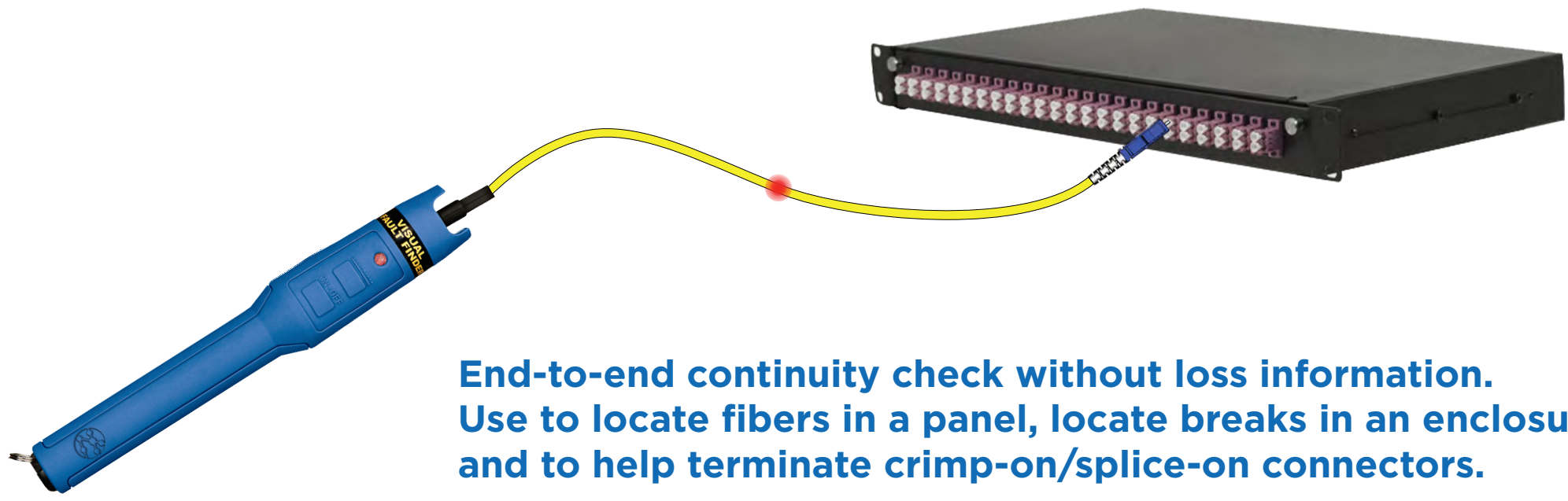


Verification



End-to-end continuity check without loss information. Use to locate fibers in a panel, locate breaks in an enclosure and to help terminate crimp-on/splice-on connectors.

Fiber Optic Testing Solutions

Product	Part No.	Visible Continuity Verification	Power Meter	Light Source	Dual Fiber Length	Dual-End Test	Single Fiber Length	Single-End Test	Visual Inspection w/Optional Scope	Certification	Notes
Visual Fault Locator	VFF5	•									
FiberMASTER PM/LS	R240-PMLS		•	•				•	•		
FiberMASTER Light Source	R240-LSIV	•		•					•		Multimode & Single-mode
FiberMASTER Power Meter	R240-PMIV	•	•						•		Multimode & Single-mode
FiberMASTER Quad OTDR	R240-QIP	•	•	•		•	•	•	•	TIA/ISO Tier-2	5m MM/SM event dead zone
OTDR II Handheld Quad OTDR	R230000	•	Opt	•		•	•	•	•	TIA/ISO Tier-2	2.5m MM/SM event dead zone
FiberMASTER Palm Size MM OTDR	R240-MIPV	•	•	•		•	•	•	•	TIA/ISO Tier-2	Multimode
FiberMASTER Palm Size SM OTDR	R240-SIPV	•	•	•		•	•	•	•	TIA/ISO Tier-2	Single-mode
FiberMASTER Palm Size PON OTDR	R240-PIP	•	•	•		•	•	•	•	TIA/ISO Tier-2	Single-mode (1310, 1550, 1625)
FiberMASTER Inspection Probe	R240-VIP								•	IEC 61300-3-35	Compatible with all FiberMASTER R240 series
OTDR II Inspection Probe	R230002								•	IEC 61300-3-35	Compatible with OTDR II Handheld OTDR
OTDR II Power Meter & VFL	R230050	•	•	•							Compatible with OTDR II Handheld OTDR
FiberTEK IV Quad	R164010	•	•	•	•	•	•	•		TIA/ISO Tier-1	For LanTEK IV/IV-S
FiberTEK IV MM	R164008	•	•	•	•	•	•	•		TIA/ISO Tier-1	For LanTEK IV/IV-S
FiberTEK IV SM	R164009	•	•	•	•	•	•	•		TIA/ISO Tier-1	For LanTEK IV/IV-S
FiberTEK III Quad	R164007	•	•	•	•	•	•	•		TIA/ISO Tier-1	For LanTEK III
FiberTEK III MM	R164005	•	•	•	•	•	•	•		TIA/ISO Tier-1	For LanTEK III
FiberTEK III SM	R164006	•	•	•	•	•	•	•		TIA/ISO Tier-1	For LanTEK III

