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Report Format:

☐ **Verizon Format**
☐ **Client Customized Format**
☒ **MET Format**

Test Plan and Performance Verification
for
Chameleon High Density Fiber Optic Solution
to
Customer Specifications

Prepared for:	CablesPlus, LLC 2818-B Hungary Road Richmond, VA 23228
Prepared by:	MET Laboratories, Inc.
Test Plan No.:	FO24952 Rev. 3
Issued:	October 3, 2008

Prepared by: _____
Johnnie Evans, Fiber Optics Lab Manager

Approved by: _____
Johnnie Evans, Fiber Optics Lab Manager

Reviewed by: _____
Jenn Warnell, TCB Administrator/Documentation

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REVISION STATUS SHEET

Revision	Date	Page No.	Paragraph No.	Description of Revision
Ø	September 22, 2008	–	–	Initial Issue.
1	September 24, 2008	5, 26 & 29	–	Addition's & Clarification's to P/N's and compliance statements
2	September 26, 2008	5, 6-23 (replaced) & 29	–	Part number clarification (pg 5 & 29) and replaced Supplier Published Marketing Specification (pgs 6-23)
3	October 3, 2008	Appendix B	–	Customer correction.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY
THIS TEST PLAN AND TESTING WAS PREPARED BY MET LABORATORIES, INC.

Manufacturer: CablesPlus, LLC

Location of Manufacturer: 2818-B Hungary Road
Richmond, VA 23228

Location of Test Laboratory: 914 W. Patapsco Ave
Baltimore, MD 21230

Product Name: Chameleon HighDensity Fiber Optic Solution

Product Part Number:

TB-144HX5	144Fiber MTP to LC Multimode 50/125 10 Gig Cassette
VFVF-144P0IL0100-2-S	144 Fiber MTP Trunking Cable
FC-4U12P	4U 12-Panel Chassis
VFHP-024P0IN0004-LCB	24-Fiber MTP Brand to 24 LC, 10 gig 50 Micron Cable, Blue
VFHP-024P0IN0004-LCG	24-Fiber MTP Brand to 24 LC, 10 gig 50 Micron Cable, Green
AP-V6610F	Fiber Adapter Panel, LC SM/MM, 24 Fiber, Blue

Connector Type: LC

Connector Polish: PC

Connector Form Factor: Small, High Density

Fiber Type: Multimode

Product Description: The Chameleon Chassis, when fully loaded with (12) 144 High Volume Cassette Modules can accommodate 1,728 fibers in just one 4U space, all that space savings while making fiber management and patching easier and cleaner than traditional fiber solutions currently on the market. The Chameleon 144 or 72 fiber MTP Backbone Cables and our proprietary patent pending MTP to LC Cables patching system, provide a high density fiber distribution solution to the space conscious data center manager. Adapter Panels by Chameleon can accommodate each major fiber connector: ST, SC, MTRJ, FC, LC, and MTP brand, from 6-up to 144-fiber solutions in each panel. And the Chameleon is flexible enough to include Cat5e, Media Conversion and switching products all in the same chassis. No other product on the market can meet your demands the way the Chameleon can.

Chameleon High-Density Fiber Optic Solution

1728 Fibers per 4U Chassis!

The Chameleon has been designed to be a flexible solution to meet today's needs in today's environments. Each 12 Port MTP Fiber Cassette can patch a 48 Port Line Card. A fully loaded Chassis (12 Slots) can terminate up to (12) 48 Port Line cards and still provide a total of 24 spare connections (2 per Cassette).

The Chameleon works as a standard fiber patching system as well as accepting 6 Port CAT5E modules, 5 Port 10/100 Switches, and 10/100/1000 Media Converters. The Chameleon is truly a flexible system that meets a broad spectrum of markets' and customers' needs.

Chassis Details

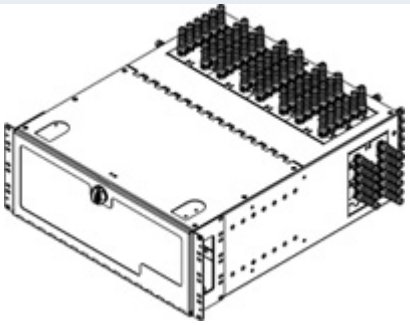
Dimensions:	7.0 h x 17.0 w x 20.0 d (4U)
Weight:	35 lbs (fully Loaded)
Slots:	12 Slots which accept any of the standard fiber panels, MTP Cassettes, Media Converters, Switches, or CAT5E Patching Cassettes
Fiber Count:	1,728 Maximum per Chassis

Product Description

The Chameleon Chassis is the framework for our adaptable modular system. The Chameleon proprietary cable management design gives users the benefits of increased cordage stability while maintaining minimum bend radius. Our sliding tray and removable body panels ease the loading process. Our comprehensive selection of adaptor panels, cassettes, and accessories gives users the flexibility to design the Chameleon to their needs.

Technical Specifications

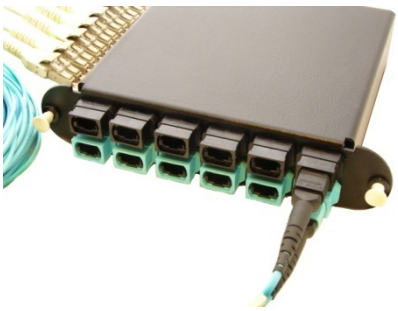
- Accepts up to (12) Adapter Panels, MTP Cassettes, CAT5E Cassettes, or Media Converters
- Supports up to (144) MTP, (144) FC, (144) ST, (144) SC, or (288) LC fiber optic ports
- Removable top
- Horizontal cable entrances on either side
- Integrated cable management system accepts strain relief boots
- Locking doors (front and rear)
- Compatible with 19" and 23" racks



144-Fiber MTP Cassette

Description:

The Chameleon 144-Fiber MTP Cassette is built specifically for the Chameleon fiber/copper patching system. Two 72-fiber MTP connectors (backbone) are plugged into the rear of the cassette. In the front of the cassette are twelve 12-fiber feed-thru MTP couplers for your patching. Inside the cassette are two unique 72-fiber harnesses with one 72-fiber MTP connector in the back breaking out to six 12-fiber MTP connectors in the front.



Optical Specs (100% Interferometer Tested):

	72-Fiber (Backbone)		12-Fiber (Distribution)	
Results	**Typical**	**Maximum**	**Typical**	**Maximum**
Insertion Loss	≤ 0.55 dB	≤ 0.80 dB	≤ 0.20 dB	≤ 0.50 dB

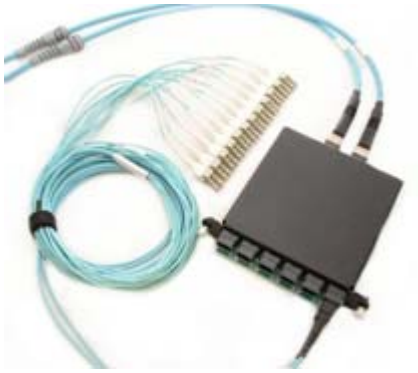
Results included for each serialized assembly.

Sample Reading:

PASS		**Max. Diff. Height All Fib. (nm)**	**645**
X Endface Angle (°)	0.136	**Max. Diff. Height Adj. Fib. (nm)**	357
Y Endface Angle (°)	-0.215	**Flatness Deviation (nm)**	-829
X ROC (mm)	8450	**Max. Core Dip (nm)**	-77
Y ROC (mm)	420	**Valid Pixels Ration (%)**	58

Results may vary.

MTP Cassette Details



Dimensions:	4.75 h x 1.25 w x 6.0 d
Weight:	1 lbs
Fibers: Front: Rear: Fiber Type:	144 (12) 12 Fiber MTP (2) 72 Fiber MTP 50/125 OM3 Laser Enhanced

Product Description

The Chameleon High Volume Cassette Module takes full advantage of the MT multifiber ferrule design. In coordination with the LightWave 144 fiber Trunk Cable and the patent pending Chameleon Patch Cord system, the HVCM eliminates optical crosstalk, maintaining data integrity. Smaller form factors in the trunking and patching system make the enclosure less cluttered and improves airflow to integral systems. The Chameleon Chassis, when fully loaded with HVCMs can make fiber management and patching a one rack solution.

Technical Specifications

- Accepts (6) Chameleon Patch Cords
- Accepts (1) LightWave 144 fiber Trunk Cable
- 100% Insertion and Return Loss Tested (results included)
- 100% Interferometric Testing (results included)

Typical End to End Solution

- @850nm = **1.98db** – average loss across 10 connectors
- @1300nm = **1.79db** – average loss across 10 connectors

144-Fiber MTP Backbone Harness

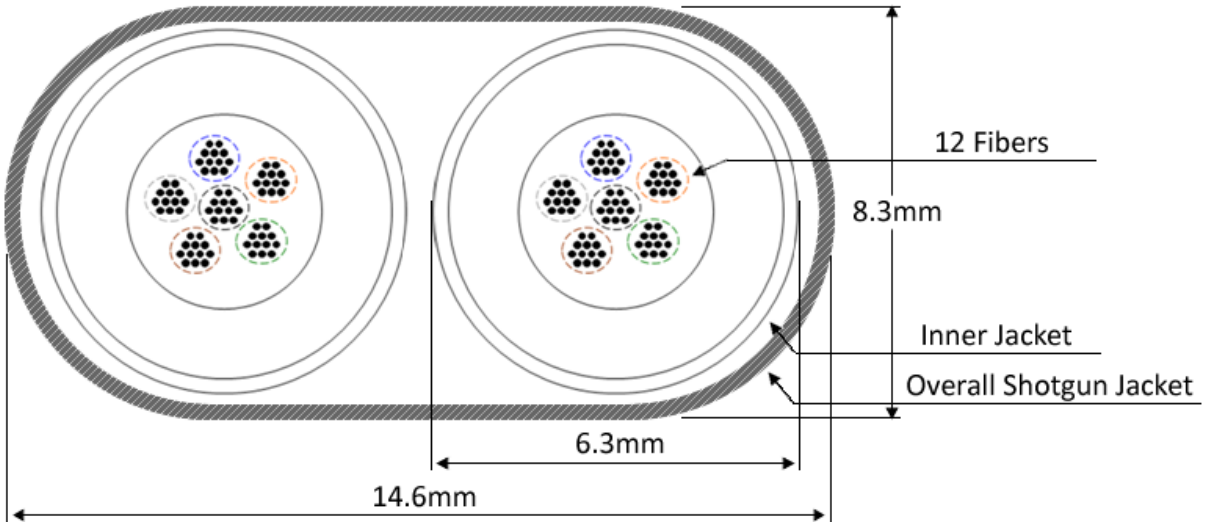
Description:

The Chameleon 144-Fiber MTP Trunking Cable provides a high density fiber distribution solution to the space conscious data center manager. As storage solutions and fiber management needs grow, data center space becomes more and more precious.

In the Chameleon Trunking Cable, two 72 Fiber MTP cables are packaged together in a single "shotgun" style jacket, making the cable flexible given the fiber density. Less bulk means more airflow, more manageability, and less space required.

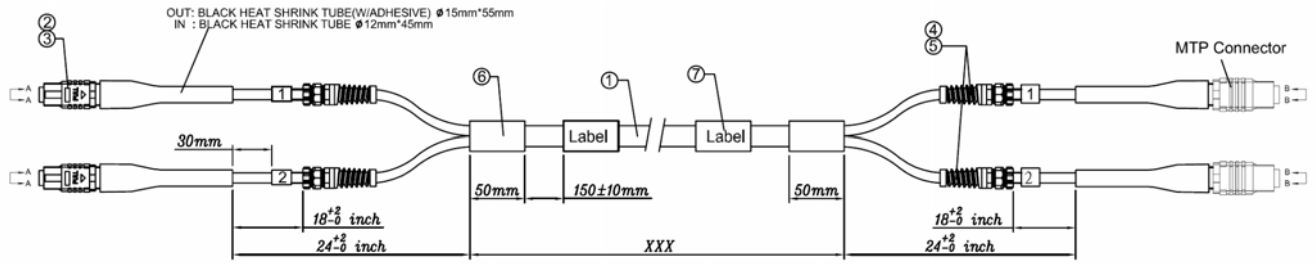
Each cable is intended to plug into the back of a Chameleon High Volume Cassette Module for maximum bandwidth. The trunk and cassette module, when combined with our patent pending patching system, eliminates crosstalk amongst fibers so you can be sure your data will not be corrupted due to interference.

Cross-Section Diagram



Diagrammed above is the cross section of the two cables. Each cable jacket has a diameter of 6.3mm, 72 optical fibers, aramid yarn, and an inner jacket. The assembly measures approximately 14.6mm including the "shotgun" overall jacket.

MTP Harness Assembly Drawing



Typical Cable Management Scheme

The above represents typical distribution in the back of the chassis. The strain relief modules for each cable are secured into place on each side using specialized brackets.

A strain relief module is provided with each 72-fiber branch allowing for easy cable management. The Chameleon chassis allows cables to be fed in from the top, bottom, sides, or the back and secured with brackets engineered especially for this purpose. The brackets isolate the strain relief modules and route the cable directly to the MTP cassettes. Due to the maximum bend radius of the cable, in high-density solutions this configuration is a necessity.

Pictured to the right are the strain relief modules that are prefabricated around the cable. They can be moved along each branch depending on your application. They allow the cable to be distributed with ease while maintaining secure cable routing.

Optical Specs (100% Interferometer Tested):

	72-Fiber (Backbone)		12-Fiber (Distribution)	
Results	**Typical**	**Maximum**	**Typical**	**Maximum**
Insertion Loss	≤ 0.55 dB	≤ 0.80 dB	≤ 0.20 dB	≤ 0.50 dB

Results included for each serialized assembly.

