

For fully automated return loss and insertion loss measurements the 680RL Series is the ideal solution. The innovative design eliminates manual operation (both external referencing and mandrel wraps) resulting in significant operator time savings and drastically increased productivity. The 680RL Series modules are capable of measuring singlemode return loss up to 70dB. The instruments are available in single wavelength (1310/1550nm) as well as dual wavelength models.

**Ultra PC and 8°APC - No Problem!**

The measurement performance is optimized for the high return loss measurement requirements of SUPER PC (>40dB), ULTRA PC(>50dB), and APC (>60dB) connectors.

**Reduce Test Costs - Automate!**

Unlike conventional CW return loss meters, the 680RL Series eliminates the need for manual operations like External Referencing /Calibration and Mandrel Wraps. This test system offers economy, flexibility and increased productivity through its automated, unattended test capability.

**Test Systems- Large or Small!**

A small and economical single channel modular test configuration can address simplex patch cord testing. A multichannel Insertion /Return Loss test system addresses harness and both Military and BELLCORE-type qualification testing.

**Features**

- Reduce your testing costs - fully automated
- No mandrel wraps
- Total hands free operation - better productivity
- No external referencing - built-in and automatic
- Can measure both ends at once
- Compatible with optical switches for multi-channel testing
- Optimized for high return loss measurements to 70 dB
- Meets BELLCORE GR-326-CORE test requirements
- Single & dual wavelength models

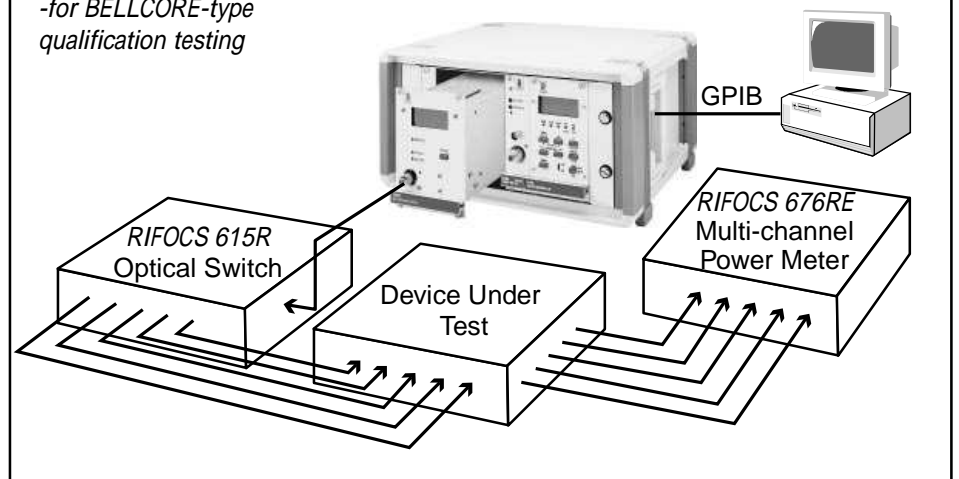
**Applications**

- BELLCORE-type qualification testing
- Cable assembly testing
- Ribbon and other multi-channel connectors
- Passive component testing, including couplers, splitters, isolators, attenuators, etc.



**Multi-Channel Return Loss/Insertion Test System**

-for BELLCORE-type qualification testing



**Multi-Channel Testing**

The RIFOCS 680RL Series Return Loss Module is applicable whenever there is a need for unattended, automated testing of insertion loss and return loss. The 680RL is capable of spatially measuring the return loss. Therefore components preceding the device under test such as patch cords, optical switches and other devices that might be required for the test are not falsifying the measured return loss. The measurement range of the 680RL is not limited by other components in the link, whereas the conventional CW method is limited by the highest reflective components

Together with a 615 Optical Switch the 680RL the most economical solution for a multichannel single mode test system performing tests complying with GR-326-CORE.

