

Cable ID	Summary	Test Limit	Length	Headroom	Date / Time
TS5-023/1	PASS	ISO 14763-3:2014	92 ft	1.81 dB (Loss Margin)	02/25/2020 09:34 AM
TS5-023/2	PASS	ISO 14763-3:2014	92 ft	2.01 dB (Loss Margin)	02/25/2020 09:34 AM
TS5-024/1	PASS	ISO 14763-3:2014	92 ft	1.95 dB (Loss Margin)	02/25/2020 09:37 AM
TS5-024/2	PASS	ISO 14763-3:2014	92 ft	1.95 dB (Loss Margin)	02/25/2020 09:37 AM
TS5-025/1	PASS	ISO 14763-3:2014	470 ft	1.62 dB (Loss Margin)	02/25/2020 09:42 AM
TS5-025/2	PASS	ISO 14763-3:2014	470 ft	1.62 dB (Loss Margin)	02/25/2020 09:42 AM
TS5-026/1	PASS	ISO 14763-3:2014	470 ft	1.74 dB (Loss Margin)	02/25/2020 09:44 AM
TS5-026/2	PASS	ISO 14763-3:2014	470 ft	1.74 dB (Loss Margin)	02/25/2020 09:44 AM
TS-001/1	PASS	ISO 14763-3:2014	44 ft	2.02 dB (Loss Margin)	02/27/2020 09:56 PM
TS-001/2	PASS	ISO 14763-3:2014	44 ft	2.02 dB (Loss Margin)	02/27/2020 09:56 PM
TS-002/1	PASS	ISO 14763-3:2014	46 ft	1.63 dB (Loss Margin)	02/27/2020 09:57 PM
TS-002/2	PASS	ISO 14763-3:2014	46 ft	1.63 dB (Loss Margin)	02/27/2020 09:57 PM
TS-003/1	PASS	ISO 14763-3:2014	44 ft	1.97 dB (Loss Margin)	02/27/2020 09:59 PM
TS-003/2	PASS	ISO 14763-3:2014	44 ft	1.97 dB (Loss Margin)	02/27/2020 09:59 PM
TS-004/1	PASS	ISO 14763-3:2014	44 ft	1.97 dB (Loss Margin)	02/27/2020 10:00 PM
TS-004/2	PASS	ISO 14763-3:2014	44 ft	1.98 dB (Loss Margin)	02/27/2020 10:00 PM
TS-005/1	PASS	ISO 14763-3:2014	73 ft	1.59 dB (Loss Margin)	02/27/2020 10:01 PM
TS-005/2	PASS	ISO 14763-3:2014	73 ft	1.60 dB (Loss Margin)	02/27/2020 10:01 PM
TS-006/1	PASS	ISO 14763-3:2014	74 ft	1.01 dB (Loss Margin)	02/27/2020 10:03 PM
TS-006/2	PASS	ISO 14763-3:2014	74 ft	1.01 dB (Loss Margin)	02/27/2020 10:03 PM
TS-007/1	PASS	ISO 14763-3:2014	71 ft	1.67 dB (Loss Margin)	02/27/2020 10:05 PM
TS-007/2	PASS	ISO 14763-3:2014	71 ft	1.68 dB (Loss Margin)	02/27/2020 10:05 PM
TS-008/1	PASS	ISO 14763-3:2014	71 ft	1.68 dB (Loss Margin)	02/27/2020 10:06 PM
TS-008/2	PASS	ISO 14763-3:2014	71 ft	1.68 dB (Loss Margin)	02/27/2020 10:06 PM
TS-009/1	PASS	ISO 14763-3:2014	69 ft	1.54 dB (Loss Margin)	02/27/2020 10:07 PM
TS-009/2	PASS	ISO 14763-3:2014	69 ft	1.55 dB (Loss Margin)	02/27/2020 10:07 PM
TS-010/1	PASS	ISO 14763-3:2014	69 ft	1.59 dB (Loss Margin)	02/27/2020 10:08 PM
TS-010/2	PASS	ISO 14763-3:2014	69 ft	1.59 dB (Loss Margin)	02/27/2020 10:08 PM
TS-011/1	PASS	ISO 14763-3:2014	69 ft	1.26 dB (Loss Margin)	02/27/2020 10:14 PM
TS-011/2	PASS	ISO 14763-3:2014	69 ft	1.26 dB (Loss Margin)	02/27/2020 10:14 PM
TS-012/1	PASS	ISO 14763-3:2014	69 ft	1.26 dB (Loss Margin)	02/27/2020 10:15 PM
TS-012/2	PASS	ISO 14763-3:2014	69 ft	1.26 dB (Loss Margin)	02/27/2020 10:15 PM
TS-013/1	PASS	ISO 14763-3:2014	69 ft	1.25 dB (Loss Margin)	02/27/2020 10:17 PM
TS-013/2	PASS	ISO 14763-3:2014	69 ft	1.26 dB (Loss Margin)	02/27/2020 10:17 PM
TS-014/1	PASS	ISO 14763-3:2014	69 ft	1.25 dB (Loss Margin)	02/27/2020 10:18 PM
TS-014/2	PASS	ISO 14763-3:2014	69 ft	1.25 dB (Loss Margin)	02/27/2020 10:18 PM
TS-015/1	PASS	ISO 14763-3:2014	65 ft	1.88 dB (Loss Margin)	02/27/2020 10:26 PM
TS-015/2	PASS	ISO 14763-3:2014	65 ft	1.88 dB (Loss Margin)	02/27/2020 10:26 PM
TS-016/1	PASS	ISO 14763-3:2014	65 ft	1.88 dB (Loss Margin)	02/27/2020 10:27 PM
TS-016/2	PASS	ISO 14763-3:2014	65 ft	1.88 dB (Loss Margin)	02/27/2020 10:27 PM
TS-017/1	PASS	ISO 14763-3:2014	65 ft	1.89 dB (Loss Margin)	02/27/2020 10:28 PM
TS-017/2	PASS	ISO 14763-3:2014	65 ft	1.89 dB (Loss Margin)	02/27/2020 10:28 PM
TS-018/1	PASS	ISO 14763-3:2014	65 ft	1.59 dB (Loss Margin)	02/27/2020 10:29 PM
TS-018/2	PASS	ISO 14763-3:2014	65 ft	1.59 dB (Loss Margin)	02/27/2020 10:29 PM
TS-019/1	PASS	ISO 14763-3:2014	64 ft	1.88 dB (Loss Margin)	02/27/2020 10:30 PM
TS-019/2	PASS	ISO 14763-3:2014	64 ft	1.88 dB (Loss Margin)	02/27/2020 10:30 PM
TS-020/1	PASS	ISO 14763-3:2014	64 ft	1.87 dB (Loss Margin)	02/27/2020 10:31 PM
TS-020/2	PASS	ISO 14763-3:2014	64 ft	1.87 dB (Loss Margin)	02/27/2020 10:31 PM
TS-021/1	PASS	ISO 14763-3:2014	57 ft	1.50 dB (Loss Margin)	02/27/2020 10:33 PM
TS-021/2	PASS	ISO 14763-3:2014	57 ft	1.50 dB (Loss Margin)	02/27/2020 10:33 PM
TS-022/1	PASS	ISO 14763-3:2014	57 ft	0.33 dB (Loss Margin)	02/27/2020 10:46 PM
TS-022/2	PASS	ISO 14763-3:2014	57 ft	0.32 dB (Loss Margin)	02/27/2020 10:46 PM
TS-023/1	PASS	ISO 14763-3:2014	56 ft	0.84 dB (Loss Margin)	02/27/2020 10:47 PM
TS-023/2	PASS	ISO 14763-3:2014	56 ft	0.84 dB (Loss Margin)	02/27/2020 10:47 PM
TS-024/1	PASS	ISO 14763-3:2014	55 ft	1.51 dB (Loss Margin)	02/27/2020 10:47 PM
TS-024/2	PASS	ISO 14763-3:2014	55 ft	1.51 dB (Loss Margin)	02/27/2020 10:47 PM
TS-025/1	PASS	ISO 14763-3:2014	53 ft	1.77 dB (Loss Margin)	02/27/2020 10:48 PM
TS-025/2	PASS	ISO 14763-3:2014	53 ft	1.77 dB (Loss Margin)	02/27/2020 10:48 PM
TS-026/1	PASS	ISO 14763-3:2014	52 ft	1.55 dB (Loss Margin)	02/27/2020 10:49 PM
TS-026/2	PASS	ISO 14763-3:2014	52 ft	1.55 dB (Loss Margin)	02/27/2020 10:49 PM
TS-027/1	PASS	ISO 14763-3:2014	46 ft	1.45 dB (Loss Margin)	02/27/2020 10:51 PM
TS-027/2	PASS	ISO 14763-3:2014	46 ft	1.45 dB (Loss Margin)	02/27/2020 10:51 PM
TS-028/1	PASS	ISO 14763-3:2014	48 ft	1.23 dB (Loss Margin)	02/27/2020 10:52 PM
TS-028/2	PASS	ISO 14763-3:2014	48 ft	1.23 dB (Loss Margin)	02/27/2020 10:52 PM
TS-029/1	PASS	ISO 14763-3:2014	46 ft	1.53 dB (Loss Margin)	02/27/2020 10:52 PM
TS-029/2	PASS	ISO 14763-3:2014	46 ft	1.53 dB (Loss Margin)	02/27/2020 10:52 PM
TS-030/1	PASS	ISO 14763-3:2014	44 ft	1.54 dB (Loss Margin)	02/27/2020 10:53 PM
TS-030/2	PASS	ISO 14763-3:2014	44 ft	1.54 dB (Loss Margin)	02/27/2020 10:53 PM
24C-NSWAN FDB/1	PASS	ISO 14763-3:2014	46 ft	1.93 dB (Loss Margin)	02/28/2020 08:05 AM
24C-NSWAN FDB/2	PASS	ISO 14763-3:2014	46 ft	1.94 dB (Loss Margin)	02/28/2020 08:05 AM
24C-NSWAN FDB/3	PASS	ISO 14763-3:2014	46 ft	2.05 dB (Loss Margin)	02/28/2020 08:06 AM
24C-NSWAN FDB/4	PASS	ISO 14763-3:2014	46 ft	2.05 dB (Loss Margin)	02/28/2020 08:06 AM
24C-NSWAN FDB/5	PASS	ISO 14763-3:2014	46 ft	2.07 dB (Loss Margin)	02/28/2020 08:07 AM
24C-NSWAN FDB/6	PASS	ISO 14763-3:2014	46 ft	2.07 dB (Loss Margin)	02/28/2020 08:07 AM
24C-NSWAN FDB/7	PASS	ISO 14763-3:2014	46 ft	1.96 dB (Loss Margin)	02/28/2020 08:08 AM
24C-NSWAN FDB/8	PASS	ISO 14763-3:2014	46 ft	1.97 dB (Loss Margin)	02/28/2020 08:08 AM
24C-NSWAN FDB/9	PASS	ISO 14763-3:2014	46 ft	1.98 dB (Loss Margin)	02/28/2020 08:09 AM