Sample Reading:

PASS		**Max. Diff. Height All Fib. (nm)**	**645**
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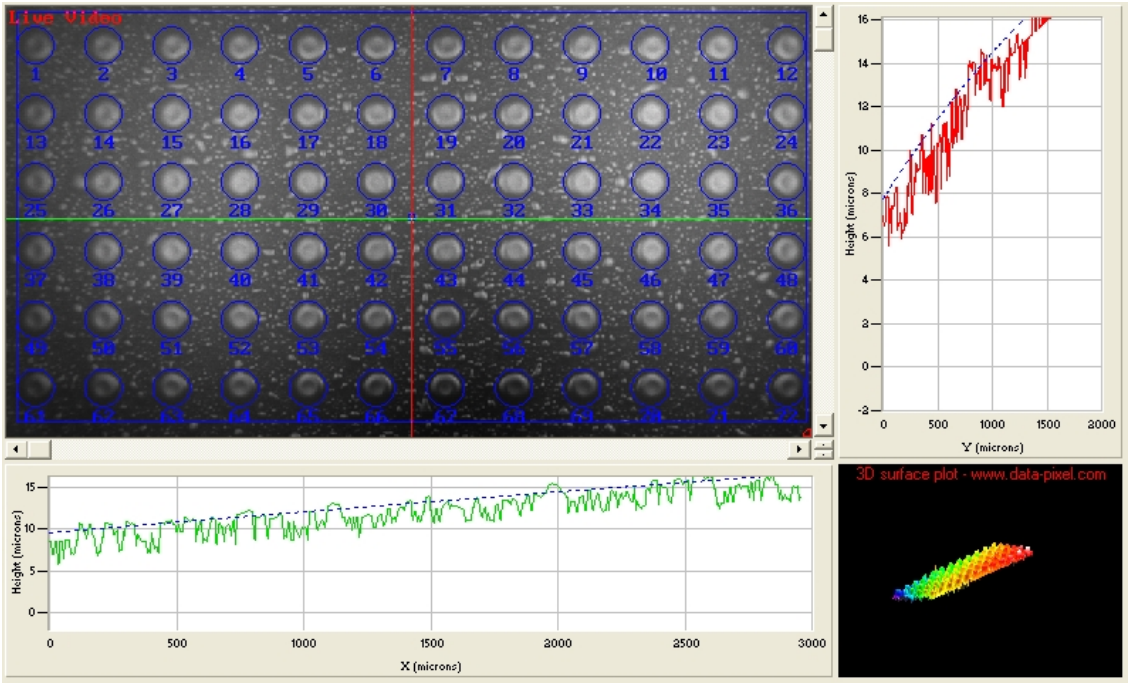
X ROC (mm)	8450	**Max. Core Dip (nm)**	-77
Y ROC (mm)	420	**Valid Pixels Ration (%)**	58

Results may vary.

Interferometer Reading for 72-Fiber Cassette Harness



Introduction

The purpose of this test program is to determine the product performance of the specified CablesPlus, LLC product could meet the Insertion Loss, Return Loss and CrossTalk requirements specified herein to perform the intended in-service functions.

All test equipment used for this program was checked before testing to assure that it was in calibration, and that the parameters to be measured were appropriate for the range on the measuring instrument.

Calibration is performed and checked on a routine basis using standards traceable to the National Institute of Standards and Technology (NIST). Calibration of equipment is performed in accordance with the MET Laboratories, Inc. Quality Program and satisfies the requirements of ISO 17025 and ANSI/NCSL Z540-1.

Declaration of Compliance:

MET Laboratories, Inc. will conduct testing and evaluation in order to certify that the Chameleon High Density Fiber Optic Solution, manufactured by CablesPlus, LLC **complies** with the criteria set forth in this document.

Schedule:

The test program will take a total of 40 days to complete, start to finish. The program will not start until all required materials are received from the customer which includes documentation, samples, adapters, etc. It will take approximately 4 weeks to complete the requirements specified herein and a total of about 2 weeks to complete the generation of the Final test report.

Supplier Responsibility:

The supplier must provide all necessary documentation and required information necessary to properly evaluate their product. These items are specified below:

1. The supplier must provide all the required samples, reference quality launch cables, adapters, cleaning kits or any other product specific peripheral devices necessary to properly evaluate their product.

2. The supplier shall supply a list of all components used in the product(s) including part numbers, manufacturer, and product specifications.

3. The supplier shall provide all cabling, jumpers, and accessories to perform the tests.

Requirements Terminology:

The criteria in this document are presented in one category:

- **Performance Verification** - This section presents tests to which the product is to be subjected, and the performance criteria to be applied during these tests. Any of the tests in this category may also be conducted individually as required.

Criteria Checklist:

The requirements and objectives Matrix details the product requirements and specific test objectives per section and sequence. The matrix also details the conformance or nonconformance of the product in a Verify/Analyze/Inspect/Test and Pass/Fail/NA format with a comments section for each criterion. Your product will be evaluated to the following requirements and objectives, as applicable, by the procedures listed within this test plan/document. (See Requirements and Objectives Matrix)

- **Verify** – Verify by a review of the documentation that the information or accessories required by the criterion were supplied or are available from the manufacturer.

- **Analyze** – Draw conclusions based on vendor supplied product information, test data, and other information as to the conformance or nonconformance of the product to the requirements.

- **Inspect** – Visually inspect the product to determine conformance or nonconformance to criteria.

- **Test** – Measure quantitatively product features or performance to determine conformance or nonconformance to criteria.

Table 1. Requirements and Objectives Matrix

Performance Verification Tests			Method of Conformance					
			VERIFY	ANALYZE	INSPECT	TEST	Results Pass/Fail/NA	Comments
Requirement	**Section Number**	**R** – Requirement **O** – Objective **C** – Condition **CR** – Conditional Requirement **CO** – Conditional Objective	**Verified** – All supplied materials/documentation are verified to meet the specified criteria. **Analyze** – Conclusion was drawn based on vendor supplied product information. **Inspect** – Visual inspection of the product determined conformance or non-conformance to the requirements. **Tested** – The product is tested to determine conformance or nonconformance to the defined specification **Pass** – The product meets all requirements of the defined specification. **Fail** – The product does not meet all requirements of the defined specification. **NA** - Not applicable to the equipment under tests. Reason(s) will be stated in the comment section.					
Insertion Loss								
Detail Spec	**3.2**	The equipment shall meet the loss criteria listed in Table 2. Data shall be recorded and evaluated at the end of test.				✓	Pass	The product evaluated for Insertion Loss exceeded the requirements of the CablesPlus, LLC detail specification
Return Loss								
Detail Spec	**3.2**	The equipment shall meet the reflectance criteria listed in Table 2. Data shall be recorded and evaluated at the end of test.				✓	Pass	The product evaluated for Return Loss exceeded the requirements of the CablesPlus, LLC detail specification
CrossTalk								
Detail Spec	**3.3**	The equipment shall meet the crosstalk criteria listed in Table 2. Data shall be recorded and evaluated at the end of test.				✓	Pass	The product evaluated for Crosstalk met the requirements of the CablesPlus, LLC detail specification

Table 2. Test Samples

GR-326-CORE Test Samples			
Criteria	**Section Number**	**Section Name**	**Samples Required**
850nm – (4.69dB) 1300nm – (4.62dB)	3.2	Insertion Loss	One product sample was submitted for evaluation. All Fiber components are 50/125 micron laser enhanced 10 Gig Multimode. The system consists of a 144 Fiber trunk cable connecting 2 cassettes. The trunk cable has 2 ea 72 fiber legs. The cassettes each have 2 ea 72 fiber ports in the rear, 12 ea 12 fiber ports in the front. 12 ea 12 fiber MTP to 12 LC duplex patch cables connect the cassettes to the equipment (data server and fiber manager with LC ports).
850nm – (-25dB) 1300nm – (-25dB)	3.2	Return Loss	
Record Data	3.3	CrossTalk	

PROGRAM SCOPE

The scope of this program is to provide product performance verification. MET Laboratories, Inc. will verify, analyze, inspect and test the Chameleon High Density Fiber Optic Solution to determine conformance to each essential Requirement [R], Objective [O], Conditional Requirement [CR], and Conditional Objective [CO], as applicable within this document. A complete list of the criteria to be evaluated is included as Table 1 located in the Executive Summary section of this Test Report. Any criteria that may not be applicable to a specific product will be denoted as "NA" in Table 1 and the reason will be stated.

TEST REPORT FORMAT

It is the intent of this Test Plan to be converted to a Test Report for delivery to the client at the completion of the test program. In this way, a uniform correlation will be maintained between the Customer Requirements document, MET Laboratories, Inc. Test Plan and Test Report.

I. ADMINISTRATIVE DATA

1.1 Description of Test Item/s

Chameleon HighDensity Fiber Optic Solution

1.2 Part Number/s and Serial Number/s of Test Item/s

TB-144HX5	144Fiber MTP to LC Multimode 50/125 10 Gig Cassette
VFVF-144P0IL0100-2-S	144 Fiber MTP Trunking Cable
FC-4U12P	4U 12-Panel Chassis
VFHP-024P0IN0004-LCB	24-Fiber MTP Brand to 24 LC, 10 gig 50 Micron Cable, Blue
VFHP-024P0IN0004-LCG	24-Fiber MTP Brand to 24 LC, 10 gig 50 Micron Cable, Green
AP-V6610F	Fiber Adapter Panel, LC SM/MM, 24 Fiber, Blue

1.3 Location/s of Manufacturing

CablesPlus, LLC
2818-B Hungary Road
Richmond, VA 23228

1.4 Test / Evaluation Location/s and Dates

MET Laboratories, Inc.
914 W. Patapsco Ave.
Baltimore, MD 21230

Table 3. Test / Evaluation Location(s) and Dates

Test / Evaluation Category	Criteria Section	Location Performed	Date Completed
Insertion Loss / Performance Verification	3.2	MET Laboratories	8-22-08
Return Loss / Performance Verification	3.2	MET Laboratories	8-25-08
CrossTalk / Performance Verification	3.3	MET Laboratories	9-12-08

1.5 References

Telecommunications Industry Association (TIA)

- **ANSI/EIA/TIA-455-42A** FOTP-42 Procedure to Measure Optical Crosstalk in Fiber Optic Components, October 1989.
- **ANSI/EIA/TIA-455-107A** FOTP-107 Determination of Component Reflectance or Link/System Return Loss Using a Loss Test Set, March 1999.
- **ANSI/EIA/TIA-455-171A** FOTP-171 Determination of Attenuation by substitution measurement—for short-length Multimode graded-Index and Sinle-Mode Optical Fiber Cable Assemblies, June 1987.

Quality Standards

- **ANSI/NCSL Z540-1-1994,** Calibration Laboratories and Measuring and Test Equipment -General Requirements
- **IEC Guide 17025: 1999,** General Requirements for the Competence of Testing and Calibration Laboratories

Optical Safety

- **ANSI Z136.2 ANSI**, American National Standard for the Safe Use of Optical Fiber Communications Systems Utilizing Laser Diode and LED Sources, August 1988.
- **FDA 79-8035 United States Food and Drug Administration**, Bureau of Radiological Health Laser Product Safety Classifications, 21 CFR 1040, August 20, 1985.
- **FDA 88-8035**, Regulations for Administration and Enforcement of the Radiation Control for Health and Safety Act of 1968, HHS Pub., Part 1040.

II. GENERAL INFORMATION

2.1 Generic Test Procedures and Procedures

All test equipment used for this program is to be checked before testing to assure that it is in calibration, and that the parameters to be measured are appropriate for the range on the measuring instrument. Calibration is to be performed and checked on a routine basis using standards traceable to the National Institute of Standards and Technology (NIST). Calibration of equipment at MET Laboratories, Inc., is in accordance with the MET Laboratories, Inc. Quality program.

The connectors are to be cleaned prior to being assembled for measurements. During all testing steps where cleaning is required, Cleaning Procedures A or B, shall be observed for all cleaning, unless otherwise noted in the test procedure as "special". Modified cleaning methods must be provided by the vendor/client in the form of a cleaning instruction procedure.

Optical measurements are to be made at 850 nm and 1300 nm for insertion loss and reflectance measurements. Once testing has started, product that subsequently becomes nonconforming shall be reported as such in any test report generated based upon this document is to be handled as described in the Handling of Nonconformance section.

MET Laboratories, Inc. has developed a Standard Operating Procedures (SOP) for optical performance testing. MET Laboratories, Inc. SOPs may be used separately or in conjunction with ANSI/EIA/TIA 455 – Fiber Optic Test Procedures.

2.2 Test Equipment

Equipment that may be used to perform the testing of fiber optic products is listed in the Test Apparatus section for each individual test to be performed. The equipment used may differ from those listed, but must be equivalent to that which is identified. For operating instructions on any particular equipment, please refer to the manufacturer's user manual.

2.3 Test Sequence and Schedule

The time required preparing the test samples and to set-up the laboratory, equipment is not specifically included in the schedule. When samples are submitted to MET Laboratories, Inc. for testing, a minimum of two weeks should be allowed to schedule the start of testing, prepare the samples, and set-up the laboratory equipment for testing. Two weeks after the completion of testing should be allowed for the analysis of the data and preparation of a draft test report.

III. PERFORMANCE VERIFICATION TESTS AND CRITERIA

3.1 Cleaning Procedures

The performance of an optical fiber connector assembly is, to a large degree, dependent on the state of cleanliness of the connector and adapter at the time of connection. Therefore, the cleaning procedures to be used during the tests conducted under the terms of this document must be clearly defined and followed very specifically.

During all tests Cleaning Procedure A shall be observed for all cleanings, unless otherwise noted in the test procedure.

3.1.1 Cleaning Procedure A

1. If both plugs have been removed from the adapter, blow compressed gas through the adapter. If both plugs are not to be removed, blow compressed gas into the open end of the adapter.
2. Wipe completely around the ferrule of the plug twice with a lint-free wiping material that has been moistened with alcohol. Then wipe across the end of the ferrule.
3. Repeat Step 2 with a dry wipe.
4. Blow compressed gas across the end of the ferrule. This is the final step before inserting the plug. Do not wipe the ferrule or allow it to touch anything after completion of this step and before the ferrule is inserted into the sleeve.
5. Insert the plug in the adapter.
6. If both plugs have been removed, repeat Steps 2 through 5 with the second plug.

The following materials are needed for Cleaning Procedure A:

- Laboratory wipes that are free of lint and abrasive particles
- Ethyl alcohol, nominal USP ≥ 99%
- Compressed air or canned compressed gas that is clean, dry, and oil-free.

Note: Cleaning Procedure A is presented for use only in the testing of optical fiber connectors conducted under the terms of this document. Procedure A is a minimum level of cleaning against which the manufacturer's cleaning procedure is to be compared.
Local plant procedures may require more rigorous cleaning methods.

