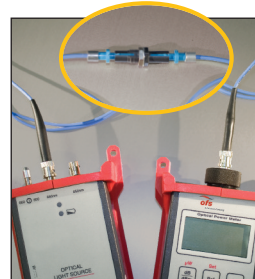
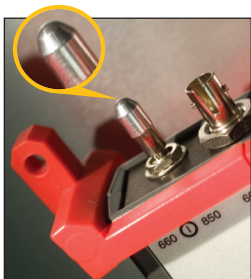


Test Kit **Quick Start Guide** (Procedure illustrates insertion loss by single-ended test method. Refer to booklet for loss by substitution method.)



Before you get started:

- Make sure all optical ends are clean to avoid poor insertion loss readings and prevent contamination of the optical ports on the test units.
- Annual calibration is recommended.



CAUTION:

Never look directly into the output ports of the light source or the ends of a fiber optic connector. The light may not always be visible, but can still cause damage to the eye.

- Turn on **LIGHT SOURCE** by pulling up on the **TOGGLE SWITCH** and moving it to the left or the right, selecting appropriate wavelength.

NOTE:

To turn *off* light source, pull up on toggle switch and move to center position.

- Turn on **POWER METER** by pressing **⏻** button.

NOTE:

To disable the 5-minute, automatic-shutdown battery saver feature, hold down the button **⏻** until *P* is displayed.

- On the Power Meter press the **dB/dBm** button until *dB* is displayed.
- On Power Meter press “λ” button until appropriate wavelength is displayed.
- Install appropriate **ADAPTER CAP** onto Power Meter.
- Allow 2 minutes for test set to stabilize.

- Insert **ST® CONNECTOR** end of **LAUNCH JUMPER** into appropriate wavelength port on Light Source.

- Insert other connector end of Launch Jumper into Adapter Cap on Power Meter.
- *Zero* the Power Meter by pressing and holding down the **Ref** button until *HELD* and *0.0 dB* is displayed.

NOTE:

It is recommended to *re-zero* the Power Meter at least every 30 minutes.

- Disconnect connector end of Launch Jumper from adapter cap on Power Meter and insert into **SPLICE BUSHING**.
- Insert one connector end of the **DEVICE UNDER TEST (DUT)** into the Splice Bushing.
- Insert the other connector end of the DUT into the Adapter Cap on the Power Meter.
- The number on the Power Meter display represents the insertion loss due to the connector at the Splice Bushing plus the attenuation through the length of cable.



Expected Insertion Loss for 200 and 400 µm HCS® Cable Assemblies

	Connector Type and test method ¹							
	V-System®		F07	ST		SMA		
	Single-Ended Method	Substitution Method	Single-Ended Method	Single-Ended Method		Single-Ended Method		
Operating Wavelength	660 nm	660 nm	660 nm	660 nm	850 nm	660 nm	850 nm	
Assembly Length	5 ft (1.5 m)	2.0 dB	4.0 dB	2.0 dB	1.5 dB	1.5 dB	1.5 dB	1.5 dB
	50 ft (15.2 m)	2.2 dB	4.2 dB	2.2 dB	1.7 dB	1.6 dB	1.7 dB	1.6 dB
	100 ft (30.5 m)	2.4 dB	4.4 dB	2.4 dB	1.9 dB	1.7 dB	1.9 dB	1.7 dB
	200 ft (60.9 m)	2.7 dB	4.7 dB	2.7 dB	2.2 dB	2.0 dB	2.2 dB	2.0 dB
	300 ft (91.4 m)	3.1 dB	5.1 dB	3.1 dB	2.6 dB	2.2 dB	2.6 dB	2.2 dB
	400 ft (121.9 m)	3.5 dB	5.5 dB	3.5 dB	3.0 dB	2.5 dB	3.0 dB	2.5 dB
	500 ft (152.4 m)	3.8 dB	5.8 dB	3.8 dB	3.3 dB	2.7 dB	3.3 dB	2.7 dB
	600 ft (182.9 m)	4.2 dB	6.2 dB	4.2 dB	3.7 dB	3.0 dB	3.7 dB	3.0 dB
	700 ft (213.4 m)	4.6 dB	6.6 dB	4.6 dB	4.1 dB	3.2 dB	4.1 dB	3.2 dB
	800 ft (243.8 m)	4.9 dB	6.9 dB	4.9 dB	4.4 dB	3.5 dB	4.4 dB	3.5 dB
900 ft (274.3 m)	5.3 dB	7.3 dB	5.3 dB	4.8 dB	3.7 dB	4.8 dB	3.7 dB	
1000 ft (304.8 m)	5.7 dB	7.7 dB	5.7 dB	5.2 dB	3.9 dB	5.2 dB	3.9 dB	

To calculate expected insertion loss (ILMAX) values for cable assembly lengths not in table:

Part #: P9930-02 Rev. H

For Length in Feet

@ 660 nm: $ILMAX = \text{Connector Factor} + (0.0037 \times \text{Length in feet})$

@ 850 nm: $ILMAX = \text{Connector Factor} + (0.0024 \times \text{Length in feet})$

For Length in Meters

@ 660 nm: $ILMAX = \text{Connector Factor} + (0.012 \times \text{Length in meters})$

@ 850 nm: $ILMAX = \text{Connector Factor} + (0.008 \times \text{Length in meters})$

	V-System®		F07	ST		SMA	
	Single-Ended Method	Substitution Method	Single-Ended Method	Single-Ended Method		Single-Ended Method	
Connector Factor	2.0	4.0	2.0	1.5		1.5	

¹See "Insertion Loss Test Kit Instruction Manual" for detailed explanation of insertion loss methods. HCS is a registered trademark in the USA of OFS Fitel, LLC. V-System is a registered trademarks of OFS Fitel, LLC.