Cable ID	Summary	Test Limit	Length	Headroom	Date / Time
24C-NSWAN FDB/10	PASS	ISO 14763-3:2014	46 ft	1.98 dB (Loss Margin)	02/28/2020 08:09 AM
24C-NSWAN FDB/11	PASS	ISO 14763-3:2014	48 ft	1.48 dB (Loss Margin)	02/28/2020 08:14 AM
24C-NSWAN FDB/12	PASS	ISO 14763-3:2014	48 ft	1.48 dB (Loss Margin)	02/28/2020 08:14 AM
24C-NSWAN FDB/13	PASS	ISO 14763-3:2014	48 ft	1.48 dB (Loss Margin)	02/28/2020 08:15 AM
24C-NSWAN FDB/14	PASS	ISO 14763-3:2014	48 ft	1.49 dB (Loss Margin)	02/28/2020 08:15 AM
24C-NSWAN FDB/15	PASS	ISO 14763-3:2014	48 ft	1.38 dB (Loss Margin)	02/28/2020 08:15 AM
24C-NSWAN FDB/16	PASS	ISO 14763-3:2014	48 ft	1.39 dB (Loss Margin)	02/28/2020 08:15 AM
24C-NSWAN FDB/17	PASS	ISO 14763-3:2014	48 ft	1.52 dB (Loss Margin)	02/28/2020 08:16 AM
24C-NSWAN FDB/18	PASS	ISO 14763-3:2014	48 ft	1.52 dB (Loss Margin)	02/28/2020 08:16 AM
24C-NSWAN FDB/19	PASS	ISO 14763-3:2014	48 ft	1.49 dB (Loss Margin)	02/28/2020 08:16 AM
24C-NSWAN FDB/20	PASS	ISO 14763-3:2014	48 ft	1.49 dB (Loss Margin)	02/28/2020 08:16 AM
24C-NSWAN FDB/21	PASS	ISO 14763-3:2014	47 ft	1.47 dB (Loss Margin)	02/28/2020 08:18 AM
24C-NSWAN FDB/22	PASS	ISO 14763-3:2014	47 ft	1.47 dB (Loss Margin)	02/28/2020 08:18 AM
24C-NSWAN FDB/23	PASS	ISO 14763-3:2014	49 ft	1.47 dB (Loss Margin)	02/28/2020 08:18 AM
24C-NSWAN FDB/24	PASS	ISO 14763-3:2014	49 ft	1.47 dB (Loss Margin)	02/28/2020 08:18 AM