3.1.2 Cleaning Procedure B

Cleaning Procedure B is the procedure recommended by the supplier for use by craft personnel while installing and using the connector. Cleaning procedures are to meet all applicable safety requirements.

3.1.3 Test Procedure

All samples were cleaned per MET Laboratories Cleaning procedure. See FIW-4, Rev 0 - End-Face Cleaning and Inspection.

3.2 Insertion Loss & Return Loss Performance Verification

3.2.1 Conformance Criteria – Requirements and Sample Size

R3-1 Product Maximum Insertion Loss Requirement

All connections in the population shall meet the Product Insertion Loss Requirement of 4.69 dB for 850nm & 4.62dB for 1300nm stated in Table 2.

R3-2 Product Return Loss

All connections in the population shall meet the Product Return Loss Requirement of -25 dB stated in Table 2.

Sample Size

The supplier of the product shall ensure that the product submitted is representative of the product being sold, and not selected for improved performance or reliability.

One product sample was submitted for evaluation. All Fiber components are 50/125 micron laser enhanced 10 Gig Multimode. The system consists of a 144 Fiber trunk cable connecting 2 cassettes. The trunk cable has 2 ea 72 fiber legs. The cassettes each have 2 ea 72 fiber ports in the rear, 12 ea 12 fiber ports in the front. 12 ea 12 fiber MTP to 12 LC duplex patch cables connect the cassettes to the equipment (data server and fiber manager with LC ports).

3.2.2 Test Procedure

IMPORTANT: ALWAYS FOLLOW MET STANDARD OPERATING PROCEDURES ON **SAFE HANDLING OF LASER AND FIBER OPTICS** WHILE CONDUCTING ANY OPTICAL TEST.

1) During any connect/disconnect, the connectors on the ends of the fiber optic cables for jumpers and DUT shall be cleaned as per FIW-4, Rev 0 - End-Face Cleaning and Inspection and then mated together.
2) The test system shall be performed on the samples per the instruction for insertion loss and return loss testing specified in FOTP-107 & FOTP-171.
3) The system will be allowed to warm up one hour before testing
4) All data will be manually recorded per sample and connector ID.
5) The procedures specified in step 2 above will be repeated until all samples have been tested.
6) Analyze the data to verify that the Loss and Reflectance conform with the product measurement criteria of Table 2 and Table 2.
7) If the product criteria is not met, record the results in the Summary of Test Results section 3.2.4.
8) The supplier must analyze the cause of the nonconformance, or other problem, and provide MET Laboratories, Inc. with a written explanation of the cause(s) and the corrective actions taken by the supplier. The supplier may alternately choose to have MET Laboratories, Inc. perform the required analysis. The supplier's explanation shall appear in the final version of any test report generated based upon this document.
9) If the criteria is met, than subject the DUT to the next test in the schedule.

3.2.3 Test Configuration and Conditions

All tests shall be conducted under ambient laboratory conditions:

Conditions	Limits
Temperature	23° ±2° C (73° ±4°F)
Humidity	Less than 75% RH

3.2.3.1 Test Apparatus

Equipment List				
Asset	**Description**	**Manufacturer**	**Model**	**Cal Cycle**
9T2077	16CH SOURCE	OPTOTEST	OP750	12 MONTHS
9T2079	16CH POWER METER	OPTOTEST	OP710	12 MONTHS
Other test equipment used				
Asset	**Description**	**Manufacturer**	**Model**	**Cal Cycle**
5T5675	FIBER SCOPE	NOYES	OFS300-200C	N/A
NONE	ISOPROPANOL 99.9%	BAKER	99.9%	N/A
NONE	CLEANING WIPES	KIMWIPES	EX-L	N/A

3.2.4 Summary of Test Results

Conformance/Nonconformance

All samples of LC to MTP configuration conformed to the Requirements Reflectance and Loss test measurements of Section 3.2.1. Any deviation in Loss and Reflectance shall be noted in the data and test report.

Sample Size

One product sample was submitted for evaluation. All Fiber components are 50/125 micron laser enhanced 10 Gig Multimode. The system consists of a 144 Fiber trunk cable connecting 2 cassettes. The trunk cable has 2 ea 72 fiber legs. The cassettes each have 2 ea 72 fiber ports in the rear, 12 ea 12 fiber ports in the front. 12 ea 12 fiber MTP to 12 LC duplex patch cables connect the cassettes to the equipment (data server and fiber manager with LC ports).

Failure History

The sample has no prior Failure History.

Disposition of Nonconformance

N/A

Test Data

Data Summary charts are provided below. See appendix A for detailed optical data collected.

Test Data

Criteria Category	Max Values (dB)	Customer Specified Req.	Customer Criteria Met?	Requirement	
				Criteria (dB)	Criteria Met?
850nm					
Max Insertion Loss	3.85	4.69	Y	4.69	Y
Mean Insertion Loss	2.61	N/A	N/A	N/A	N/A
Max Reflectance	-30.24	-25	Y	-25	Y
Mean Reflectance	-31.71	N/A	N/A	N/A	N/A
1300nm					
Max Insertion Loss	3.79	4.62	Y	4.62	Y
Mean Insertion Loss	2.47	N/A	N/A	N/A	N/A
Max Reflectance	-35.55	-25	Y	-25	Y
Mean Reflectance	-37.02	N/A	N/A	N/A	N/A

Note: Detailed optical data can be found in the Appendices.

3.3 CrossTalk Performance Verification

3.3.1 Conformance Criteria – Requirements and Sample Size

R3-3 Product CrossTalk Requirement

Measure and Record Near-End & Far-End Crosstalk values per the prescribed CablesPlus, LLC Method (see Appendix B)

Sample Size

The supplier of the product shall ensure that the product submitted is representative of the product being sold, and not selected for improved performance or reliability.

One product sample was submitted for evaluation. All Fiber components are 50/125 micron laser enhanced 10 Gig Multimode. The system consists of a 144 Fiber trunk cable connecting 2 cassettes. The trunk cable has 2 ea 72 fiber legs. The cassettes each have 2 ea 72 fiber ports in the rear, 12 ea 12 fiber ports in the front. 12 ea 12 fiber MTP to 12 LC duplex patch cables connect the cassettes to the equipment (data server and fiber manager with LC ports).

3.3.2 Test Procedure

IMPORTANT: ALWAYS FOLLOW MET STANDARD OPERATING PROCEDURES ON **SAFE HANDLING OF LASER AND FIBER OPTICS** WHILE CONDUCTING ANY OPTICAL TEST.

1) During any connect/disconnect, the connectors on the ends of the fiber optic cables for jumpers and DUT shall be cleaned as per FIW-4, Rev 0 - End-Face Cleaning and Inspection and then mated together.
2) The test system shall be performed on the samples per the instructions provided by CablesPlus, LLC (see appendix B) with guidance for CrossTalk testing specified in FOTP-42.
3) The system will be allowed to warm up one hour before testing
4) All data will be manually recorded per sample and connector ID.
5) The procedures specified in step 2 above will be repeated until all samples have been tested.
6) Analyze the data to verify that the CrossTalk values conform with the product measurement criteria of Table 2.
7) If product criteria is not met, record the results in the Summary of Test Results section 3.3.4.
8) The supplier must analyze the cause of the nonconformance, or other problem, and provide MET Laboratories, Inc. with a written explanation of the cause(s) and the corrective actions taken by the supplier. The supplier may alternately choose to have MET Laboratories, Inc. perform the required analysis. The supplier's explanation shall appear in the final version of any test report generated based upon this document.
9) If the criteria is met, subject the DUT to the next test in the schedule.

3.3.3 Test Configuration and Conditions

All tests shall be conducted under ambient laboratory conditions:

Conditions	Limits
Temperature	23° ±2° C (73° ±4°F)
Humidity	Less than 75% RH

3.3.3.1 Test Apparatus

Equipment List				
Asset	**Description**	**Manufacturer**	**Model**	**Cal Cycle**
9T2077	16CH SOURCE	OPTOTEST	OP750	12 MONTHS
9T2079	16CH POWER METER	OPTOTEST	OP710	12 MONTHS
Other test equipment used				
Asset	**Description**	**Manufacturer**	**Model**	**Cal Cycle**
5T5675	FIBER SCOPE	NOYES	OFS300-200C	N/A
NONE	ISOPROPANOL 99.9%	BAKER	99.9%	N/A
NONE	CLEANING WIPES	KIMWIPES	EX-L	N/A

3.3.4 Summary of Test Results

Conformance/Nonconformance

All samples of LC to MTP configuration conformed to the Requirements CrossTalk test measurements of Section 3.3.1. Any deviation in Loss and Reflectance shall be noted in the data and test report.

Sample Size

One product sample was submitted for evaluation. All Fiber components are 50/125 micron laser enhanced 10 Gig Multimode. The system consists of a 144 Fiber trunk cable connecting 2 cassettes. The trunk cable has 2 ea 72 fiber legs. The cassettes each have 2 ea 72 fiber ports in the rear, 12 ea 12 fiber ports in the front. 12 ea 12 fiber MTP to 12 LC duplex patch cables connect the cassettes to the equipment (data server and fiber manager with LC ports).

Failure History

The sample has no prior Failure History.

Disposition of Nonconformance

N/A

Test Data

The Product was tested and found to have no apparent Alien Crosstalk across the adjacent channels monitored per the prescribed test method supplied by CablesPlus, LLC. Output power data was recorded only on the identified channel pairs. See appendix B for detailed optical data collected.

