ORTRONICS

FIBER OPTIC CASSETTE ASSEMBLY PERFORMANCE				
ECN: 05176	**REV:** 07	**DATE**: 1/18/2011	**SHT:** 1 of 2	**DOC #: OR-71800061C**
DWN. BY: CR	**CHK BY:** RJG	**DATE:** 1/21/2011	**APP BY:** AM	**DATE:** 1/24/2011

1.0 SCOPE

This document contains the minimum optical performance requirements for applicable Singlemode and Multimode Cassette Assemblies. The detail specification may override the requirements specified in this document.

2.0 STANDARDS REFERENCED

This document makes specific reference to the following standards:

TIA-455-107: Fiber Optic test Procedure for Return Loss, Singlemode and Multimode
TIA-526-7: Fiber Optic test Procedure for Attenuation, Singlemode
TIA-526-14-A: Fiber Optic test Procedure for Attenuation, Multimode
TIA-568-C.3: Optical Fiber Cabling Components Standard, Singlemode and Multimode
TIA/EIA-604-XX: Optical Connector(s) Intermateability Standards

3.0 OPTICAL REQUIREMENTS

Performance tier levels are defined in **Tables 1a**, **1b**, and **1c** for singlemode cassettes and in **Tables 2a** and **2b** for multimode cassettes, by input and output connector type. In cases where multiple tier levels are defined, the cassette shall be in accordance with Tier 1, unless explicitly indicated otherwise in the detail specification.

3.1 SINGLEMODE CASSETTES

3.1.1 INSERTION LOSS: Values for each fiber will not exceed values specified in the appropriate table (**Table 1a**, **1b**, or **1c**) when tested in accordance with TIA-526-7 and TIA-568-C.3. Insertion loss values and test wavelengths will appear on a data card provided with each cassette.

3.1.2 RETURN LOSS: Values for each fiber will be no less than values specified in the appropriate table (**Table 1a**, **1b**, or **1c**) when tested in accordance with latest publication of TIA-455-107 and with TIA-568-C.3.

3.1.3 INTERMATEABILITY: Will be in accordance with latest publications of TIA Standards specified in **Table 3**. For singlemode cassette MTP®[†]/MPO(APC) ports with Type B ("key-up to key-up") adapter keying, internal MTP®/MPO(APC) connector will be reverse angled to function with Ortronics® standard trunk cables.

3.2 MULTIMODE CASSETTES

3.2.1 INSERTION LOSS: Values for each fiber will not exceed values specified in the appropriate table (**Table 2a** or **2b**) when tested in accordance with TIA-526-14-A and TIA-568-C.3. Insertion loss values and test wavelengths will appear on a data card provided with each cassette.

3.2.2 RETURN LOSS: Values for each fiber will be no less than values specified in the appropriate table (**Table 2a** or **2b**) when tested in accordance with latest publication of TIA-455-107 and with TIA-568-C.3.

3.2.3 INTERMATEABILITY: Will be in accordance with latest publications of TIA Standards specified in **Table 3**.

[†]MTP is a registered trademark of US Conec Ltd.

ORTRONICS

FIBER OPTIC CASSETTE ASSEMBLY PERFORMANCE

ECN: 05112	REV: 07	DATE: 1/18/2011	SHT: 2 of 2	DOC #: OR-71800061C

Table 1a

SINGLEMODE "UPC" CASSETTES – MTP®/MPO(APC)→LC/SC(UPC)		
TIER	INSERTION LOSS (dB)*	RETURN LOSS (dB)**
1	**1.05**	**52.0**
2	**0.60**	**52.0**

Table 1b

SINGLEMODE "APC" CASSETTES – MTP®/MPO(APC)→LC/SC(APC)		
TIER	INSERTION LOSS (dB)*	RETURN LOSS (dB)**
1	**1.15**	**54.6**
2	**0.60**	**54.6**

Table 1c

SINGLEMODE "APC" CASSETTES – MTP®/MPO(APC)→MTP®/MPO(APC)		
TIER	INSERTION LOSS (dB)*	RETURN LOSS (dB)**
1	**1.50**	**52.0**
2	**0.70**	**52.0**

Table 2a

MULTIMODE CASSETTES – MTP®/MPO(PC)→LC/SC(PC)		
TIER	INSERTION LOSS (dB)*	RETURN LOSS (dB)**
1	**1.25**	**19.0**
2	**0.75**	**19.0**
3	**0.50**	**19.0**
4	**0.35**	**24.5**

Table 2b

MULTIMODE CASSETTES – MTP®/MPO(PC)→MTP®/MPO(PC)		
TIER	INSERTION LOSS (dB)*	RETURN LOSS (dB)**
1	**1.50**	**17.0**
2	**1.00**	**17.0**
3	**0.70**	**17.0**
4	**0.50**	**27.0**

(*) MAXIMUM VALUES **(**) MINIMUM VALUES**

Table 3

INTERMATEABILITY STANDARD	
TIA SPECIFICATION	**CONNECTOR TYPE**
604-5	MTP®/MPO
604-3	SC
604-10	LC