Total Length:	6946 ft
Number of Reports:	92
Number of Passing Reports:	92
Number of Failing Reports:	0
Number of Warning Reports:	0
Documentation Only:	0



Cable ID: TS5-023/1

Date / Time: 02/25/2020 09:34:50 AM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/25/2020 09:34:50 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	139	
Length ft	92	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.41	0.31
Margin (dB)	2.35	2.29
	1.94	1.98
Reference (dBm)	-20.01	-20.43

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/25/2020 09:29:47 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.51	0.48
Limit (dB)	2.35	2.29
Margin (dB)	1.84	1.81
Reference (dBm)	-19.32	-19.57

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS5-023/2

Date / Time: 02/25/2020 09:34:50 AM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/25/2020 09:34:50 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	139	
Length ft	92	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.34	0.22
Margin (dB)	2.35	2.29
	2.01	2.07
Reference (dBm)	-20.01	-20.43

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/25/2020 09:29:47 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.34	0.28
Limit (dB)	2.35	2.29
Margin (dB)	2.01	2.01
Reference (dBm)	-19.32	-19.57

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS5-024/1

Date / Time: 02/25/2020 09:37:30 AM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/25/2020 09:37:30 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	139	
Length ft	92	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.29	0.11
Margin (dB)	2.35	2.29
	2.06	2.18
Reference (dBm)	-20.01	-20.43

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/25/2020 09:29:47 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.40	0.32
Limit (dB)	2.35	2.29
Margin (dB)	1.95	1.97
Reference (dBm)	-19.32	-19.57

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS5-024/2

Date / Time: 02/25/2020 09:37:30 AM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/25/2020 09:37:30 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	139	
Length ft	92	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.28	0.11
Margin (dB)	2.35	2.29
	2.07	2.18
Reference (dBm)	-20.01	-20.43

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/25/2020 09:29:47 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.40	0.31
Limit (dB)	2.35	2.29
Margin (dB)	1.95	1.98
Reference (dBm)	-19.32	-19.57

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS5-025/1

Date / Time: 02/25/2020 09:42:38 AM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/25/2020 09:42:38 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	713	
Length ft	470	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.89	0.47
Margin (dB)	2.75	2.47
	1.86	2.00
Reference (dBm)	-20.01	-20.43

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/25/2020 09:29:47 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.13	0.84
Limit (dB)	2.75	2.47
Margin (dB)	1.62	1.63
Reference (dBm)	-19.32	-19.57

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	ATM155	ATM155SWL
ATM52	ATM622 Fiber Optic	ATM622SWL Fiber Optic
FDDI Fiber Optic	Fibre Channel 100-M6-SN-I	Fibre Channel 133
Fibre Channel 200-M6-SN-I	Fibre Channel 266	Fibre Channel 266SWL



Cable ID: TS5-025/2

Date / Time: 02/25/2020 09:42:38 AM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/25/2020 09:42:38 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	713	
Length ft	470	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.87	0.48
Margin (dB)	2.75	2.47
	1.88	1.99
Reference (dBm)	-20.01	-20.43

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/25/2020 09:29:47 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.13	0.83
Limit (dB)	2.75	2.47
Margin (dB)	1.62	1.64
Reference (dBm)	-19.32	-19.57

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	ATM155	ATM155SWL
ATM52	ATM622 Fiber Optic	ATM622SWL Fiber Optic
FDDI Fiber Optic	Fibre Channel 100-M6-SN-I	Fibre Channel 133
Fibre Channel 200-M6-SN-I	Fibre Channel 266	Fibre Channel 266SWL



Cable ID: TS5-026/1

Date / Time: 02/25/2020 09:44:00 AM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/25/2020 09:44:00 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	712	
Length ft	470	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.99	0.56
Margin (dB)	2.75	2.46
	1.76	1.90
Reference (dBm)	-20.01	-20.43

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/25/2020 09:29:47 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.01	0.70
Limit (dB)	2.75	2.46
Margin (dB)	1.74	1.76
Reference (dBm)	-19.32	-19.57

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	ATM155	ATM155SWL
ATM52	ATM622 Fiber Optic	ATM622SWL Fiber Optic
FDDI Fiber Optic	Fibre Channel 100-M6-SN-I	Fibre Channel 133
Fibre Channel 200-M6-SN-I	Fibre Channel 266	Fibre Channel 266SWL



Cable ID: TS5-026/2

Date / Time: 02/25/2020 09:44:00 AM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/25/2020 09:44:00 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	712	
Length ft	470	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.98	0.56
Margin (dB)	2.75	2.46
	1.77	1.90
Reference (dBm)	-20.01	-20.43

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/25/2020 09:29:47 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.01	0.70
Limit (dB)	2.75	2.46
Margin (dB)	1.74	1.76
Reference (dBm)	-19.32	-19.57

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	ATM155	ATM155SWL
ATM52	ATM622 Fiber Optic	ATM622SWL Fiber Optic
FDDI Fiber Optic	Fibre Channel 100-M6-SN-I	Fibre Channel 133
Fibre Channel 200-M6-SN-I	Fibre Channel 266	Fibre Channel 266SWL