APPENDIX A: Insertion Loss and Return Loss Data

24952 - IL & RL

Fiber #	850nm Wavelength								
	Pass / Fail Link Loss, dB						4.69		
	Pass / Fail ORL Loss, dB						-25.00		
	Ref Level dBm		2nd Value dBm		Link Loss dB			ORL Loss	
	A	B	A	B	A to B	B to A	Avg	A	B
1	-21.23	-21.25	-23.95	-24.48	3.25	2.70	2.98	-31.76	-31.99
2	-21.38	-21.40	-24.19	-24.40	3.02	2.79	2.91	-31.19	-31.84
3	-21.23	-21.25	-23.81	-23.96	2.73	2.56	2.65	-32.01	-31.72
4	-21.38	-21.40	-24.11	-24.16	2.78	2.71	2.75	-31.33	-31.66
5	-21.23	-21.25	-23.18	-23.38	2.15	1.93	2.04	-31.10	-31.58
6	-21.38	-21.40	-23.65	-23.54	2.16	2.25	2.21	-32.10	-31.02
7	-21.23	-21.25	-24.23	-24.22	2.99	2.98	2.99	-34.22	-31.21
8	-21.38	-21.40	-24.54	-24.14	2.76	3.14	2.95	-32.14	-33.57
9	-21.23	-21.25	-23.90	-23.75	2.52	2.65	2.59	-33.88	-31.86
10	-21.38	-21.40	-24.14	-24.30	2.92	2.74	2.83	-31.92	-32.78
11	-21.23	-21.25	-23.94	-24.27	3.04	2.69	2.87	-32.30	-32.28
12	-21.38	-21.40	-24.56	-23.88	2.50	3.16	2.83	-32.00	-32.56
13	-21.23	-21.25	-23.49	-23.48	2.25	2.24	2.25	-32.69	-32.21
14	-21.38	-21.40	-23.45	-23.73	2.35	2.05	2.20	-32.77	-32.13
15	-21.23	-21.25	-23.69	-24.31	3.08	2.44	2.76	-31.81	-31.22
16	-21.38	-21.40	-24.48	-24.22	2.84	3.08	2.96	-31.34	-31.66
17	-21.23	-21.25	-23.56	-23.43	2.20	2.30	2.25	-32.43	-32.06
18	-21.38	-21.40	-23.85	-23.91	2.53	2.45	2.49	-32.39	-32.33
19	-21.23	-21.25	-23.88	-23.83	2.60	2.63	2.62	-32.51	-31.99
20	-21.38	-21.40	-24.05	-24.36	2.98	2.65	2.82	-31.40	-33.10
21	-21.23	-21.25	-23.80	-24.19	2.96	2.56	2.76	-32.63	-32.60
22	-21.38	-21.40	-25.25	-24.04	2.66	3.85	3.26	-30.80	-34.69
23	-21.23	-21.25	-23.52	-23.80	2.57	2.27	2.42	-31.59	-31.76
24	-21.38	-21.40	-24.10	-23.76	2.38	2.70	2.54	-32.28	-32.09
25	-21.23	-21.25	-24.00	-23.86	2.63	2.75	2.69	-32.29	-31.79
26	-21.38	-21.40	-23.61	-24.00	2.62	2.21	2.42	-32.79	-32.53
27	-21.23	-21.25	-23.54	-23.36	2.13	2.29	2.21	-32.48	-30.69
28	-21.38	-21.40	-23.73	-23.86	2.48	2.33	2.41	-31.07	-30.91
29	-21.23	-21.25	-23.25	-23.94	2.71	2.00	2.36	-31.14	-31.16
30	-21.38	-21.40	-23.93	-23.45	2.07	2.53	2.30	-30.46	-30.70
31	-21.23	-21.25	-23.91	-23.79	2.56	2.66	2.61	-32.73	-31.82
32	-21.38	-21.40	-24.51	-24.11	2.73	3.11	2.92	-31.61	-31.07
33	-21.23	-21.25	-23.70	-23.63	2.40	2.45	2.43	-31.86	-31.17
34	-21.38	-21.40	-24.28	-23.73	2.36	2.88	2.62	-31.42	-30.98
35	-21.23	-21.25	-23.44	-23.74	2.51	2.19	2.35	-31.12	-31.06
36	-21.38	-21.40	-24.00	-23.61	2.23	2.60	2.42	-32.16	-30.52
37	-21.23	-21.25	-23.60	-23.96	2.72	2.35	2.54	-33.03	-31.25
38	-21.38	-21.40	-24.02	-23.88	2.50	2.62	2.56	-32.27	-31.53
39	-21.23	-21.25	-23.36	-23.92	2.69	2.11	2.40	-32.34	-31.28
40	-21.38	-21.40	-24.41	-23.72	2.34	3.01	2.68	-31.21	-32.23
41	-21.23	-21.25	-23.85	-23.53	2.30	2.60	2.45	-31.86	-31.68
42	-21.38	-21.40	-23.83	-24.22	2.84	2.43	2.64	-31.10	-31.23
43	-21.23	-21.25	-23.80	-24.23	3.00	2.55	2.78	-31.76	-32.59
44	-21.38	-21.40	-24.24	-24.06	2.86	2.84	2.76	-32.67	-34.16
45	-21.23	-21.25	-23.69	-23.99	2.76	2.44	2.60	-32.67	-31.60
46	-21.38	-21.40	-24.33	-24.32	2.94	2.93	2.94	-31.48	-31.10
47	-21.23	-21.25	-23.90	-24.26	3.03	2.65	2.84	-30.77	-32.20
48	-21.38	-21.40	-23.70	-24.52	3.14	2.30	2.72	-32.99	-30.74
49	-21.23	-21.25	-23.72	-23.88	2.65	2.47	2.56	-32.59	-31.74
50	-21.38	-21.40	-24.48	-23.98	2.60	3.08	2.84	-31.34	-32.49
51	-21.23	-21.25	-23.57	-23.31	2.08	2.32	2.20	-31.28	-30.71
52	-21.38	-21.40	-23.50	-24.12	2.74	2.10	2.42	-31.02	-30.91
53	-21.23	-21.25	-22.97	-22.99	1.76	1.72	1.74	-30.98	-31.08
54	-21.38	-21.40	-23.41	-23.31	1.93	2.01	1.97	-31.52	-30.79
55	-21.23	-21.25	-23.60	-23.88	2.63	2.35	2.49	-31.59	-31.87
56	-21.38	-21.40	-24.19	-24.02	2.64	2.79	2.72	-32.59	-30.33
57	-21.23	-21.25	-23.69	-23.45	2.22	2.44	2.33	-31.68	-31.17
58	-21.38	-21.40	-23.81	-23.93	2.56	2.41	2.48	-31.44	-30.37
59	-21.23	-21.25	-23.23	-23.66	2.43	1.96	2.21	-30.86	-31.02
60	-21.38	-21.40	-23.84	-23.79	2.41	2.44	2.43	-31.45	-30.34
61	-21.23	-21.25	-23.93	-23.85	2.60	2.69	2.65	-31.58	-31.27
62	-21.38	-21.40	-24.17	-24.22	2.84	2.77	2.81	-31.30	-31.48
63	-21.23	-21.25	-23.68	-23.89	2.66	2.43	2.55	-32.01	-31.32
64	-21.38	-21.40	-24.25	-23.98	2.60	2.85	2.73	-31.22	-32.28
65	-21.23	-21.25	-23.67	-23.82	2.29	2.42	2.36	-30.80	-31.62
66	-21.38	-21.40	-24.05	-23.82	2.44	2.65	2.55	-30.90	-31.00
67	-21.23	-21.25	-24.35	-23.87	2.64	3.10	2.87	-34.10	-32.64
68	-21.38	-21.40	-24.53	-23.98	2.60	3.13	2.87	-33.30	-34.13
69	-21.23	-21.25	-24.18	-24.23	3.00	2.93	2.97	-31.45	-31.59
70	-21.38	-21.40	-24.47	-24.68	3.30	3.07	3.19	-31.88	-31.11
71	-21.23	-21.25	-23.71	-23.50	2.27	2.46	2.37	-30.55	-32.17
72	-21.38	-21.40	-23.85	-24.02	2.64	2.45	2.55	-32.59	-30.74
73	-21.23	-21.25	-24.12	-23.95	2.72	2.67	2.69	-31.40	-31.35
74	-21.38	-21.40	-24.35	-24.46	3.08	2.95	3.02	-31.37	-31.37
75	-21.23	-21.25	-23.98	-23.58	2.56	2.73	2.64	-31.47	-31.46
76	-21.38	-21.40	-23.83	-24.33	2.96	2.43	2.69	-31.52	-31.12
77	-21.23	-21.25	-23.37	-23.48	2.22	2.12	2.17	-30.92	-30.37
78	-21.38	-21.40	-23.81	-23.85	2.47	2.41	2.44	-30.65	-30.46
79	-21.23	-21.25	-24.01	-24.46	3.23	3.26	3.25	-32.47	-31.88
80	-21.38	-21.40	-24.33	-24.52	3.14	2.93	3.04	-32.71	-31.67
81	-21.23	-21.25	-23.96	-24.25	3.02	2.71	2.87	-31.66	-32.25
82	-21.38	-21.40	-24.61	-24.36	2.98	3.21	3.10	-31.69	-31.58
83	-21.23	-21.25	-24.21	-24.36	3.13	2.96	3.05	-31.20	-34.69
84	-21.38	-21.40	-24.52	-24.84	3.48	3.30	3.39	-31.66	-31.13
85	-21.23	-21.25	-23.43	-23.46	2.23	2.18	2.21	-32.22	-31.39
86	-21.38	-21.40	-23.54	-24.39	3.01	2.14	2.58	-32.01	-31.86
87	-21.23	-21.25	-23.16	-23.35	2.12	1.91	2.02	-31.38	-30.86
88	-21.38	-21.40	-23.83	-23.69	2.31	2.43	2.37	-30.24	-31.21
89	-21.23	-21.25	-23.64	-23.27	2.04	2.39	2.22	-31.10	-30.94
90	-21.38	-21.40	-23.82	-24.18	2.78	2.58	2.68	-30.81	-31.17
91	-21.23	-21.25	-23.74	-24.20	2.97	2.49	2.73	-31.79	-32.07
92	-21.38	-21.40	-24.62	-24.31	2.93	3.22	3.08	-31.62	-31.69
93	-21.23	-21.25	-23.57	-23.26	2.03	2.32	2.18	-31.48	-30.30
94	-21.38	-21.40	-23.74	-24.20	2.82	2.34	2.58	-30.88	-30.93
95	-21.23	-21.25	-23.58	-23.37	2.14	2.33	2.24	-31.34	-32.78
96	-21.38	-21.40	-23.46	-24.08	2.70	2.06	2.38	-33.23	-31.27
97	-21.23	-21.25	-23.64	-23.64	2.41	2.39	2.40	-31.54	-32.02
98	-21.38	-21.40	-24.04	-24.03	2.66	2.64	2.65	-32.47	-31.63
99	-21.23	-21.25	-23.32	-23.53	2.30	2.07	2.19	-30.72	-31.18
100	-21.38	-21.40	-23.76	-23.48	2.10	2.36	2.23	-31.17	-31.10

Fiber #	1300nm Wavelength								
	Pass / Fail Link Loss, dB						4.62		
	Pass / Fail ORL Loss, dB						-25.00		
	Ref Level dBm		2nd Value dBm		Link Loss dB			ORL Loss	
	A	B	A	B	A to B	B to A	Avg	A	B
1	-23.25	-23.36	-26.70	-26.22	2.07	3.34	3.16	-37.07	-37.30
2	-23.82	-23.88	-26.24	-25.89	2.07	2.38	2.22	-36.60	-37.15
3	-23.25	-23.36	-26.28	-26.16	2.90	2.92	2.91	-37.32	-37.03
4	-23.82	-23.88	-25.74	-25.75	1.93	1.86	1.90	-36.64	-36.99
5	-23.25	-23.36	-25.98	-25.86	2.61	2.62	2.62	-36.41	-36.89
6	-23.82	-23.88	-25.71	-25.45	1.65	1.83	1.73	-37.41	-36.33
7	-23.25	-23.36	-26.23	-26.49	3.24	2.87	3.06	-39.53	-36.52
8	-23.82	-23.88	-26.88	-25.79	1.91	3.00	2.46	-37.45	-38.68
9	-23.25	-23.36	-26.26	-25.94	2.69	2.90	2.80	-39.19	-37.16
10	-23.82	-23.88	-25.80	-26.19	2.37	1.92	2.15	-37.23	-38.09
11	-23.25	-23.36	-26.40	-26.29	3.04	3.04	3.04	-37.61	-37.59
12	-23.82	-23.88	-26.14	-25.67	1.85	2.26	2.06	-37.31	-37.86
13	-23.25	-23.36	-25.81	-26.03	2.76	2.45	2.62	-38.00	-37.53
14	-23.82	-23.88	-25.38	-25.52	1.70	1.50	1.60	-38.08	-37.44
15	-23.25	-23.36	-26.20	-26.63	3.38	2.84	3.11	-37.12	-36.53
16	-23.82	-23.88	-26.47	-25.92	2.10	2.59	2.35	-36.65	-36.97
17	-23.25	-23.36	-25.88	-25.86	2.61	2.52	2.57	-37.74	-37.37
18	-23.82	-23.88	-25.53	-25.23	1.41	1.65	1.53	-37.70	-37.63
19	-23.25	-23.36	-26.17	-26.44	3.19	2.81	3.00	-37.82	-37.30
20	-23.82	-23.88	-26.08	-26.23	2.41	2.20	2.31	-36.71	-38.41
21	-23.25	-23.36	-26.87	-26.38	3.13	3.51	3.32	-37.94	-37.91
22	-23.82	-23.88	-26.42	-26.66	2.84	2.54	2.69	-36.11	-40.00
23	-23.25	-23.36	-25.98	-26.32	3.07	2.62	2.85	-36.90	-37.07
24	-23.82	-23.88	-25.84	-25.77	1.95	1.96	1.96	-37.59	-37.40
25	-23.25	-23.36	-26.06	-26.03	2.78	2.70	2.74	-37.60	-37.10
26	-23.82	-23.88	-25.31	-25.92	2.10	1.43	1.77	-38.10	-37.84
27	-23.25	-23.36	-25.36	-26.22	2.97	2.00	2.49	-37.79	-36.00
28	-23.82	-23.88	-26.17	-25.05	1.23	2.29	1.76	-36.38	-36.22
29	-23.25	-23.36	-25.71	-25.87	2.62	2.35	2.49	-36.45	-36.47
30	-23.82	-23.88	-25.68	-25.22	1.40	1.80	1.60	-35.77	-36.01
31	-23.25	-23.36	-25.68	-26.19	2.94	2.32	2.63	-38.04	-37.13
32	-23.82	-23.88	-26.00	-25.26	1.43	2.12	1.78	-36.92	-36.38
33	-23.25	-23.36	-25.70	-26.10	2.85	2.34	2.60	-37.17	-36.48
34	-23.82	-23.88	-25.95	-25.31	1.49	2.07	1.78	-36.73	-36.29
35	-23.25	-23.36	-25.82	-26.50	3.25	2.46	2.86	-36.43	-36.37
36	-23.82	-23.88	-26.25	-25.34	1.52	2.37	1.95	-37.47	-35.83
37	-23.25	-23.36	-25.75	-26.03	2.78	2.59	2.69	-38.34	-36.56
38	-23.82	-23.88	-25.82	-25.30	1.48	1.94	1.71	-37.58	-36.94
39	-23.25	-23.36	-25.77	-26.43	3.18	2.41	2.80	-37.65	-36.59
40	-23.82	-23.88	-26.35	-25.32	1.50	2.47	1.99	-36.52	-37.54
41	-23.25	-23.36	-26.11	-25.77	2.52	2.75	2.64	-37.17	-36.99
42	-23.82	-23.88	-25.30	-25.59	1.77	1.42	1.60	-36.41	-36.54
43	-23.25	-23.36	-26.17	-26.53	3.28	2.91	3.09	-37.07	-37.90
44	-23.82	-23.88	-26.01	-25.81	1.99	2.13	2.06	-37.98	-39.47
45	-23.25	-23.36	-26.38	-26.22	2.97	3.02	3.00	-37.98	-36.91
46	-23.82	-23.88	-25.88	-26.32	2.50	2.00	2.25	-36.79	-36.41
47	-23.25	-23.36	-26.18	-26.27	3.02	2.82	2.92	-36.08	-37.51
48	-23.82	-23.88	-25.89	-26.02	2.20	1.71	1.96	-38.30	-36.05
49	-23.25	-23.36	-25.93	-26.71	3.46	2.57	3.02	-37.90	-37.05
50	-23.82	-23.88	-25.33	-25.35	1.53	2.45	1.99	-36.65	-37.90
51	-23.25	-23.36	-25.95	-25.79	2.54	2.59	2.57	-36.59	-36.02
52	-23.82	-23.88	-25.26	-25.81	1.99	1.38	1.69	-36.33	-36.22
53	-23.25	-23.36	-25.74	-25.95	2.70	2.38	2.54	-36.29	-36.39
54	-23.82	-23.88	-25.60	-25.36	1.54	1.72	1.63	-36.83	-36.10
55	-23.25	-23.36	-26.33	-26.66	3.30	2.97	3.14	-36.90	-37.19
56	-23.82	-23.88	-26.27	-26.13	2.31	2.39	2.35	-37.90	-35.54
57	-23.25	-23.36	-26.02	-25.96	2.71	2.66	2.69	-36.99	-36.48
58	-23.82	-23.88	-25.72	-25.56	1.74	1.84	1.79	-36.75	-35.58
59	-23.25	-23.36	-25.96	-25.96	2.71	2.60	2.66	-36.17	-36.33
60	-23.82	-23.88	-25.44	-25.84	2.02	1.56	1.79	-36.78	-35.65
61	-23.25	-23.36	-26.24	-26.27	3.02	2.88	2.95	-36.89	-36.58
62	-23.82	-23.88	-25.80	-25.89	2.07	1.92	2.00	-36.61	-36.79
63	-23.25	-23.36	-25.98	-26.26	3.01	2.62	2.82	-37.32	-36.63
64	-23.82	-23.88	-25.93	-25.57	1.75	2.05	1.90	-36.53	-37.59
65	-23.25	-23.36	-26.06	-26.12	2.87	2.70	2.79	-36.11	-36.93
66	-23.82	-23.88	-26.11	-25.67	1.85	2.23	2.04	-36.21	-36.51
67	-23.25	-23.36	-26.70	-26.62	3.37	3.34	3.36	-39.41	-37.95
68	-23.82	-23.88	-27.04	-26.51	2.69	3.16	2.93	-38.61	-39.44
69	-23.25	-23.36	-26.30	-26.03	2.78	2.94	2.86	-36.76	-36.90
70	-23.82	-23.88	-25.92	-25.76	1.94	2.04	1.99	-37.19	-36.42
71	-23.25	-23.36	-26.50	-26.29	3.04	3.14	3.09	-35.86	-37.48
72	-23.82	-23.88	-26.11	-26.23	2.41	2.33	2.37	-37.90	-36.05
73	-23.25	-23.36	-26.37	-26.01	2.76	3.01	2.89	-36.71	-36.66
74	-23.82	-23.88	-25.50	-26.10	2.28	1.62	1.95	-36.68	-36.68
75	-23.25	-23.36	-26.06	-25.99	2.74	2.70	2.72	-36.78	-36.77
76	-23.82	-23.88	-25.78	-25.79	1.97	1.90	1.94	-36.83	-36.43
77	-23.25	-23.36	-27.05	-27.04	3.79	3.69	3.74	-36.23	-35.68
78	-23.82	-23.88	-26.13	-26.98	2.54	2.25	2.40	-35.96	-35.78
79	-23.25	-23.36	-26.81	-26.77	3.52	3.15	3.34	-37.78	-37.19
80	-23.82	-23.88	-26.40	-26.40	2.58	2.52	2.55	-38.02	-36.98
81	-23.25	-23.36	-26.41	-26.42	3.17	3.05	3.11	-36.97	-37.56
82	-23.82	-23.88	-26.00	-25.88	2.06	2.12	2.09	-37.00	-36.89
83	-23.25	-23.36	-25.74	-26.17	2.92	2.38	2.65	-36.61	-40.00
84	-23.82	-23.88	-25.60	-25.66	1.77	1.85	1.81	-37.17	-36.49
85	-23.25	-23.36	-25.95	-26.03	2.78	2.59	2.69	-37.53	-36.70
86	-23.82	-23.88	-25.85	-25.56	1.74	1.97	1.86	-37.32	-37.17
87	-23.25	-23.36	-26.07	-25.67	2.42	2.71	2.57	-36.69	-36.17
88	-23.82	-23.88	-25.33	-25.60	1.76	1.45	1.62	-35.55	-36.52
89	-23.25	-23.36	-26.08	-26.59	3.34	2.72	3.03	-36.41	-36.25
90	-23.82	-23.88	-26.42	-25.74	1.92	2.54	2.23	-36.12	-36.48
91	-23.25	-23.36	-26.26	-25.88	2.63	2.90	2.77	-37.10	-37.38
92	-23.82	-23.88	-26.61	-25.84	2.02	2.73	2.38	-36.93	-37.00
93	-23.25	-23.36	-26.06	-25.83	2.58	2.70	2.64	-36.79	-35.61
94	-23.82	-23.88	-25.37	-25.78	1.96	1.49	1.73	-36.19	-36.24
95	-23.25	-23.36	-27.06	-25.94	2.59	3.70	3.15	-36.65	-38.09
96	-23.82	-23.88	-25.52	-27.29	3.47	1.64	2.56	-38.54	-36.58
97	-23.25	-23.36	-25.95	-25.89	2.64	2.59	2.62	-36.85	-37.33
98	-23.82	-23.88	-25.39	-25.59	1.77	1.51	1.64	-37.78	-36.94
99	-23.25	-23.36	-26.00	-25.83	2.58	2.64	2.61	-36.03	-36.49
100	-23.82	-23.88	-25.86	-25.29	1.47	1.98	1.73	-36.48	-36.50

