



**Verizon NEBS™ Compliance: Sample Size for
Multiple Connector Types Manufactured at
Multiple Locations**
Verizon Technical Purchasing Requirements
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PREPARED BY:

Name, Title, Organization	Date
Vijay Jain M.Tech., M.A.Sc., PMP FOC-ITL Program Manager NEBS & Quality Assurance Verizon Technology Organization 320 St. Paul Place, Floor 14 Baltimore, MD 21202 Phone: 410-736-7947; Fax: 410-736-5144 E-mail: Vijay.x.jain@verizon.com	08/07/2007

APPROVED BY:

Name, Title, Organization	Date
Ludwig C. Graff Director, NEBS Compliance and Quality Assurance Verizon Technology Organization Systems Integration and Testing 320 St. Paul Place, Floor 14 Baltimore, MD 21202 Phone: 410-736-5904; Fax: 410-736-5144 E-mail: ludwig.c.graff@verizon.com	08/07/2007



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1.0 PURPOSE

The purpose of this Verizon Technical Purchasing Requirement document is to provide sample size for Multiple Connector Types Manufactured at Multiple Locations.

2.0 SCOPE

FOC- Optical Connectors

3.0 REFERENCES

FOC Memo #44	GR-326 Sample Size for Multiple Connectors Type Manufactured at Multiple Locations
GR-326-CORE	Generic Requirements for Singlemode Optical Connectors and Jumper Assemblies

4.0 ACRONYMS

FOC	Fiber Optic Components
ITL	Independent Testing Laboratory
SIT	System Integration & Testing
TPR	Technical Purchasing Requirements

5.0 SAMPLE SIZE FOR MULTIPLE CONNECTOR TYPES MANUFACTURED AT MULTIPLE LOCATIONS

This TPR is issued to provide sample size for Multiple Connector Types Manufactured at Multiple Locations.

Reason: Some manufacturers make many different type of connectors with multiple media types. These connectors can be manufactured at multiple locations also. This TPR provides a guideline on multiple sample sizes.



Assumption: All the media types are already tested to appropriate GRs such as GR-409, GR-20 etc.

Variables:

- Media type
- Connector Type
- Manufacturing Locations

1. **Media Type:** All the three different media types shall be considered as different products. If there is a connector terminated on three media types, a complete GR-326 sample size shall be used for each media type. If there are several sizes of cables within a same media type then smallest and largest cable types can be tested as long as the manufacturing process is the same. A complete GR-326 sample size shall be used for the connector on the smallest cable and a complete GR-326 sample size shall be used for connector on the largest cable size. Section-8 of GR-326 shall be conducted on all cable types.

2. **Connector Type:** Each connector type shall be considered as a separate product and shall use a complete GR-326 sample size. It applies to both polishing and type. Section-8 of GR-326 shall be conducted on all connector types.

3. **Manufacturing Location:** As long as all the locations have the same manufacturing process, a 50% sample size of the GR-326 sample size from each location can be used. If the manufacturing process is different then a complete GR-326 sample size from each location shall be used. Section-8 of GR-326 shall be conducted at all manufacturing locations.

Example-1:

A customer wants to test SC/UPC connector assemblies but will manufacture 3 mm, 2 mm, 1.6 mm, and 900 micron products. All the assemblies are made the same way. All the cables are already tested.

Applicable Sample Size:

900 micron: Media Type -II: Complete GR-326 Sample Size; Section-8 of GR-326 shall be conducted

1.6 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

2 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted



3 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

Example-2:

A customer wants to test SC/UPC, SC/APC, and LC/UPC connector assemblies but will manufacture 3 mm, 2 mm, 1.6 mm, and 900 micron products. All the assemblies are made the same way. All the cables are already tested.

Applicable Sample Size:

SC/UPC;

900 micron: Media Type -II: Complete GR-326 Sample Size; Section-8 of GR-326 shall be conducted

1.6 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

2 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

3 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

SC/APC;

900 micron: Media Type -II: Complete GR-326 Sample Size; Section-8 of GR-326 shall be conducted

1.6 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

2 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

3 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

LC/UPC;

900 micron: Media Type -II: Complete GR-326 Sample Size; Section-8 of GR-326 shall be conducted

1.6 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

2 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted

3 mm: Media Type -I: 50% of GR-326 Sample Size; Section-8 of GR-326 shall be conducted



Example-3:

A customer wants to test SC/UPC connector assemblies but will manufacture 3 mm, 2 mm, 1.6 mm, and 900 micron products at 3 different locations. All the assemblies are made the same way and manufacturing processes at all the location are the same. All the cables are already tested.

Applicable Sample Size:

Location-1;

900 micron: Media Type -II: 50% of GR-326 Sample Size from location-1; Section-8 of GR-326 shall be conducted
1.6 mm: Media Type -I: 50% of GR-326 Sample Size from location-1; Section-8 of GR-326 shall be conducted
2 mm: Media Type -I: 50% of GR-326 Sample Size from location-1; Section-8 of GR-326 shall be conducted
3 mm: Media Type -I: 50% of GR-326 Sample Size from location-1; Section-8 of GR-326 shall be conducted

Location-2;

900 micron: Media Type -II: 50% of GR-326 Sample Size from location-2; Section-8 of GR-326 shall be conducted
1.6 mm: Media Type -I: 50% of GR-326 Sample Size from location-2; Section-8 of GR-326 shall be conducted
2 mm: Media Type -I: 50% of GR-326 Sample Size from location-2; Section-8 of GR-326 shall be conducted
3 mm: Media Type -I: 50% of GR-326 Sample Size from location-2; Section-8 of GR-326 shall be conducted

Location-3;

900 micron: Media Type -II: 50% of GR-326 Sample Size from location-3; Section-8 of GR-326 shall be conducted
1.6 mm: Media Type -I: 50% of GR-326 Sample Size from location-3; Section-8 of GR-326 shall be conducted
2 mm: Media Type -I: 50% of GR-326 Sample Size from location-3; Section-8 of GR-326 shall be conducted
3 mm: Media Type -I: 50% of GR-326 Sample Size from location-3; Section-8 of GR-326 shall be conducted



Example-4:

A customer wants to test SC/UPC connector assemblies but will manufacture 3 mm, 2 mm, 1.6 mm, and 900 micron products at 2 different locations. All the assemblies are made the same way but the manufacturing processes at both the locations are different. All the cables are already tested.

Applicable Sample Size:

Location-1;

900 micron: Media Type -II: Complete GR-326 Sample Size from location-1; Section-8 of GR-326 shall be conducted

1.6 mm: Media Type -I: 50% of GR-326 Sample Size from location-1; Section-8 of GR-326 shall be conducted

2 mm: Media Type -I: 50% of GR-326 Sample Size from location-1; Section-8 of GR-326 shall be conducted

3 mm: Media Type -I: 50% of GR-326 Sample Size from location-1; Section-8 of GR-326 shall be conducted

Location-2;

900 micron: Media Type -II: Complete GR-326 Sample Size from location-2; Section-8 of GR-326 shall be conducted

1.6 mm: Media Type -I: 50% of GR-326 Sample Size from location-2; Section-8 of GR-326 shall be conducted

2 mm: Media Type -I: 50% of GR-326 Sample Size from location-2; Section-8 of GR-326 shall be conducted

3 mm: Media Type -I: 50% of GR-326 Sample Size from location-2; Section-8 of GR-326 shall be conducted