Cable ID: TS-001/1

Date / Time: 02/27/2020 09:56:44 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 09:56:44 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	66	
Length ft	44	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	-0.10	-0.17
Margin (dB)	2.30	2.27
	2.40	2.44
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.26	0.25
Limit (dB)	2.30	2.27
Margin (dB)	2.04	2.02
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-001/2

Date / Time: 02/27/2020 09:56:44 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 09:56:44 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	66	
Length ft	44	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	-0.12	-0.17
Margin (dB)	2.30	2.27
	2.42	2.44
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.26	0.25
Limit (dB)	2.30	2.27
Margin (dB)	2.04	2.02
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-002/1

Date / Time: 02/27/2020 09:57:52 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 09:57:52 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.00	-0.06
Margin (dB)	2.30	2.27
Reference (dBm)	2.30	2.33
	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.67	0.57
Limit (dB)	2.30	2.27
Margin (dB)	1.63	1.70
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-002/2

Date / Time: 02/27/2020 09:57:52 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 09:57:52 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	-0.01	-0.05
Margin (dB)	2.30	2.27
	2.31	2.32
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.67	0.57
Limit (dB)	2.30	2.27
Margin (dB)	1.63	1.70
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-003/1

Date / Time: 02/27/2020 09:59:42 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 09:59:42 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	66	
Length ft	44	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	-0.09	-0.18
Margin (dB)	2.30	2.27
	2.39	2.45
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.30	0.30
Limit (dB)	2.30	2.27
Margin (dB)	2.00	1.97
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-003/2

Date / Time: 02/27/2020 09:59:42 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 09:59:42 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	66	
Length ft	44	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	-0.09	-0.17
Margin (dB)	2.30	2.27
	2.39	2.44
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.30	0.30
Limit (dB)	2.30	2.27
Margin (dB)	2.00	1.97
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-004/1

Date / Time: 02/27/2020 10:00:26 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:00:26 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	67	
Length ft	44	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	-0.09	-0.19
Margin (dB)	2.30	2.27
	2.39	2.46
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.30	0.30
Limit (dB)	2.30	2.27
Margin (dB)	2.00	1.97
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-004/2

Date / Time: 02/27/2020 10:00:26 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:00:26 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	67	
Length ft	44	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	-0.09	-0.18
Margin (dB)	2.30	2.27
	2.39	2.45
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.30	0.29
Limit (dB)	2.30	2.27
Margin (dB)	2.00	1.98
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-005/1

Date / Time: 02/27/2020 10:01:30 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:01:30 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	111	
Length ft	73	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.26	0.22
Margin (dB)	2.33	2.28
	2.07	2.06
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.66	0.69
Limit (dB)	2.33	2.28
Margin (dB)	1.67	1.59
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-005/2

Date / Time: 02/27/2020 10:01:30 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:01:30 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	111	
Length ft	73	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.26	0.22
Margin (dB)	2.33	2.28
	2.07	2.06
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.66	0.68
Limit (dB)	2.33	2.28
Margin (dB)	1.67	1.60
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-006/1

Date / Time: 02/27/2020 10:03:06 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:03:06 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	113	
Length ft	74	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.26	0.20
Margin (dB)	2.33	2.28
	2.07	2.08
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.20	1.27
Limit (dB)	2.33	2.28
Margin (dB)	1.13	1.01
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-006/2

Date / Time: 02/27/2020 10:03:06 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:03:06 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	113	
Length ft	74	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.26	0.21
Margin (dB)	2.33	2.28
	2.07	2.07
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.20	1.27
Limit (dB)	2.33	2.28
Margin (dB)	1.13	1.01
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-007/1

Date / Time: 02/27/2020 10:05:51 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:05:51 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	107	
Length ft	71	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.19	0.12
Margin (dB)	2.33	2.28
	2.14	2.16
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.61	0.61
Limit (dB)	2.33	2.28
Margin (dB)	1.72	1.67
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-007/2

Date / Time: 02/27/2020 10:05:51 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:05:51 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	107	
Length ft	71	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.19	0.13
Margin (dB)	2.33	2.28
	2.14	2.15
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.61	0.60
Limit (dB)	2.33	2.28
Margin (dB)	1.72	1.68
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-008/1

Date / Time: 02/27/2020 10:06:46 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:06:46 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	107	
Length ft	71	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.20	0.12
Margin (dB)	2.33	2.28
	2.13	2.16
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.61	0.60
Limit (dB)	2.33	2.28
Margin (dB)	1.72	1.68
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-008/2

Date / Time: 02/27/2020 10:06:46 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:06:46 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	107	
Length ft	71	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.20	0.13
Margin (dB)	2.33	2.28
	2.13	2.15
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.61	0.60
Limit (dB)	2.33	2.28
Margin (dB)	1.72	1.68
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-009/1

Date / Time: 02/27/2020 10:07:34 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:07:34 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.13	0.03
Margin (dB)	2.32	2.28
	2.19	2.25
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.72	0.74
Limit (dB)	2.32	2.28
Margin (dB)	1.60	1.54
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-009/2

Date / Time: 02/27/2020 10:07:34 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:07:34 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.13	0.04
Margin (dB)	2.32	2.28
	2.19	2.24
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.72	0.73
Limit (dB)	2.32	2.28
Margin (dB)	1.60	1.55
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-010/1

Date / Time: 02/27/2020 10:08:21 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:08:21 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.07	-0.06
Margin (dB)	2.32	2.28
	2.25	2.34
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.67	0.69
Limit (dB)	2.32	2.28
Margin (dB)	1.65	1.59
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-010/2

Date / Time: 02/27/2020 10:08:21 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:08:21 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.07	-0.05
Margin (dB)	2.32	2.28
	2.25	2.33
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.69	0.69
Limit (dB)	2.32	2.28
Margin (dB)	1.63	1.59
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-011/1

Date / Time: 02/27/2020 10:14:36 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:14:36 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.11	-0.02
Margin (dB)	2.32	2.28
	2.21	2.30
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.96	1.02
Limit (dB)	2.32	2.28
Margin (dB)	1.36	1.26
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-011/2

Date / Time: 02/27/2020 10:14:36 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:14:36 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.10	-0.02
Margin (dB)	2.32	2.28
	2.22	2.30
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.96	1.02
Limit (dB)	2.32	2.28
Margin (dB)	1.36	1.26
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-012/1