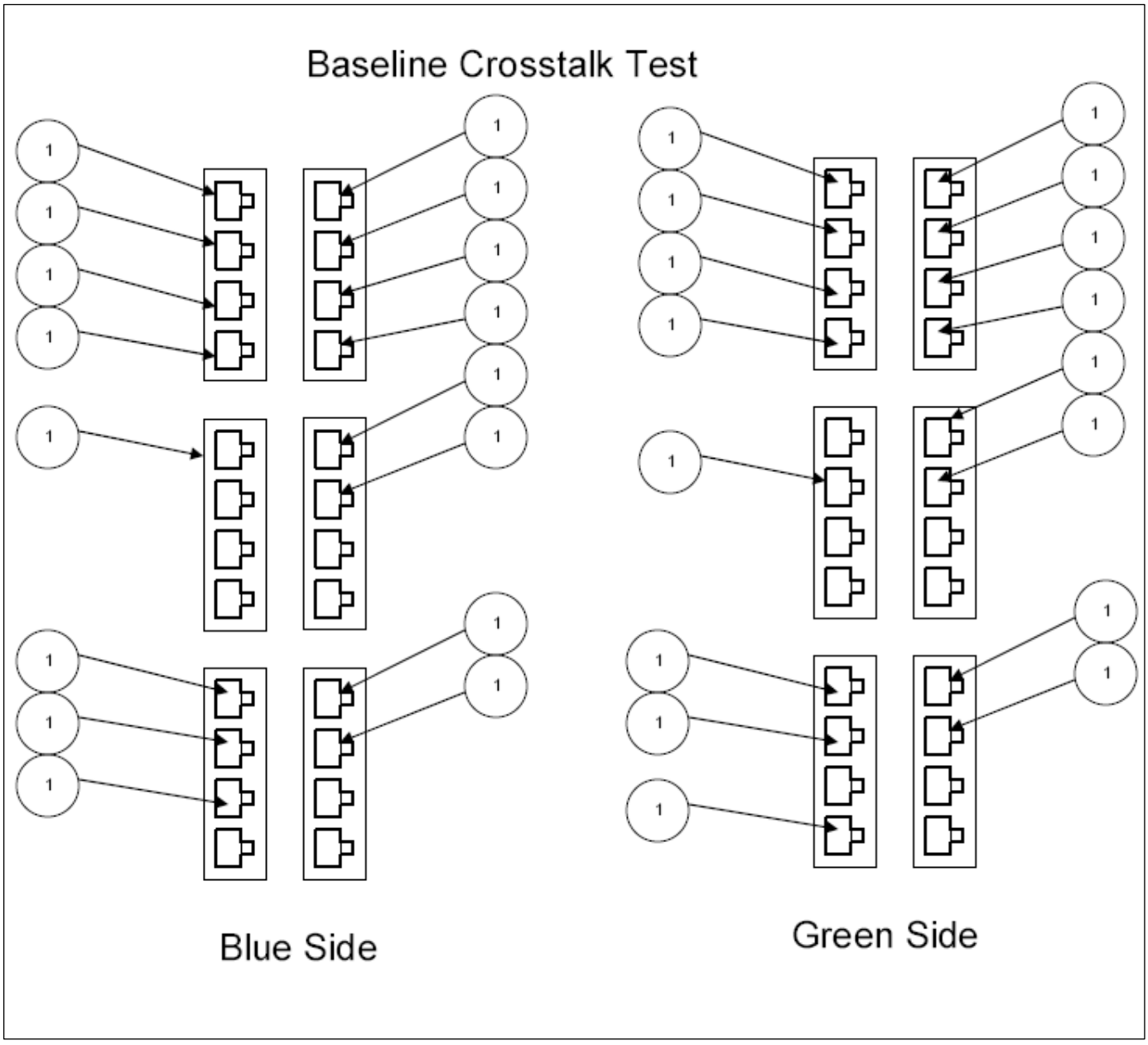
24952 - IL & RL

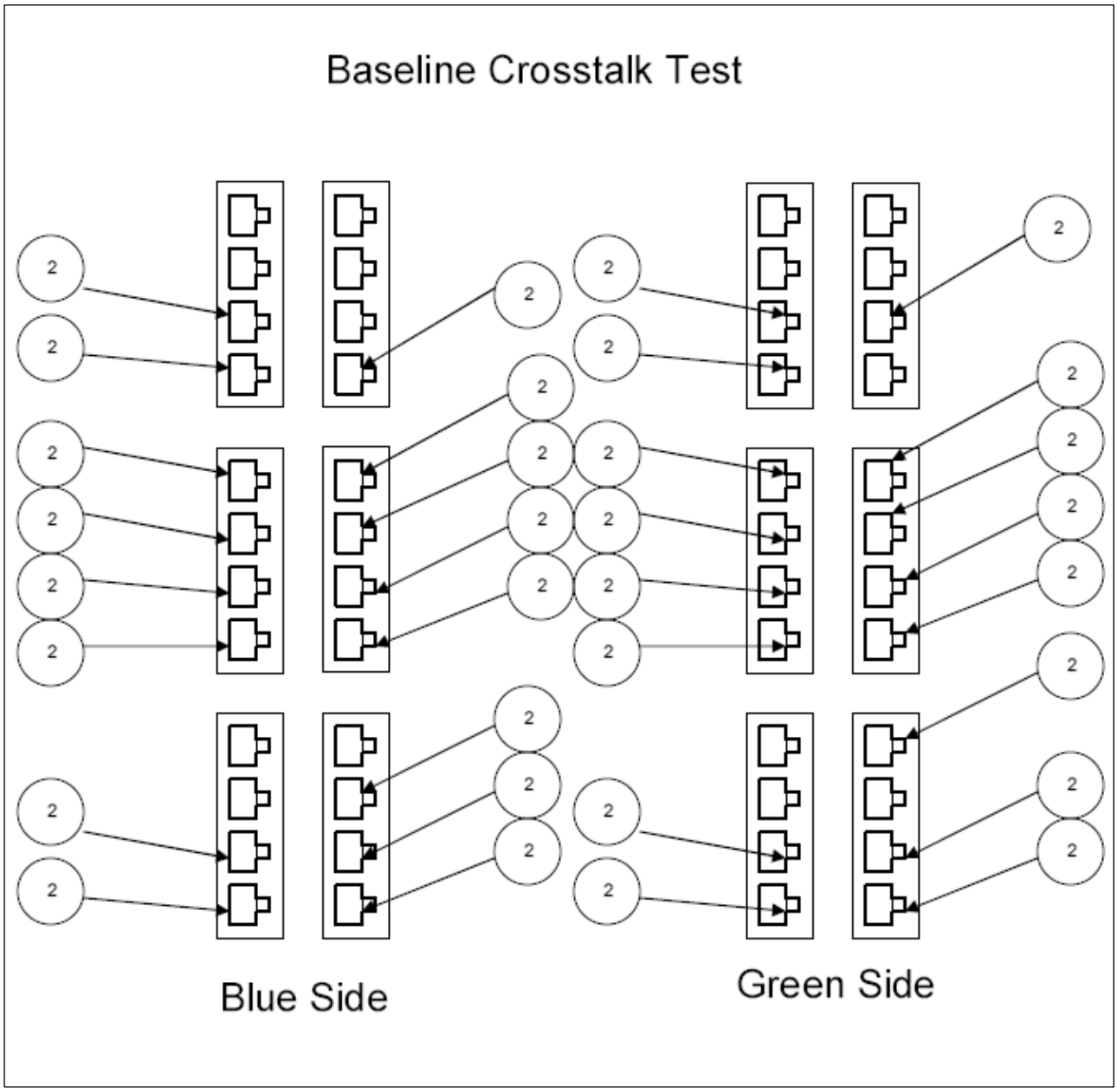
Fiber #	850nm Wavelength								
	Pass / Fail Link Loss, dB						4.69		
	Pass / Fail ORL Loss, dB						-25.00		
	Ref Level dBm		2nd Value dBm		Link Loss dB			ORL Loss	
	A	B	A	B	A to B	B to A	Avg	A	B
101	-21.23	-21.25	-23.72	-23.39	2.16	2.47	2.32	-31.32	-31.63
102	-21.38	-21.40	-23.78	-23.66	2.28	2.38	2.33	-31.37	-31.65
103	-21.23	-21.25	-24.40	-24.48	3.25	3.15	3.20	-31.44	-31.84
104	-21.38	-21.40	-24.83	-24.40	3.02	3.43	3.23	-31.18	-32.41
105	-21.23	-21.25	-23.43	-23.61	2.38	2.18	2.28	-31.87	-31.48
106	-21.38	-21.40	-23.81	-23.56	2.18	2.41	2.30	-31.31	-31.83
107	-21.23	-21.25	-23.73	-23.91	2.66	2.48	2.58	-31.33	-32.28
108	-21.38	-21.40	-24.17	-23.85	2.47	2.77	2.62	-31.64	-31.91
109	-21.23	-21.25	-23.47	-23.09	1.86	2.22	2.04	-31.59	-32.60
110	-21.38	-21.40	-23.47	-23.88	2.50	2.07	2.29	-32.89	-31.06
111	-21.23	-21.25	-24.00	-23.54	2.31	2.75	2.53	-31.02	-32.35
112	-21.38	-21.40	-23.96	-23.91	2.53	2.56	2.55	-32.38	-30.80
113	-21.23	-21.25	-23.40	-23.38	2.15	2.15	2.15	-31.33	-30.34
114	-21.38	-21.40	-23.56	-24.06	2.68	2.16	2.42	-31.17	-31.10
115	-21.23	-21.25	-24.49	-24.23	3.00	3.24	3.12	-31.91	-31.15
116	-21.38	-21.40	-24.88	-24.68	3.30	3.48	3.39	-31.04	-31.26
117	-21.23	-21.25	-23.73	-23.35	2.12	2.48	2.30	-32.23	-32.08
118	-21.38	-21.40	-24.05	-23.88	2.50	2.65	2.58	-31.45	-31.90
119	-21.23	-21.25	-23.93	-23.99	2.76	2.68	2.72	-31.37	-31.99
120	-21.38	-21.40	-24.51	-24.00	2.62	3.11	2.87	-31.52	-31.09
121	-21.23	-21.25	-23.74	-23.45	2.22	2.49	2.36	-31.79	-31.28
122	-21.38	-21.40	-23.77	-24.06	2.68	2.37	2.53	-31.67	-31.39
123	-21.23	-21.25	-23.60	-23.45	2.22	2.35	2.29	-31.55	-32.93
124	-21.38	-21.40	-23.87	-24.02	2.64	2.47	2.56	-31.91	-31.60
125	-21.23	-21.25	-23.59	-23.71	2.48	2.34	2.41	-31.30	-31.63
126	-21.38	-21.40	-23.95	-23.81	2.43	2.55	2.49	-31.14	-31.52
127	-21.23	-21.25	-23.88	-24.36	3.13	2.63	2.88	-32.14	-32.60
128	-21.38	-21.40	-24.89	-24.01	2.63	3.49	3.06	-32.17	-32.47
129	-21.23	-21.25	-23.88	-23.54	2.31	2.63	2.47	-30.98	-31.07
130	-21.38	-21.40	-23.80	-24.03	2.65	2.40	2.53	-31.11	-30.95
131	-21.23	-21.25	-23.01	-23.85	2.62	1.76	2.19	-31.52	-31.56
132	-21.38	-21.40	-24.25	-23.43	2.05	2.85	2.45	-31.39	-31.84
133	-21.23	-21.25	-23.88	-23.71	2.48	2.63	2.56	-31.38	-31.64
134	-21.38	-21.40	-24.04	-23.99	2.61	2.64	2.63	-32.10	-31.59
135	-21.23	-21.25	-24.22	-23.80	2.57	2.97	2.77	-32.10	-34.69
136	-21.38	-21.40	-24.08	-24.16	2.78	2.68	2.73	-32.41	-32.31
137	-21.23	-21.25	-24.12	-23.77	2.54	2.87	2.71	-31.84	-32.86
138	-21.38	-21.40	-24.13	-24.63	3.25	2.73	2.99	-32.30	-31.45
139	-21.23	-21.25	-24.04	-23.83	2.60	2.79	2.70	-32.33	-32.50
140	-21.38	-21.40	-24.31	-24.22	2.84	2.91	2.88	-31.44	-32.89
141	-21.23	-21.25	-24.31	-24.01	2.78	3.06	2.92	-32.28	-31.36
142	-21.38	-21.40	-24.48	-24.59	3.21	3.08	3.15	-31.36	-32.11
143	-21.23	-21.25	-23.98	-24.52	3.29	2.73	3.01	-32.68	-31.99
144	-21.38	-21.40	-24.73	-24.44	3.06	3.33	3.20	-31.83	-32.61

