610
1270+1575 Channel Wavelength Range (nm) [XGPON]	1260 1575	1280 1581
1310+1490 Channel Wavelength Range (nm) [GPON]	1290 1480	1330 1500
1550 Channel Wavelength Range (nm) [VIDEO]	1550	1560
TWDMPON Channel Wavelength Range (nm)	1524 1596	1544 1603
1270+1575 Channel Insertion Loss (dB) *		1.3
1310+1490 Channel Insertion Loss (dB) *		1.0
1550 Channel Insertion Loss (dB) *		1.6
TWDM-PON Channel Insertion Loss (dB) *		1.4
1270+1575 Port Isolation (dB)	30	
1310+1490 Port Isolation (dB)	30	
1550 Port Isolation (dB)	30	
TWDM-PON Port Isolation (dB)	15	
Return Loss (dB)	50	
Directivity (dB)	50	
PDL (dB)		0.2
PMD (ps)		0.2
Optical Power (mW)		500
Operating Temperature Range (°C) **	- 5	+70
Storage Temperature (°C)	- 40	+85

\*Specifications do not include connector loss

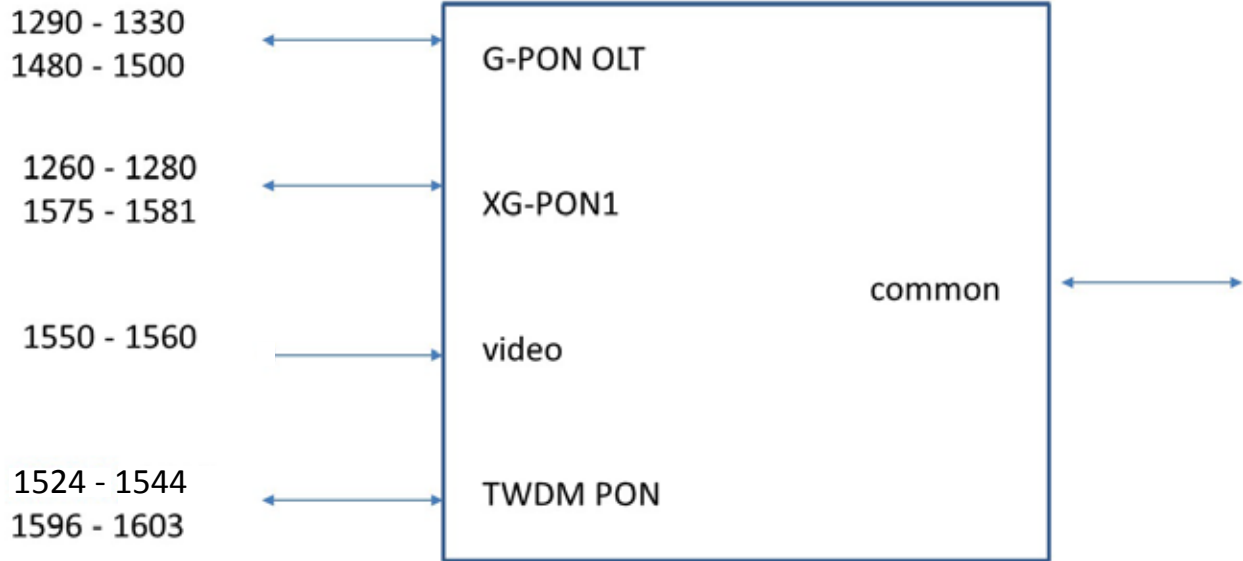
\*\* If requested, this can be extended to industrial operating temperature range -40°C ~ 85°C, but insertion loss will be slightly higher.

Packaging Dimensions	Fiber Type	Pigtail Length
100mm x 80mm x 10mm Cassette	Fiber Type: Corning® SMF-28e® or compatible, 900 µm	1.5 m

# WDM1r Series



## Drawing – WDM1r+TWDMPON+Video Cassette



## Ordering Information – WDM1r+TWDMPON+Video Cassette

WDM1r Series – WDM1r+TWDMPON+Video Cassette

6 6 0 - P 2 1 3 - 1  5 0 0  
1

**1** Select Connector Type

- A: NONE
- K: LC/APC
- L: LC/PC
- P: FC/PC
- Q: FC/APC
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- T: SC/APC
- U: MU/PC

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