Date / Time: 02/27/2020 10:15:19 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:15:19 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.11	-0.02
Margin (dB)	2.32	2.28
	2.21	2.30
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.96	1.02
Limit (dB)	2.32	2.28
Margin (dB)	1.36	1.26
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-012/2

Date / Time: 02/27/2020 10:15:19 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:15:19 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.11	-0.02
Margin (dB)	2.32	2.28
	2.21	2.30
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.96	1.02
Limit (dB)	2.32	2.28
Margin (dB)	1.36	1.26
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-013/1

Date / Time: 02/27/2020 10:17:52 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:17:52 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.11	-0.03
Margin (dB)	2.32	2.28
	2.21	2.31
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.96	1.03
Limit (dB)	2.32	2.28
Margin (dB)	1.36	1.25
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-013/2

Date / Time: 02/27/2020 10:17:52 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:17:52 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.11	-0.02
Margin (dB)	2.32	2.28
	2.21	2.30
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.96	1.02
Limit (dB)	2.32	2.28
Margin (dB)	1.36	1.26
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-014/1

Date / Time: 02/27/2020 10:18:31 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:18:31 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.11	-0.03
Margin (dB)	2.32	2.28
	2.21	2.31
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.97	1.03
Limit (dB)	2.32	2.28
Margin (dB)	1.35	1.25
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-014/2

Date / Time: 02/27/2020 10:18:31 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:18:31 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	104	
Length ft	69	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.11	-0.03
Margin (dB)	2.32	2.28
	2.21	2.31
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.97	1.03
Limit (dB)	2.32	2.28
Margin (dB)	1.35	1.25
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-015/1

Date / Time: 02/27/2020 10:26:59 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:26:59 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	99	
Length ft	65	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.06	-0.10
Margin (dB)	2.32	2.28
	2.26	2.38
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.44	0.39
Limit (dB)	2.32	2.28
Margin (dB)	1.88	1.89
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-015/2

Date / Time: 02/27/2020 10:26:59 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:26:59 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	99	
Length ft	65	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.06	-0.10
Margin (dB)	2.32	2.28
	2.26	2.38
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.44	0.39
Limit (dB)	2.32	2.28
Margin (dB)	1.88	1.89
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-016/1

Date / Time: 02/27/2020 10:27:48 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:27:48 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	98	
Length ft	65	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.06	-0.10
Margin (dB)	2.32	2.28
	2.26	2.38
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.44	0.39
Limit (dB)	2.32	2.28
Margin (dB)	1.88	1.89
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-016/2

Date / Time: 02/27/2020 10:27:48 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:27:48 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	98	
Length ft	65	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.06	-0.10
Margin (dB)	2.32	2.28
	2.26	2.38
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.44	0.39
Limit (dB)	2.32	2.28
Margin (dB)	1.88	1.89
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-017/1

Date / Time: 02/27/2020 10:28:37 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:28:37 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	99	
Length ft	65	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.23	0.11
Margin (dB)	2.32	2.28
	2.09	2.17
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.43	0.36
Limit (dB)	2.32	2.28
Margin (dB)	1.89	1.92
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-017/2

Date / Time: 02/27/2020 10:28:37 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:28:37 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	99	
Length ft	65	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.23	0.12
Margin (dB)	2.32	2.28
	2.09	2.16
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.43	0.35
Limit (dB)	2.32	2.28
Margin (dB)	1.89	1.93
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-018/1

Date / Time: 02/27/2020 10:29:19 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:29:19 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	99	
Length ft	65	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.07	-0.08
Margin (dB)	2.32	2.28
	2.25	2.36
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.73	0.62
Limit (dB)	2.32	2.28
Margin (dB)	1.59	1.66
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-018/2

Date / Time: 02/27/2020 10:29:19 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:29:19 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	99	
Length ft	65	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.07	-0.07
Margin (dB)	2.32	2.28
	2.25	2.35
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.73	0.62
Limit (dB)	2.32	2.28
Margin (dB)	1.59	1.66
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-019/1

Date / Time: 02/27/2020 10:30:09 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:30:09 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	97	
Length ft	64	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.06	-0.10
Margin (dB)	2.32	2.28
	2.26	2.38
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.44	0.38
Limit (dB)	2.32	2.28
Margin (dB)	1.88	1.90
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-019/2

Date / Time: 02/27/2020 10:30:09 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:30:09 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	97	
Length ft	64	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.06	-0.10
Margin (dB)	2.32	2.28
	2.26	2.38
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.44	0.38
Limit (dB)	2.32	2.28
Margin (dB)	1.88	1.90
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-020/1

Date / Time: 02/27/2020 10:31:50 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:31:50 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	97	
Length ft	64	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.07	-0.10
Margin (dB)	2.32	2.28
	2.25	2.38
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.45	0.39
Limit (dB)	2.32	2.28
Margin (dB)	1.87	1.89
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-020/2

Date / Time: 02/27/2020 10:31:50 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:31:50 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	97	
Length ft	64	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.07	-0.09
Margin (dB)	2.32	2.28
	2.25	2.37
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.45	0.39
Limit (dB)	2.32	2.28
Margin (dB)	1.87	1.89
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-021/1

Date / Time: 02/27/2020 10:33:02 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:33:02 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	86	
Length ft	57	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.81	0.74
Margin (dB)	2.31	2.28
	1.50	1.54
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.45	0.40
Limit (dB)	2.31	2.28
Margin (dB)	1.86	1.88
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-021/2

Date / Time: 02/27/2020 10:33:02 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:33:02 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	86	
Length ft	57	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.81	0.74
Margin (dB)	2.31	2.28
	1.50	1.54
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.45	0.40
Limit (dB)	2.31	2.28
Margin (dB)	1.86	1.88
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-022/1

Date / Time: 02/27/2020 10:46:06 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:46:06 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	86	
Length ft	57	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.06	-0.13
Margin (dB)	2.31	2.28
	2.25	2.41
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.98	1.57
Limit (dB)	2.31	2.28
Margin (dB)	0.33	0.71
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LX4
10GBASE-SR	ATM155	ATM155SWL
ATM52	ATM622 Fiber Optic	ATM622SWL Fiber Optic
FDDI Fiber Optic	Fibre Channel 100-M6-SN-I	Fibre Channel 1200-M6-SN-I
Fibre Channel 133	Fibre Channel 200-M6-SN-I	Fibre Channel 266
Fibre Channel 266SWL		