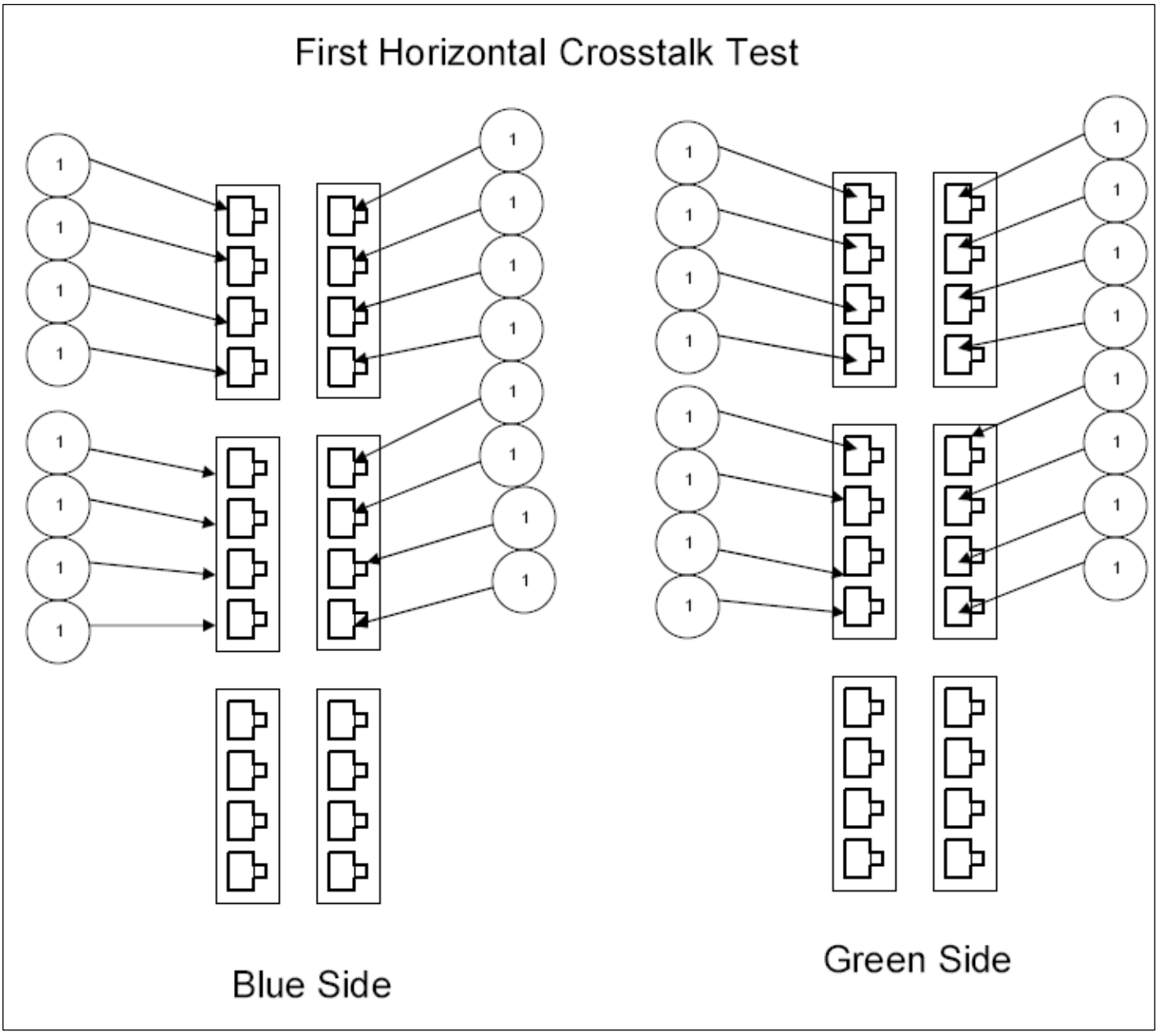
Fiber #	1300nm Wavelength								
	Pass / Fail Link Loss, dB						4.62		
	Pass / Fail ORL Loss, dB						-25.00		
	Ref Level dBm		2nd Value dBm		Link Loss dB			ORL Loss	
	A	B	A	B	A to B	B to A	Avg	A	B
101	-23.25	-23.36	-26.68	-26.81	3.56	3.32	3.44	-36.63	-36.94
102	-23.82	-23.88	-27.05	-26.97	3.25	3.17	3.21	-36.68	-37.24
103	-23.25	-23.36	-25.82	-26.11	2.86	2.46	2.66	-36.75	-37.15
104	-23.82	-23.88	-26.23	-25.23	1.41	2.35	1.88	-36.49	-37.72
105	-23.25	-23.36	-26.05	-26.38	3.13	2.69	2.91	-37.18	-36.79
106	-23.82	-23.88	-26.35	-25.43	1.61	2.47	2.04	-36.62	-37.14
107	-23.25	-23.36	-26.08	-25.49	2.24	2.72	2.48	-36.64	-37.56
108	-23.82	-23.88	-25.67	-25.82	2.00	1.79	1.90	-36.95	-37.22
109	-23.25	-23.36	-26.48	-25.94	2.59	3.12	2.86	-36.90	-37.91
110	-23.82	-23.88	-26.17	-25.56	1.74	2.29	2.02	-38.20	-36.37
111	-23.25	-23.36	-25.83	-25.91	2.66	2.47	2.57	-36.33	-37.66
112	-23.82	-23.88	-26.03	-25.01	1.19	2.15	1.67	-37.69	-36.11
113	-23.25	-23.36	-26.82	-26.78	3.53	3.46	3.50	-36.64	-35.66
114	-23.82	-23.88	-27.31	-26.42	2.60	3.43	3.02	-36.48	-36.41
115	-23.25	-23.36	-26.36	-25.64	2.39	3.00	2.70	-37.72	-36.46
116	-23.82	-23.88	-26.17	-25.91	2.09	2.29	2.19	-36.35	-36.57
117	-23.25	-23.36	-26.27	-26.42	3.17	2.91	3.04	-37.54	-37.39
118	-23.82	-23.88	-26.98	-25.76	1.94	3.10	2.52	-36.76	-37.21
119	-23.25	-23.36	-26.31	-25.90	2.65	2.95	2.80	-36.68	-37.30
120	-23.82	-23.88	-25.61	-25.96	2.14	1.73	1.94	-36.83	-36.40
121	-23.25	-23.36	-26.25	-25.82	2.57	2.89	2.73	-37.10	-36.59
122	-23.82	-23.88	-25.37	-25.86	2.04	1.49	1.77	-36.98	-36.70
123	-23.25	-23.36	-25.99	-26.13	2.88	2.83	2.76	-36.86	-38.24
124	-23.82	-23.88	-25.71	-25.46	1.64	1.83	1.74	-37.22	-36.91
125	-23.25	-23.36	-26.71	-26.93	3.66	3.35	3.52	-36.61	-36.94
126	-23.82	-23.88	-26.83	-26.11	2.29	2.95	2.62	-36.45	-36.83
127	-23.25	-23.36	-26.44	-25.96	2.71	3.08	2.90	-37.46	-38.00
128	-23.82	-23.88	-25.49	-25.98	2.16	1.61	1.89	-37.48	-37.78
129	-23.25	-23.36	-25.86	-26.19	2.94	2.50	2.72	-36.29	-36.38
130	-23.82	-23.88	-26.00	-25.61	1.79	2.12	1.96	-36.42	-36.26
131	-23.25	-23.36	-25.72	-26.26	3.01	2.36	2.69	-36.83	-36.87
132	-23.82	-23.88	-25.98	-25.75	1.93	2.10	2.02	-36.70	-37.16
133	-23.25	-23.36	-26.44	-26.26	3.01	3.08	3.05	-36.69	-36.95
134	-23.82	-23.88	-26.84	-25.76	1.96	1.96	1.96	-37.41	-36.90
135	-23.25	-23.36	-26.83	-26.22	2.97	3.47	3.22	-37.41	-40.00
136	-23.82	-23.88	-25.91	-26.18	2.36	2.03	2.20	-37.72	-37.62
137	-23.25	-23.36	-26.48	-26.29	3.04	3.09	3.07	-37.15	-38.17
138	-23.82	-23.88	-25.99	-26.48	2.66	2.11	2.39	-37.61	-36.76
139	-23.25	-23.36	-26.77	-26.45	3.20	3.41	3.31	-37.64	-37.81
140	-23.82	-23.88	-26.49	-26.37	2.55	2.61	2.58	-36.76	-38.19
141	-23.25	-23.36	-26.71	-26.46	3.21	3.35	3.28	-37.59	-36.67
142	-23.82	-23.88	-26.03	-26.42	2.60	2.15	2.38	-36.67	-37.42
143	-23.25	-23.36	-26.48	-26.86	3.61	3.12	3.37	-37.99	-37.30
144	-23.82	-23.88	-26.36	-26.14	2.32	2.48	2.40	-37.14	-37.92

