CORNING OPTICAL COMMUNICATIONS GENERIC SPECIFICATION FOR PRETIUM EDGE® SPLICE CASSETTE

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PGS138
Revision 1

Corning Optical Communications reserves the right to update this specification without prior notification.

Master Format 27 11 16 Communications Cabinets, Racks, Frames and Enclosures

1 Cassette Specifications and Options

1.1 Cassette Function and Construction

1.1.1 The cassette shall provide a means for splicing cables entering at the back of the cassette, while providing LC connectivity at the front of the cassette.

1.1.2 The cassette shall contain one 12-fiber harness for splicing incoming fiber. The cassette shall offer enough cassette harness length for multiple re-splices when required.

1.1.3 The cassette shall contain a mean to strain relieve the incoming cable.

1.1.4 The cassette shall have at least six finger tabs that allow easy routing of harness and incoming fiber and help to contain the fibers inside the cassette.

1.1.5 The cassette shall have a removable splice organizer that allows the installation of 12 single-fiber heat-shrink protective sleeves (40 mm) and 1 mass-fusion splice heat-shrink protective sleeve (40 mm). The cassette shall come with a snap on mechanism that allows the installation of the splice organizer into the cassette.

1.1.6 The cassette shall come with a removable top cover. Removal of this top cover shall allow access to the inside of the cassette for splicing, and shall be able to snap the cover back onto the cassette after splicing.

1.1.7 The cassette shall have internally opening shuttered LC adapters that allow a single-handed operation. The shutter adapter shall eliminate the need to remove and re-install dust caps. The shutter shall be VFL compatible. The adapter sleeves shall be color coded as indicated in Table 1.

1.1.8 The cassette shall meet the following dimensions: 6.91” x 3.52”x 0.47” (LxWxH).

1.1.9 The cassette shall be compatible with Corning Optical Communications Pretium EDGE® HD rack-mountable connector housings.

1.1.9.1 The cassette shall permit front and rear installation into the Pretium EDGE housings.

1.1.9.2 The cassette shall have a rear accessible spring loaded retention trigger and finger handle for rear installation into the housing.

1.1.10 The cassette shall have a label containing part number and serial number affixed to it.
1.1.11 The cassette shall provide a cross-connection point with other cassettes when mounted in a connector housing,the adapter sleeves shall be accessible from the front.
1.1.12 The cassette shall contain discrete fiber and port identification pad printed on top and bottom of the adapters.

1.2 Cassette Connectivity

1.2.1 The cassette shall contain either ribbon or single-fiber assemblies for splicing at the rear of the cassette and LC connectors at the front.
1.2.2 The cassette shall contain 12 fiber terminations.

1.3 Cassette Fiber Types and Optical Specifications

1.3.1 Available fiber types and their optical performance specifications shall be as indicated in Table 1. Cassette insertion loss performance shall be as indicated in table 2.

Table 1: Cassettes - Available Fiber Types, Optical Specifications, Adapter Colors.

	Multimode		Single-Mode
Property	OM3 Ultra-Bendable 50 µm (850/1300 nm)	OM4 Ultra-Bendable 50 µm (850/1300 nm)	OS2 Bend-Improved Single-Mode (1310/1550 nm)
Fiber Attenuation, Max (dB/Km)	2.8/1.0	2.8/1.0	0.4/0.3
Minimum Over Filled Launch (OFL) Bandwidth (MHz*km)	1500/500	3500/500	-/-
Minimum Effective Modal Bandwidth (EMB) (MHz*km)	2000/-	4700/-	-/-
Adapter Color LC	Aqua	Aqua	Blue/Green

Note (1): As predicted by RML BW, per TIA/EIA 455-204 and IEC 60793-1-41, *for intermediate performance laser based systems* (up to 1 Gb/s).
Note (2): As predicted by minEMBc, per TIA/EIA 455-220 and IEC 60793-1-49 for *high performance laser-based systems* (up to 10 Gb/s).

2 Components Insertion Loss Specifications

All components shall meet the maximum insertion loss values indicated in Table 2.

Table 2: Component Optical Specifications - Available Fiber Types.

Property	Multimode		Single-Mode
	OM3 Ultra-Bendable 50 µm (850/1300 nm)	OM4 Ultra-Bendable 50 µm (850/1300 nm)	OS2 Bend-Improved Single-Mode (1310/1550 nm)
Insertion Loss, Max (dB)(1) LC mated Pair loss	0.5 dB	0.5 dB	0.4 dB

Note (1): Insertion loss specifications when mated to other system components of a like performance specification.

3 Splice Cassette Polarity Management

3.1 The cassette shall be available with universal or straight-through wiring.

3.1.1 Splice Cassette with Universal Wiring

3.1.1.1 The cassette with universal wiring shall have polarity-managed fiber routing as shown in Figure 1.

3.1.1.2 For A-to-B polarity management with universal splice cassettes, one end (cassette) shall be spliced to the cable blue to blue / aqua to aqua, and the other end (cassette) shall be spliced to the cable blue to aqua / aqua to blue as shown in Figure 1.

Note: A-to-A polarity management with universal cassettes, the cassettes shall be spliced to the cable blue to blue/aqua to aqua at both ends.