Cable ID: TS-022/2

Date / Time: 02/27/2020 10:46:06 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:46:06 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	86	
Length ft	57	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.06	-0.13
Margin (dB)	2.31	2.28
	2.25	2.41
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.99	1.56
Limit (dB)	2.31	2.28
Margin (dB)	0.32	0.72
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LX4
10GBASE-SR	ATM155	ATM155SWL
ATM52	ATM622 Fiber Optic	ATM622SWL Fiber Optic
FDDI Fiber Optic	Fibre Channel 100-M6-SN-I	Fibre Channel 1200-M6-SN-I
Fibre Channel 133	Fibre Channel 200-M6-SN-I	Fibre Channel 266
Fibre Channel 266SWL		



Cable ID: TS-023/1

Date / Time: 02/27/2020 10:47:18 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:47:18 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	85	
Length ft	56	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.23	0.07
Margin (dB)	2.31	2.28
	2.08	2.21
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.47	1.36
Limit (dB)	2.31	2.28
Margin (dB)	0.84	0.92
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-023/2

Date / Time: 02/27/2020 10:47:18 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:47:18 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	85	
Length ft	56	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.23	0.08
Margin (dB)	2.31	2.28
	2.08	2.20
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.47	1.35
Limit (dB)	2.31	2.28
Margin (dB)	0.84	0.93
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-024/1

Date / Time: 02/27/2020 10:47:59 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:47:59 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	84	
Length ft	55	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.49	0.39
Margin (dB)	2.31	2.28
	1.82	1.89
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.80	0.71
Limit (dB)	2.31	2.28
Margin (dB)	1.51	1.57
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-024/2

Date / Time: 02/27/2020 10:47:59 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:47:59 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	84	
Length ft	55	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.49	0.39
Margin (dB)	2.31	2.28
	1.82	1.89
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.80	0.70
Limit (dB)	2.31	2.28
Margin (dB)	1.51	1.58
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-025/1

Date / Time: 02/27/2020 10:48:43 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:48:43 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	80	
Length ft	53	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.24	0.10
Margin (dB)	2.31	2.27
	2.07	2.17
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.54	0.42
Limit (dB)	2.31	2.27
Margin (dB)	1.77	1.85
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-025/2

Date / Time: 02/27/2020 10:48:43 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:48:43 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	80	
Length ft	53	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.24	0.10
Margin (dB)	2.31	2.27
	2.07	2.17
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.54	0.41
Limit (dB)	2.31	2.27
Margin (dB)	1.77	1.86
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-026/1

Date / Time: 02/27/2020 10:49:23 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:49:23 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	79	
Length ft	52	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.10	-0.08
Margin (dB)	2.31	2.27
	2.21	2.35
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.76	0.58
Limit (dB)	2.31	2.27
Margin (dB)	1.55	1.69
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-026/2

Date / Time: 02/27/2020 10:49:23 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:49:23 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	79	
Length ft	52	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.10	-0.07
Margin (dB)	2.31	2.27
	2.21	2.34
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.76	0.57
Limit (dB)	2.31	2.27
Margin (dB)	1.55	1.70
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-027/1

Date / Time: 02/27/2020 10:51:14 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:51:14 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	70	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.76	0.67
Margin (dB)	2.30	2.27
	1.54	1.60
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.85	0.81
Limit (dB)	2.30	2.27
Margin (dB)	1.45	1.46
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-027/2

Date / Time: 02/27/2020 10:51:14 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:51:14 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	70	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.76	0.68
Margin (dB)	2.30	2.27
	1.54	1.59
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.85	0.80
Limit (dB)	2.30	2.27
Margin (dB)	1.45	1.47
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-028/1

Date / Time: 02/27/2020 10:52:02 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:52:02 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	1.01	0.87
Margin (dB)	2.30	2.27
	1.29	1.40
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.03	1.04
Limit (dB)	2.30	2.27
Margin (dB)	1.27	1.23
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-028/2

Date / Time: 02/27/2020 10:52:02 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:52:02 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	1.01	0.88
Margin (dB)	2.30	2.27
	1.29	1.39
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	1.03	1.04
Limit (dB)	2.30	2.27
Margin (dB)	1.27	1.23
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-029/1

Date / Time: 02/27/2020 10:52:44 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:52:44 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.56	0.49
Margin (dB)	2.30	2.27
	1.74	1.78
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.77	0.73
Limit (dB)	2.30	2.27
Margin (dB)	1.53	1.54
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-029/2

Date / Time: 02/27/2020 10:52:44 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:52:44 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.56	0.49
Margin (dB)	2.30	2.27
	1.74	1.78
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.77	0.73
Limit (dB)	2.30	2.27
Margin (dB)	1.53	1.54
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-030/1

Date / Time: 02/27/2020 10:53:29 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:53:29 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	66	
Length ft	44	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.09	-0.07
Margin (dB)	2.30	2.27
	2.21	2.34
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.76	0.73
Limit (dB)	2.30	2.27
Margin (dB)	1.54	1.54
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: TS-030/2

Date / Time: 02/27/2020 10:53:29 PM
Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)
n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/27/2020 10:53:29 PM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	66	
Length ft	44	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.09	-0.06
Margin (dB)	2.30	2.27
	2.21	2.33
Reference (dBm)	-20.40	-20.57

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/27/2020 09:55:19 PM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.76	0.72
Limit (dB)	2.30	2.27
Margin (dB)	1.54	1.55
Reference (dBm)	-19.32	-19.43

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/1

Date / Time: 02/28/2020 08:05:39 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:05:39 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.32	0.29
Margin (dB)	2.30	2.27
	1.98	1.98
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.35	0.34
Limit (dB)	2.30	2.27
Margin (dB)	1.95	1.93
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/2

Date / Time: 02/28/2020 08:05:39 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:05:39 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.32	0.32
Margin (dB)	2.30	2.27
	1.98	1.95
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.35	0.33
Limit (dB)	2.30	2.27
Margin (dB)	1.95	1.94
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/3

Date / Time: 02/28/2020 08:06:58 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:06:58 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.23	0.20
Margin (dB)	2.30	2.27
	2.07	2.07
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.25	0.22
Limit (dB)	2.30	2.27
Margin (dB)	2.05	2.05
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/4