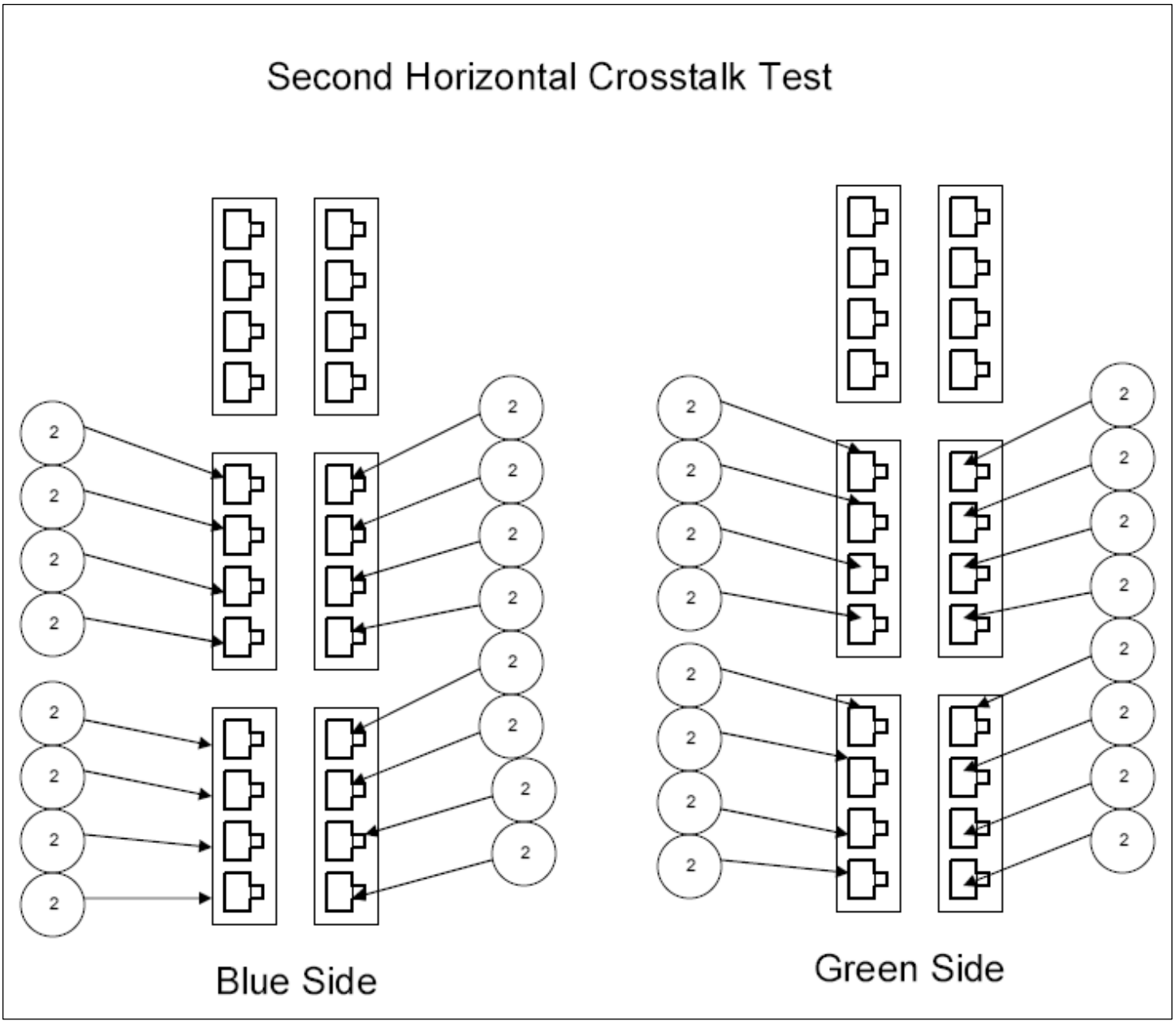
Page 2 of 2

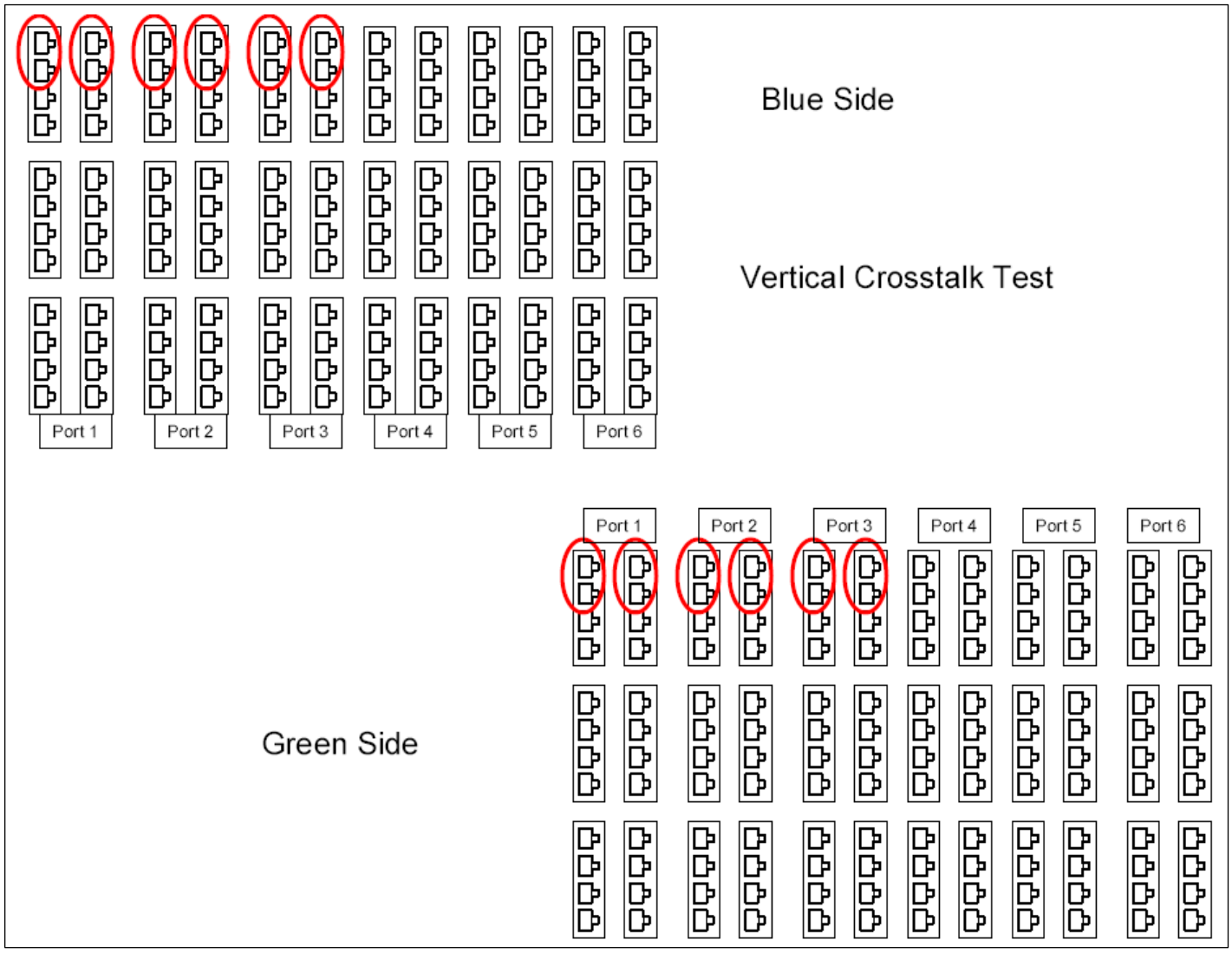
APPENDIX B: CrossTalk Test Matrix and Data

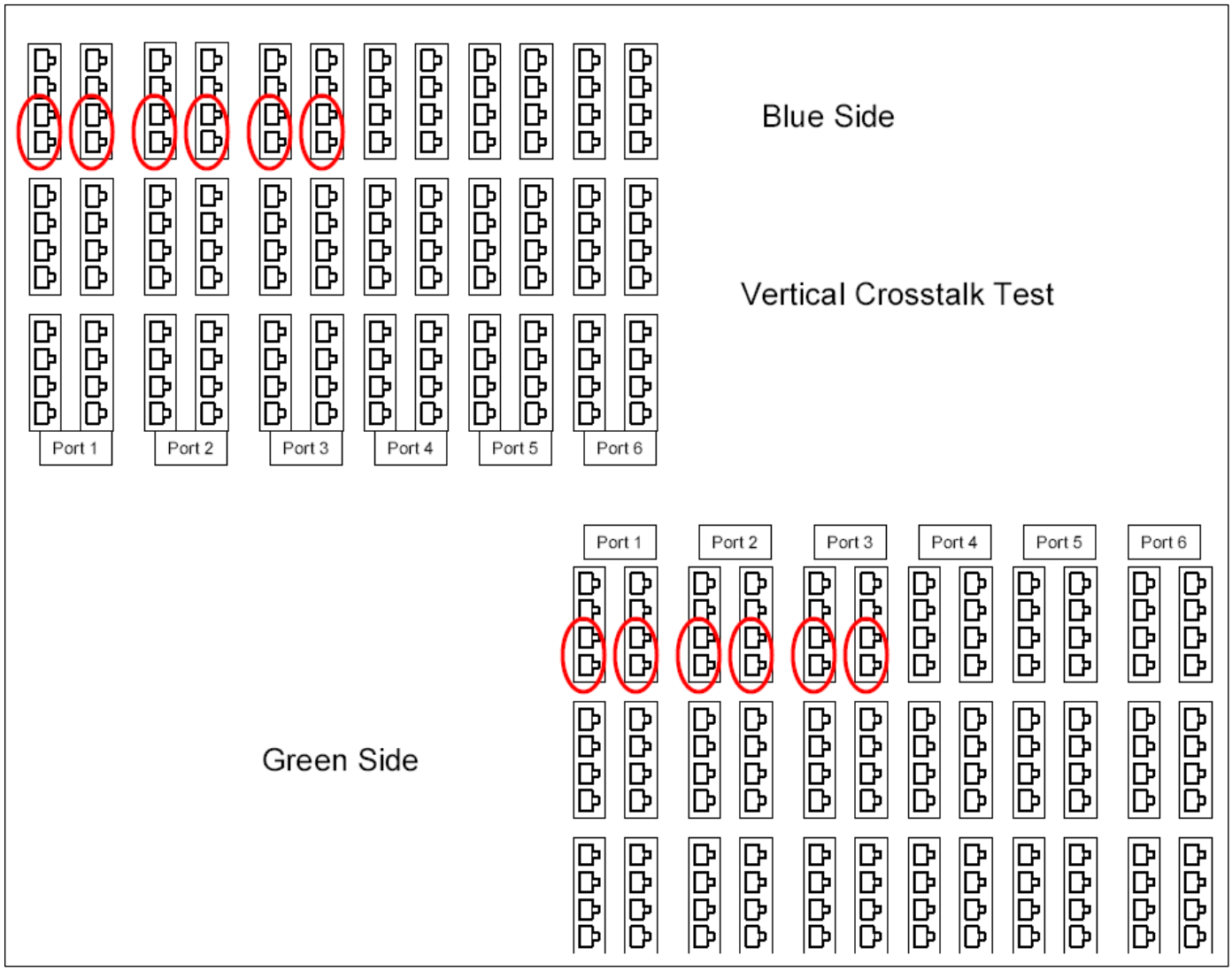












XTalk - Baseline 1 & 2

BASELINE 1 MEASUREMENTS

Port 1 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	X	CH 18	Source
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	X
CH 12	X	CH 24	X

Port 1 - FEXT MEASUREMENTS			
CH 1	-23.60	CH 13	-22.95
CH 2	-23.39	CH 14	-24.18
CH 3	-22.92	CH 15	-24.43
CH 4	-23.89	CH 16	-23.60
CH 5	X	CH 17	-23.36
CH 6	-23.19	CH 18	-23.99
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	-23.63	CH 21	-23.50
CH 10	-23.27	CH 22	-23.77
CH 11	X	CH 23	X
CH 12	-23.64	CH 24	X

Port 4 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	X	CH 18	Source
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	X
CH 12	X	CH 24	X

Port 4 - FEXT MEASUREMENTS			
CH 1	-24.16	CH 13	-23.49
CH 2	-23.8	CH 14	-23.61
CH 3	-23.08	CH 15	-23.57
CH 4	-23.84	CH 16	-23.33
CH 5	X	CH 17	-23.13
CH 6	-23.2	CH 18	-23.23
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	-23.92	CH 21	-23.18
CH 10	-23.91	CH 22	-23.09
CH 11	X	CH 23	X
CH 12	-24.03	CH 24	X

Port 2 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	X	CH 18	Source
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	X
CH 12	X	CH 24	X

Port 2 - FEXT MEASUREMENTS			
CH 1	-23.73	CH 13	-23.46
CH 2	-23.37	CH 14	-23.59
CH 3	-23.12	CH 15	-23.78
CH 4	-23.33	CH 16	-23.33
CH 5	X	CH 17	-24.04
CH 6	-23.12	CH 18	-23.92
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	-23.14	CH 21	-23.61
CH 10	-23.03	CH 22	-23.07
CH 11	X	CH 23	X
CH 12	-23.06	CH 24	X

Port 5 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	X	CH 18	Source
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	X
CH 12	X	CH 24	X

Port 5 - FEXT MEASUREMENTS			
CH 1	-23.87	CH 13	-22.95
CH 2	-23.25	CH 14	-23.47
CH 3	-23.4	CH 15	-23.39
CH 4	-23.12	CH 16	-23.61
CH 5	X	CH 17	-23.57
CH 6	-23.33	CH 18	-23.05
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	-23.28	CH 21	-23.41
CH 10	-22.96	CH 22	-23.03
CH 11	X	CH 23	X
CH 12	-23.38	CH 24	X

Port 3 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	X	CH 18	Source
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	X
CH 12	X	CH 24	X

Port 3 - FEXT MEASUREMENTS			
CH 1	-23.61	CH 13	-23.44
CH 2	-22.95	CH 14	-23.99
CH 3	-22.75	CH 15	-23.88
CH 4	-23.22	CH 16	-23.65
CH 5	X	CH 17	-23.26
CH 6	-22.59	CH 18	-23.32
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	-22.97	CH 21	-23.47
CH 10	-22.82	CH 22	-23.51
CH 11	X	CH 23	X
CH 12	-22.92	CH 24	X

Port 6 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	X	CH 18	Source
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	X
CH 12	X	CH 24	X

Port 6 - FEXT MEASUREMENTS			
CH 1	-23.74	CH 13	-23.66
CH 2	-23.28	CH 14	-23.78
CH 3	-23.06	CH 15	-24.04
CH 4	-23.13	CH 16	-24.31
CH 5	X	CH 17	-23.68
CH 6	-23.62	CH 18	-24.14
CH 7	X	CH 19	X
CH 8	X	CH 20	X
CH 9	-23.21	CH 21	-23.91
CH 10	-23.46	CH 22	-24.02
CH 11	X	CH 23	X
CH 12	-22.84	CH 24	X

BASELINE 2 MEASUREMENTS

Port 1 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	Source	CH 15	X
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 1 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	-24.01	CH 15	-24.56
CH 4	-23.63	CH 16	X
CH 5	-23.07	CH 17	-23.74
CH 6	-23.61	CH 18	-23.96
CH 7	-23.74	CH 19	-24.07
CH 8	-24	CH 20	-23.93
CH 9	X	CH 21	-23.98
CH 10	X	CH 22	X
CH 11	-23.15	CH 23	-24.03
CH 12	-23.77	CH 24	-24.04

Port 4 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	Source	CH 15	X
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 4 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	-23.94	CH 15	-23.64
CH 4	-23.79	CH 16	X
CH 5	-23.37	CH 17	-23.54
CH 6	-23.42	CH 18	-24.06
CH 7	-24.7	CH 19	-24.32
CH 8	-24.77	CH 20	-24.32
CH 9	X	CH 21	-23.86
CH 10	X	CH 22	X
CH 11	-23.69	CH 23	-23.84
CH 12	-24.25	CH 24	-24.25

Port 2 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	Source	CH 15	X
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 2 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	-23.76	CH 15	-23.81
CH 4	-23.16	CH 16	X
CH 5	-23.2	CH 17	-23.59
CH 6	-23.46	CH 18	-24.2
CH 7	-23.99	CH 19	-24.04
CH 8	-23.43	CH 20	-23.99
CH 9	X	CH 21	-23.49
CH 10	X	CH 22	X
CH 11	-23.04	CH 23	-23.75
CH 12	-23.32	CH 24	-24.18

Port 5 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	Source	CH 15	X
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 5 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	-23.75	CH 15	-23.21
CH 4	-23.1	CH 16	X
CH 5	-22.98	CH 17	-23.81
CH 6	-23.34	CH 18	-23.55
CH 7	-24.12	CH 19	-24.35
CH 8	-23.84	CH 20	-24.14
CH 9	X	CH 21	-23.07
CH 10	X	CH 22	X
CH 11	-23.37	CH 23	-23.9
CH 12	-23.35	CH 24	-23.55

Port 3 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	Source	CH 15	X
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 3 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	-23.61	CH 15	-24.02
CH 4	-23.3	CH 16	X
CH 5	-22.84	CH 17	-23.84
CH 6	-22.76	CH 18	-24.16
CH 7	-23.64	CH 19	-23.97
CH 8	-23.76	CH 20	-24.02
CH 9	X	CH 21	-23.45
CH 10	X	CH 22	X
CH 11	-23.36	CH 23	-23.69
CH 12	-23.17	CH 24	-24.09

Port 6 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	Source	CH 15	X
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 6 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	-23.37	CH 15	-24.07
CH 4	-23.06	CH 16	X
CH 5	-23.22	CH 17	-23.88
CH 6	-23.58	CH 18	-24.7
CH 7	-24.05	CH 19	-24.32
CH 8	-23.73	CH 20	-24.19
CH 9	X	CH 21	-23.65
CH 10	X	CH 22	X
CH 11	-23.25	CH 23	-24.41
CH 12	-22.97	CH 24	-24.02

An optical source was placed on each of the indicated channels and power was measured at each adjacent port for both NEXT and FEXT measurements. Output power was observed only on the identified channe pairs.