* Tier-1 certification is power meter/light source testing. Tier 2 certification is Tier 1 certification + OTDR testing

Tier-1 Certification

Loss budget (dB) = Cable loss + Connection Loss + Splice Loss
 Cable loss (dB) = length (m) x attenuation coefficient (dB/km)
 Connection loss (dB) = connection allowance (dB) x number of connections
 Splice loss (dB) = splice allowance (dB) x number of splices

Measures link loss in accordance with cabling standards to ensure support for modern applications.

Loss is measured with an OLTS (Optical Loss Test Set) that typically measures two fibers at once, plus the length of the cable.

All the elements in the cabling link are measured as a single combined loss. The tester cannot differentiate between the loss of cables, connections, and splices.

An OLTS cannot locate the distance to breaks in the fiber. Use an OTDR for fault location and troubleshooting.

Tier-2 Certification

Requires Tier-1 certification first.

Tier-2 certification uses an OTDR to evaluate each component of the link to ensure all components and the total link loss pass.

An OTDR presents the results in a pictorial link map or a graphical trace allowing the user to see the location of each component and its loss.

The trace and schematic view show the distance and loss of each event in the cabling link and whether they pass or fail the standards requirements.

Inspecting the end face of connectors is critical to ensuring proper performance. FiberMASTER offers end face inspection with automatic certification to the IEC 61300-3-35 standard.

Measurement Reference Planes

1 Jumper Reference

2 Jumper Reference

3 Jumper Reference

1 Jumper Reference: includes 2 connections in the loss measurement
 2 Jumper Reference: includes 1 connection in the loss measurement
 3 Jumper Reference: includes 0 connections in the loss measurement

Fiber Optic Cable Loss and Application Distance Allowances

Fiber Type	Specification [TIA]	Core [µm]	Min. Modal Bandwidth (MHz-km)				Attenuation Coefficient [dB/km] TIA 568 / ISO 11801						Max. Distance by Data Rate			
			Overfilled (LED) Launch [OFL]			Underfilled (VCSEL/Laser) Launch	850nm		953nm		1310nm		1550nm		1G	10G
			850nm	953nm	1300nm	850nm	953nm	850nm	953nm	1300nm	1310nm	1550nm	[m]	[m]	[m]	[m]
OM1*	492AAAA	62.5	200		500			3.5		1.5			275	33		
OM2*	492AAAB	50	500		500			3.5		1.5			550	82		
OM3	492AAAF	50	1500		500	2000		3.0		1.5				300	100	70
OM4	492AAAF	50	3500		500	4700		3.0		1.5				400	150	100
OM5	492AAAF	50	3500	1850	500	4700	2470	3.0	2.3	1.5				400	150	100
OS1a ISP	492CAAC	9									1.0	0.4	2000	2000	2000	2000
OS2 OSP	492CAAC	9									1.0	0.4	2000	2000	2000	2000

OM5 is a new type of fiber that supports 953nm transmission. Because the loss at 953nm is between the loss of 850 and 1300nm, it does not need to be tested. Therefore, Tier-1 and Tier-2 certifiers with 953nm light sources are not necessary. However, it is important to test OM5 fiber at both 850nm and 1300nm wavelengths to ensure the loss at 953nm is acceptable.

*OM1 & OM2 are obsolete and grandfathered by TIA-568.3-E