Date / Time: 02/28/2020 08:06:58 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:06:58 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.24	0.21
Margin (dB)	2.30	2.27
	2.06	2.06
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.25	0.22
Limit (dB)	2.30	2.27
Margin (dB)	2.05	2.05
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/5

Date / Time: 02/28/2020 08:07:44 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:07:44 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.21	0.16
Margin (dB)	2.30	2.27
	2.09	2.11
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.23	0.19
Limit (dB)	2.30	2.27
Margin (dB)	2.07	2.08
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/6

Date / Time: 02/28/2020 08:07:44 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:07:44 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.21	0.16
Margin (dB)	2.30	2.27
	2.09	2.11
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.23	0.19
Limit (dB)	2.30	2.27
Margin (dB)	2.07	2.08
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/7

Date / Time: 02/28/2020 08:08:23 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:08:23 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	70	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.26	0.23
Margin (dB)	2.30	2.27
	2.04	2.04
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.31	0.31
Limit (dB)	2.30	2.27
Margin (dB)	1.99	1.96
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/8

Date / Time: 02/28/2020 08:08:23 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014

Limits Version: 1.9500

Date / Time: 02/28/2020 08:08:23 AM

Operator: PAUL CUMMINGS

Main: DTX CableAnalyzer

S/N: 9441027

Software Version: 2.7800

Module: DTX-MFM2

S/N: 9788211

Calibration Date: 05/09/2014

Remote: DTX CableAnalyzer

S/N: 9441026

Software Version: 2.7800

Module: DTX-MFM2

S/N: 9788229

Calibration Date: 05/09/2014

Propagation Delay (ns)	70	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.26	0.23
Margin (dB)	2.30	2.27
	2.04	2.04
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2

Number of Splices: 2

Patch Type: OM1 Multimode 62.5

Patch Length1 (ft): 3

Patch Length2 (ft): 3

Reference Date: 02/28/2020 08:03:33 AM

2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.31	0.30
Limit (dB)	2.30	2.27
Margin (dB)	1.99	1.97
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX

100BASE-FX

10GBASE-LX4

ATM155SWL

ATM622SWL Fiber Optic

Fibre Channel 1200-M6-SN-I

Fibre Channel 266

1000BASE-LX

10BASE-FL

10GBASE-SR

ATM52

FDDI Fiber Optic

Fibre Channel 133

Fibre Channel 266SWL

1000BASE-SX

10GBASE-LRM

ATM155

ATM622 Fiber Optic

Fibre Channel 100-M6-SN-I

Fibre Channel 200-M6-SN-I

Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/9

Date / Time: 02/28/2020 08:09:11 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014

Limits Version: 1.9500

Date / Time: 02/28/2020 08:09:11 AM

Operator: PAUL CUMMINGS

Main: DTX CableAnalyzer

S/N: 9441027

Software Version: 2.7800

Module: DTX-MFM2

S/N: 9788211

Calibration Date: 05/09/2014

Remote: DTX CableAnalyzer

S/N: 9441026

Software Version: 2.7800

Module: DTX-MFM2

S/N: 9788229

Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.32	0.28
Margin (dB)	2.30	2.27
	1.98	1.99
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2

Number of Splices: 2

Patch Type: OM1 Multimode 62.5

Patch Length1 (ft): 3

Patch Length2 (ft): 3

Reference Date: 02/28/2020 08:03:33 AM

2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.28	0.24
Limit (dB)	2.30	2.27
Margin (dB)	2.02	2.03
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX

100BASE-FX

10GBASE-LX4

ATM155SWL

ATM622SWL Fiber Optic

Fibre Channel 1200-M6-SN-I

Fibre Channel 266

1000BASE-LX

10BASE-FL

10GBASE-SR

ATM52

FDDI Fiber Optic

Fibre Channel 133

Fibre Channel 266SWL

1000BASE-SX

10GBASE-LRM

ATM155

ATM622 Fiber Optic

Fibre Channel 100-M6-SN-I

Fibre Channel 200-M6-SN-I

Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/10

Date / Time: 02/28/2020 08:09:11 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:09:11 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	69	
Length ft	46	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.32	0.29
Margin (dB)	2.30	2.27
	1.98	1.98
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.28	0.24
Limit (dB)	2.30	2.27
Margin (dB)	2.02	2.03
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/11

Date / Time: 02/28/2020 08:14:24 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:14:24 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.32	0.26
Margin (dB)	2.30	2.27
	1.98	2.01
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.80	0.79
Limit (dB)	2.30	2.27
Margin (dB)	1.50	1.48
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/12

Date / Time: 02/28/2020 08:14:24 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:14:24 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.31	0.26
Margin (dB)	2.30	2.27
	1.99	2.01
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.80	0.79
Limit (dB)	2.30	2.27
Margin (dB)	1.50	1.48
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/13

Date / Time: 02/28/2020 08:15:03 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:15:03 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.32	0.26
Margin (dB)	2.30	2.27
	1.98	2.01
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.80	0.79
Limit (dB)	2.30	2.27
Margin (dB)	1.50	1.48
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/14

Date / Time: 02/28/2020 08:15:03 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014

Limits Version: 1.9500

Date / Time: 02/28/2020 08:15:03 AM

Operator: PAUL CUMMINGS

Main: DTX CableAnalyzer

S/N: 9441027

Software Version: 2.7800

Module: DTX-MFM2

S/N: 9788211

Calibration Date: 05/09/2014

Remote: DTX CableAnalyzer

S/N: 9441026

Software Version: 2.7800

Module: DTX-MFM2

S/N: 9788229

Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.32	0.26
Margin (dB)	2.30	2.27
	1.98	2.01
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2

Number of Splices: 2

Patch Type: OM1 Multimode 62.5

Patch Length1 (ft): 3

Patch Length2 (ft): 3

Reference Date: 02/28/2020 08:03:33 AM

2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.80	0.78
Limit (dB)	2.30	2.27
Margin (dB)	1.50	1.49
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX