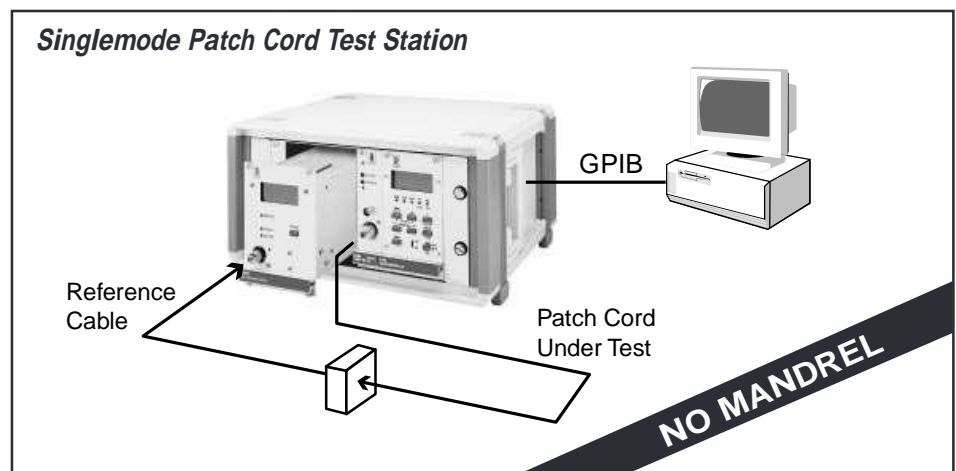
## Specifications

MODEL	688RL	685RL	686RL
Wavelength	1300nm $\pm$ 20nm, 1550nm $\pm$ 20nm	1310nm $\pm$ 20nm	1550nm $\pm$ 20nm
RMS Spectral Width	<10nm		
Launch Power	min. 0.06 mW average (-12dBm)		
Connector Option	RIFOCS UCI- APC (for connector of reference cable)		
Compatible Fiber	SMF-28		
Return Loss Range	10dB to 70dB		
Accuracy	0.5dB or better		
Resolution	0.1dB		
Interface	GPIB via 600 Series Controller		
Operating temperature	+5 °C to +45 °C, <90% RH (non-condensing)		
Storage temperature	-40 °C to +70 °C, <90% RH (non-condensing)		
Physical dimensions	18E, (takes up 3 RIFOCS slot position)		
Weight	<4kg		
Laser safety	Class 1		

Specifications subject to change without notice

## Singlemode Testing

The test station shown at right simultaneously measures IL (insertion loss) and RL (return loss) at both 1310nm and 1550nm. With the Windows95™ compatible application software, the measurement data can be easily logged for label printing or post processing.



## Ordering Information

### A) Select Return Loss Test Module:

**685RL** Return Loss Module, 1310nm  
**686RL** Return Loss Module, 1550nm  
**688RL** Return Loss Module,  
 Dual Wavelength, 1310/1550nm

### B) Select Proper UCI-APC Adapter:

Connector Type	UCI-APC Adapter (for 8° APC)
DIN 47256	AD-108
E2000	AE2-10
FC	APC-108 for wide key: 2.14mm
	APC-109 for narrow key: 2.0mm
SC	ASC-108
ST (Bayonet type)	ATS-108

### C) Ordering Code Format: (Model/Adapter)

A minimum system requires a RIFOCS 600R series Mainframe plus a 671R System Controller Module. The interface port of the 680RL Modules require an APC-type connection for optimum performance. For patch cord testing, the RL module can be used with either RIFOCS 900 Series Reference Cables (select Narrow Key FC-APC adapter option) or the customer can supply their own and select the desired UCI-APC adapter.

**Example 1:** If using RIFOCS 5900 Series Reference Cables (see price list for selection), then specify model APC-109 FC-APC type UCI-APC Adapter:

**QTY-1 688RL/APC-109**

**Example 2:** If the customer wishes to use/make their own Reference/Master and Interface Cables, then simply specify the UCI-APC adapter type per Table B, at left. For an SC-APC interface, specify:

**QTY-1 688RL/ASC-108**

AVAILABLE MAY 1997

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