XTalk - Horizontal 1 & 2

HORIZONTAL 1 MEASUREMENTS

Port 1-1 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 1-8 - FEXT MEASUREMENTS			
CH 1	-23.58	CH 13	-23.16
CH 2	-23.3	CH 14	-23.65
CH 3	-22.97	CH 15	-24.43
CH 4	-23.87	CH 16	-23.49
CH 5	-22.96	CH 17	-23.37
CH 6	-23.05	CH 18	-23.48
CH 7	-23.23	CH 19	-23.63
CH 8	-24.02	CH 20	-24.29
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 4-1 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 4-8 - FEXT MEASUREMENTS			
CH 1	-24.24	CH 13	-23.49
CH 2	-23.75	CH 14	-23.41
CH 3	-23.05	CH 15	-23.59
CH 4	-23.77	CH 16	-23.37
CH 5	-23.86	CH 17	-23.14
CH 6	-23.08	CH 18	-23.23
CH 7	-24.03	CH 19	-24.02
CH 8	-24.47	CH 20	-23.26
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 2-1 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 2-8 - FEXT MEASUREMENTS			
CH 1	-23.87	CH 13	-23.47
CH 2	-23.28	CH 14	-23.43
CH 3	-23.41	CH 15	-23.83
CH 4	-23.26	CH 16	-23.32
CH 5	-23.3	CH 17	-23.16
CH 6	-23.24	CH 18	-23.44
CH 7	-23.52	CH 19	-23.83
CH 8	-23.26	CH 20	-24.35
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 5-1 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 5-8 - FEXT MEASUREMENTS			
CH 1	-23.93	CH 13	-22.95
CH 2	-23.28	CH 14	-23.33
CH 3	-23.51	CH 15	-23.42
CH 4	-23.1	CH 16	-23.64
CH 5	-23.21	CH 17	-23.59
CH 6	-23.22	CH 18	-23.35
CH 7	-23.72	CH 19	-24.17
CH 8	-24	CH 20	-23.86
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 3-1 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 3-8 - FEXT MEASUREMENTS			
CH 1	-23.64	CH 13	-23.39
CH 2	-23.3	CH 14	-23.83
CH 3	-22.8	CH 15	-23.92
CH 4	-23.23	CH 16	-23.66
CH 5	-22.86	CH 17	-23.41
CH 6	-22.68	CH 18	-23.39
CH 7	-23.23	CH 19	-23.57
CH 8	-23.3	CH 20	-24.5
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 6-1 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

Port 6-8 - FEXT MEASUREMENTS			
CH 1	-23.57	CH 13	-23.66
CH 2	-23.41	CH 14	-23.84
CH 3	-23.33	CH 15	-23.94
CH 4	-23.25	CH 16	-24.29
CH 5	-23.61	CH 17	-23.6
CH 6	-23.39	CH 18	-24.17
CH 7	-23.53	CH 19	-24.07
CH 8	-23.87	CH 20	-23.82
CH 9	X	CH 21	X
CH 10	X	CH 22	X
CH 11	X	CH 23	X
CH 12	X	CH 24	X

HORIZONTAL 2 MEASUREMENTS

Port 1-5 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 1-12 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	-23.35	CH 17	-23.26
CH 6	-23.02	CH 18	-24.1
CH 7	-23.41	CH 19	-24
CH 8	-24.12	CH 20	-23.73
CH 9	-23.92	CH 21	-23.86
CH 10	-23.3	CH 22	-23.03
CH 11	-23.43	CH 23	-23.98
CH 12	-23.88	CH 24	-24.89

Port 4-5 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 4-12 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	-23.95	CH 17	-23.1
CH 6	-23.18	CH 18	-23.65
CH 7	-24.26	CH 19	-24.16
CH 8	-24.67	CH 20	-23.14
CH 9	-24.39	CH 21	-23.26
CH 10	-23.95	CH 22	-23.38
CH 11	-23.63	CH 23	-23.81
CH 12	-24.19	CH 24	-24.08

Port 2-5 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 2-12 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	-23.66	CH 17	-23.18
CH 6	-23.02	CH 18	-23.96
CH 7	-23.87	CH 19	-23.93
CH 8	-23.59	CH 20	-23.69
CH 9	-23.67	CH 21	-23.68
CH 10	-23.29	CH 22	-23.56
CH 11	-22.95	CH 23	-23.74
CH 12	-23.16	CH 24	-24.25

Port 5-5 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 5-12 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	-23.67	CH 17	-23.46
CH 6	-23.15	CH 18	-23.36
CH 7	-23.8	CH 19	-24.34
CH 8	-23.99	CH 20	-24.23
CH 9	-23.55	CH 21	-23.27
CH 10	-23.1	CH 22	23.2
CH 11	-23.33	CH 23	-23.87
CH 12	-23.41	CH 24	-23.61

Port 3-5 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 3-12 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	-23.27	CH 17	-23.58
CH 6	-22.68	CH 18	-23.96
CH 7	-23.6	CH 19	-23.75
CH 8	-23.53	CH 20	-23.97
CH 9	-23.27	CH 21	-24.54
CH 10	-23.35	CH 22	-23.83
CH 11	-23.25	CH 23	-23.42
CH 12	-23.07	CH 24	-24.24

Port 6-5 - NEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 6-12 - FEXT MEASUREMENTS			
CH 1	X	CH 13	X
CH 2	X	CH 14	X
CH 3	X	CH 15	X
CH 4	X	CH 16	X
CH 5	-23.9	CH 17	-23.9
CH 6	-23.53	CH 18	-24.4
CH 7	-23.81	CH 19	-23.99
CH 8	-23.76	CH 20	-24.12
CH 9	-23.28	CH 21	-24.03
CH 10	-23.57	CH 22	-24.11
CH 11	-23.22	CH 23	-24.5
CH 12	-22.88	CH 24	-24.82

An optical source was placed on each of the indicated channels and power was measured at each adjacent port for both NEXT and FEXT measurements. Output power was observed only on the identified channel pairs.

XTalk - Vertical Group

VERTICAL MEASUREMENTS

Port 1 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source

Port 1 - FEXT MEASUREMENTS			
CH 1	-23.68	CH 13	-22.77
CH 2	-23.26	CH 14	-23.24

Port 2 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source

Port 2 - FEXT MEASUREMENTS			
CH 1	-23.48	CH 13	-22.93
CH 2	-23.3	CH 14	-23.09

Port 3 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source

Port 3 - FEXT MEASUREMENTS			
CH 1	-23.28	CH 13	-23.42
CH 2	-23.3	CH 14	-23.61

Port 4 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source

Port 4 - FEXT MEASUREMENTS			
CH 1	-24.18	CH 13	-23.19
CH 2	-23.74	CH 14	-23.07

Port 5 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source

Port 5 - FEXT MEASUREMENTS			
CH 1	-23.65	CH 13	-22.61
CH 2	-23.38	CH 14	-22.99

Port 6 - NEXT MEASUREMENTS			
CH 1	Source	CH 13	Source
CH 2	Source	CH 14	Source

Port 6 - FEXT MEASUREMENTS			
CH 1	-23.44	CH 13	-23.82
CH 2	-23.88	CH 14	-23.76

Port 1 - NEXT MEASUREMENTS			
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source

Port 1 - FEXT MEASUREMENTS			
CH 3	-23.69	CH 15	-24.18
CH 4	-23.74	CH 16	-23.47

Port 2 - NEXT MEASUREMENTS			
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source

Port 2 - FEXT MEASUREMENTS			
CH 3	-23.87	CH 15	-23.38
CH 4	-23.19	CH 16	-23.16

Port 3 - NEXT MEASUREMENTS			
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source

Port 3 - FEXT MEASUREMENTS			
CH 3	-23.08	CH 15	-23.88
CH 4	-23.52	CH 16	-23.89

Port 4 - NEXT MEASUREMENTS			
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source

Port 4 - FEXT MEASUREMENTS			
CH 3	-23.64	CH 15	-23.03
CH 4	-23.57	CH 16	-23.26

Port 5 - NEXT MEASUREMENTS			
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source

Port 5 - FEXT MEASUREMENTS			
CH 3	-23.57	CH 15	-22.65
CH 4	-23.05	CH 16	-23.39

Port 6 - NEXT MEASUREMENTS			
CH 3	Source	CH 15	Source
CH 4	Source	CH 16	Source

Port 6 - FEXT MEASUREMENTS			
CH 3	-23.16	CH 15	-24.38
CH 4	-23.41	CH 16	-24.41

Port 1 - NEXT MEASUREMENTS			
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source

Port 1 - FEXT MEASUREMENTS			
CH 5	-23.45	CH 17	-22.81
CH 6	-23.26	CH 18	-23.67

Port 2 - NEXT MEASUREMENTS			
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source

Port 2 - FEXT MEASUREMENTS			
CH 5	-23.19	CH 17	-22.87
CH 6	-23.01	CH 18	-23.59

Port 3 - NEXT MEASUREMENTS			
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source

Port 3 - FEXT MEASUREMENTS			
CH 5	-22.88	CH 17	-23.49
CH 6	-22.97	CH 18	-23.77

Port 4 - NEXT MEASUREMENTS			
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source

Port 4 - FEXT MEASUREMENTS			
CH 5	-23.72	CH 17	-22.9
CH 6	-23.18	CH 18	-23.34

Port 5 - NEXT MEASUREMENTS			
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source

Port 5 - FEXT MEASUREMENTS			
CH 5	-23.6	CH 17	-23.2
CH 6	-23.16	CH 18	-23.08

Port 6 - NEXT MEASUREMENTS			
CH 5	Source	CH 17	Source
CH 6	Source	CH 18	Source

Port 6 - FEXT MEASUREMENTS			
CH 5	-23.58	CH 17	-23.98
CH 6	-23.81	CH 18	-24.34

Port 1 - NEXT MEASUREMENTS			
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source

Port 1 - FEXT MEASUREMENTS			
CH 7	-23.87	CH 19	-23.62
CH 8	-24.14	CH 20	-23.64

Port 2 - NEXT MEASUREMENTS			
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source

Port 2 - FEXT MEASUREMENTS			
CH 7	-23.56	CH 19	-23.16
CH 8	-23.28	CH 20	-23.54

Port 3 - NEXT MEASUREMENTS			
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source

Port 3 - FEXT MEASUREMENTS			
CH 7	-23.58	CH 19	-23.64
CH 8	-23.79	CH 20	-23.99

Port 4 - NEXT MEASUREMENTS			
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source

Port 4 - FEXT MEASUREMENTS			
CH 7	-24.78	CH 19	-23.71
CH 8	-24.42	CH 20	-23.59

Port 5 - NEXT MEASUREMENTS			
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source

Port 5 - FEXT MEASUREMENTS			
CH 7	-24.46	CH 19	-23.87
CH 8	-23.82	CH 20	-24.04

Port 6 - NEXT MEASUREMENTS			
CH 7	Source	CH 19	Source
CH 8	Source	CH 20	Source

Port 6 - FEXT MEASUREMENTS			
CH 7	-24.03	CH 19	-24.1
CH 8	-24.47	CH 20	-24.22

Port 1 - NEXT MEASUREMENTS			
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source

Port 1 - FEXT MEASUREMENTS			
CH 9	-24.19	CH 21	-23.82
CH 10	-23.31	CH 22	-23.94

Port 2 - NEXT MEASUREMENTS			
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source

Port 2 - FEXT MEASUREMENTS			
CH 9	-23.54	CH 21	-23.21
CH 10	-23.08	CH 22	-22.94

Port 3 - NEXT MEASUREMENTS			
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source

Port 3 - FEXT MEASUREMENTS			
CH 9	-22.91	CH 21	-24.35
CH 10	-23.45	CH 22	-23.89

Port 4 - NEXT MEASUREMENTS			
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source

Port 4 - FEXT MEASUREMENTS			
CH 9	-24.56	CH 21	-23.2
CH 10	-23.92	CH 22	-23.58

Port 5 - NEXT MEASUREMENTS			
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source

Port 5 - FEXT MEASUREMENTS			
CH 9	-23.67	CH 21	-23.13
CH 10	-23.13	CH 22	-23.46

Port 6 - NEXT MEASUREMENTS			
CH 9	Source	CH 21	Source
CH 10	Source	CH 22	Source

Port 6 - FEXT MEASUREMENTS			
CH 9	-23.35	CH 21	-24.21
CH 10	-24.16	CH 22	-24.57

Port 1 - NEXT MEASUREMENTS			
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 1 - FEXT MEASUREMENTS			
CH 11	-24.22	CH 23	-23.84
CH 12	-23.59	CH 24	-24.48

Port 2 - NEXT MEASUREMENTS			
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 2 - FEXT MEASUREMENTS			
CH 11	-23.67	CH 23	-23.27
CH 12	-22.97	CH 24	-23.1

Port 3 - NEXT MEASUREMENTS			
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 3 - FEXT MEASUREMENTS			
CH 11	-23.44	CH 23	-23.62
CH 12	-23.49	CH 24	-23.68

Port 4 - NEXT MEASUREMENTS			
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 4 - FEXT MEASUREMENTS			
CH 11	-24.35	CH 23	-23.48
CH 12	-24.01	CH 24	-23.61

Port 5 - NEXT MEASUREMENTS			
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 5 - FEXT MEASUREMENTS			
CH 11	-23.75	CH 23	-23.55
CH 12	-23.26	CH 24	-23.87

Port 6 - NEXT MEASUREMENTS			
CH 11	Source	CH 23	Source
CH 12	Source	CH 24	Source

Port 6 - FEXT MEASUREMENTS			
CH 11	-23.61	CH 23	-24.7
CH 12	-23.04	CH 24	-23.53

An optical source was placed on each of the indicated channels and power was measured at each adjacent port for both NEXT and FEXT measurements. Output power was observed only on the identified channel pairs.