100BASE-FX

10GBASE-LX4

ATM155SWL

ATM622SWL Fiber Optic

Fibre Channel 1200-M6-SN-I

Fibre Channel 266

1000BASE-LX

10BASE-FL

10GBASE-SR

ATM52

FDDI Fiber Optic

Fibre Channel 133

Fibre Channel 266SWL

1000BASE-SX

10GBASE-LRM

ATM155

ATM622 Fiber Optic

Fibre Channel 100-M6-SN-I

Fibre Channel 200-M6-SN-I

Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/15

Date / Time: 02/28/2020 08:15:39 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:15:39 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.22	0.14
Margin (dB)	2.30	2.27
	2.08	2.13
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.91	0.89
Limit (dB)	2.30	2.27
Margin (dB)	1.39	1.38
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/16

Date / Time: 02/28/2020 08:15:39 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:15:39 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.22	0.15
Margin (dB)	2.30	2.27
	2.08	2.12
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.91	0.88
Limit (dB)	2.30	2.27
Margin (dB)	1.39	1.39
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/17

Date / Time: 02/28/2020 08:16:14 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:16:14 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.30	0.22
Margin (dB)	2.30	2.27
	2.00	2.05
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.78	0.74
Limit (dB)	2.30	2.27
Margin (dB)	1.52	1.53
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/18

Date / Time: 02/28/2020 08:16:14 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:16:14 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	72	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.30	0.22
Margin (dB)	2.30	2.27
	2.00	2.05
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.78	0.73
Limit (dB)	2.30	2.27
Margin (dB)	1.52	1.54
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/19

Date / Time: 02/28/2020 08:16:58 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:16:58 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	73	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.30	0.23
Margin (dB)	2.30	2.27
	2.00	2.04
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.81	0.77
Limit (dB)	2.30	2.27
Margin (dB)	1.49	1.50
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/20

Date / Time: 02/28/2020 08:16:58 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014

Limits Version: 1.9500

Date / Time: 02/28/2020 08:16:58 AM

Operator: PAUL CUMMINGS

Main: DTX CableAnalyzer

S/N: 9441027

Software Version: 2.7800

Module: DTX-MFM2

S/N: 9788211

Calibration Date: 05/09/2014

Remote: DTX CableAnalyzer

S/N: 9441026

Software Version: 2.7800

Module: DTX-MFM2

S/N: 9788229

Calibration Date: 05/09/2014

Propagation Delay (ns)	73	
Length ft	48	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.30	0.23
Margin (dB)	2.30	2.27
	2.00	2.04
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2

Number of Splices: 2

Patch Type: OM1 Multimode 62.5

Patch Length1 (ft): 3

Patch Length2 (ft): 3

Reference Date: 02/28/2020 08:03:33 AM

2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.81	0.77
Limit (dB)	2.30	2.27
Margin (dB)	1.49	1.50
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX

100BASE-FX

10GBASE-LX4

ATM155SWL

ATM622SWL Fiber Optic

Fibre Channel 1200-M6-SN-I

Fibre Channel 266

1000BASE-LX

10BASE-FL

10GBASE-SR

ATM52

FDDI Fiber Optic

Fibre Channel 133

Fibre Channel 266SWL

1000BASE-SX

10GBASE-LRM

ATM155

ATM622 Fiber Optic

Fibre Channel 100-M6-SN-I

Fibre Channel 200-M6-SN-I

Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/21

Date / Time: 02/28/2020 08:18:01 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:18:01 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	71	
Length ft	47	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.21	0.14
Margin (dB)	2.30	2.27
	2.09	2.13
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.83	0.79
Limit (dB)	2.30	2.27
Margin (dB)	1.47	1.48
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/22

Date / Time: 02/28/2020 08:18:01 AM n = 1.496000 (850 nm)
Cable Type: OM1 Multimode 62.5 n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)
Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:18:01 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	71	
Length ft	47	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.21	0.14
Margin (dB)	2.30	2.27
	2.09	2.13
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.83	0.78
Limit (dB)	2.30	2.27
Margin (dB)	1.47	1.49
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/23

Date / Time: 02/28/2020 08:18:39 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M)

PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:18:39 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	74	
Length ft	49	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.38	0.32
Margin (dB)	2.30	2.27
	1.92	1.95
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R)

PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.83	0.80
Limit (dB)	2.30	2.27
Margin (dB)	1.47	1.47
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I



Cable ID: 24C-NSWAN FDB/24

Date / Time: 02/28/2020 08:18:39 AM

Cable Type: OM1 Multimode 62.5

n = 1.496000 (850 nm)

n = 1.491000 (1300 nm)

Test Summary: PASS

Modal Bandwidth: 200MHz-km (850 nm)

Modal Bandwidth: 500MHz-km (1300 nm)

Loss (R->M) PASS

Test Limit: ISO 14763-3:2014
Limits Version: 1.9500
Date / Time: 02/28/2020 08:18:39 AM
Operator: PAUL CUMMINGS
Main: DTX CableAnalyzer
S/N: 9441027
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788211
Calibration Date: 05/09/2014
Remote: DTX CableAnalyzer
S/N: 9441026
Software Version: 2.7800
Module: DTX-MFM2
S/N: 9788229
Calibration Date: 05/09/2014

Propagation Delay (ns)	74	
Length ft	49	PASS
Limit 6562		
Result	850 nm	1300 nm
Loss (dB)	PASS	PASS
Limit (dB)	0.38	0.33
Margin (dB)	2.30	2.27
	1.92	1.94
Reference (dBm)	-20.15	-20.25

Number of Adapters: 2
Number of Splices: 2
Patch Type: OM1 Multimode 62.5
Patch Length1 (ft): 3
Patch Length2 (ft): 3
Reference Date: 02/28/2020 08:03:33 AM
2 Jumper

Loss (M->R) PASS

	850 nm	1300 nm
Result	PASS	PASS
Loss (dB)	0.83	0.79
Limit (dB)	2.30	2.27
Margin (dB)	1.47	1.48
Reference (dBm)	-19.41	-19.49

Compliant Network Standards:

10/100BASE-SX	1000BASE-LX	1000BASE-SX
100BASE-FX	10BASE-FL	10GBASE-LRM
10GBASE-LX4	10GBASE-SR	ATM155
ATM155SWL	ATM52	ATM622 Fiber Optic
ATM622SWL Fiber Optic	FDDI Fiber Optic	Fibre Channel 100-M6-SN-I
Fibre Channel 1200-M6-SN-I	Fibre Channel 133	Fibre Channel 200-M6-SN-I
Fibre Channel 266	Fibre Channel 266SWL	Fibre Channel 400-M6-SN-I