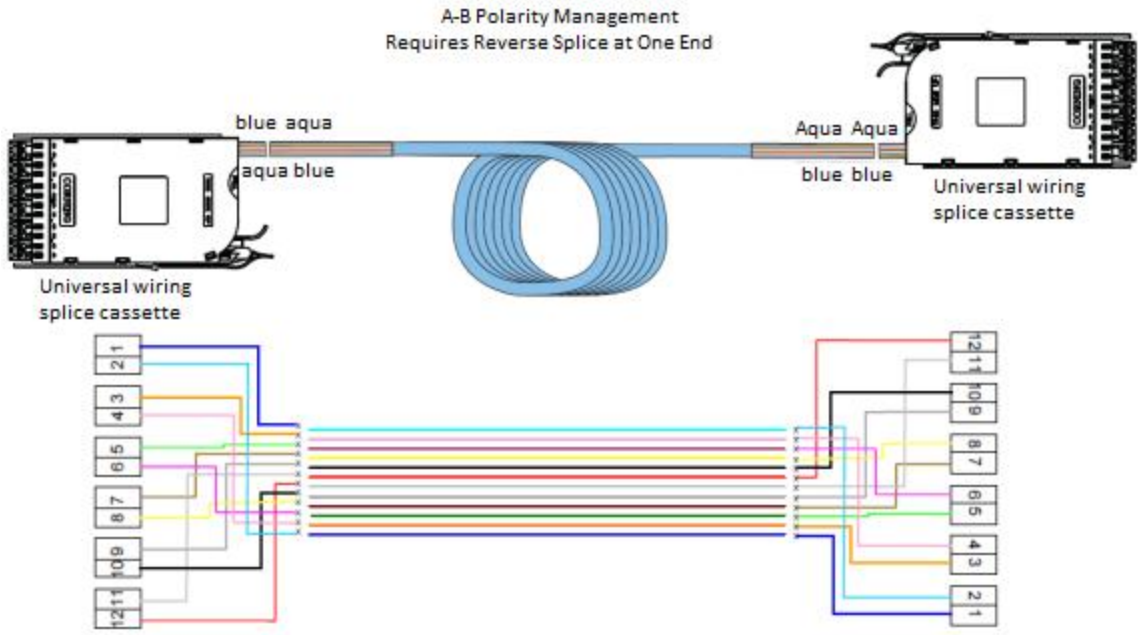

Figure 1: Universal Wiring Scheme – Splice Cassettes on Both Ends
Splice Cassette with Straight-Through Wiring

3.1.1.3 The cassette with straight-through wiring shall have polarity-managed fiber routing as shown in Figure 2.

3.1.1.4 For A-to-A polarity management with straight-through splice cassettes, both ends (cassettes) shall be spliced to the cable blue to blue / aqua to aqua (see Figure 2).

Note: Other polarity configurations can be achieved by re-organizing the fiber orientation.

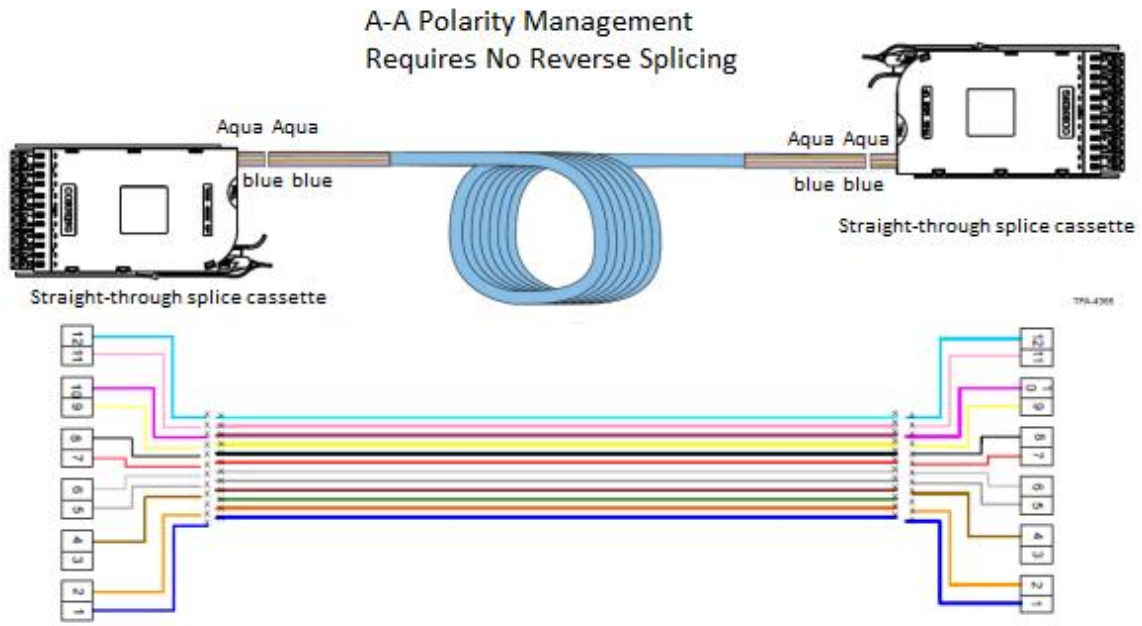

Figure 2: Straight-Through Wiring Scheme – Splice Cassettes on Both Ends

4.0 Quality Assurance Provisions

4.1 All cabled optical fibers > 1000 meters in length shall be 100% attenuation tested. The attenuation of each fiber shall be provided with each cable reel.

4.2 The cable manufacturer shall be TL 9000 registered

5.0 Miscellaneous

5.1 At the request of the customer, the cable manufacturer shall provide installation procedures and technical support concerning the items contained in this specification.

Gen Spec PGS138 Revision History

Revision #	Date	Reason for Change
0	2/28/2013	Document creation
1	10/27/17	Reformatted, added Master Format number, Quality Assurance Provisions and Miscellaneous sections.