



AFSI 525N-60-SM Single-mode Optical Line Tester.

About the AFSI MTCK-005 525N-60-SM Single-mode Optical Line Test Set

Amphenol Fiber Systems International (AFSI) offers the 525N-60-SM bi-directional optical test set as a compact, handheld instrument incorporating an Auto Test feature, Optical Power Meter and Return Loss Meter and NAVSEA certified MQJ products. It can be used to measure Insertion Loss in Simplex or Duplex test mode with the addition of a second unit. The two unit configuration significantly reduces overall test time.

The 525N is fitted with a PC Universal Connector Interface on the laser source and a Snap-On Connector on the power meter, permitting the unit to be used with compatible connectors.

All models in the series incorporate features that make the fiber optic tests and measurements more efficient and convenient:

- Built-in LED sources simplify test and measurement
- Non-volatile data storage for more than 1,000 measurements
- Pass/Fail testing mode
- RS232 interface for report printing, remote testing, data uploads/downloads
- Multiple power options, including rechargeable nickelmetal hydride (NiMH) batteries, alkaline batteries, concurrent AC/battery trickle charge mode and AC-only operation

A large, backlit LCD display enables users to easily view measured optical power levels and the calibration wavelength in use. Intuitive controls make measurements, data storage and retrieval and report printing easy and convenient.

525N-60-SM Series Single-mode Optical Test Set

The 525N Series optical test sets can perform optical power measurements within a range of +10 to -65dBm. They are calibrated at 850, 980, 1300, 1310, 1480, 1550 and 1625nm. There are laser sources available in the unit at 850 and 1300nm.



AFSI 525N-60-SM Single-mode Optical Line Test Set.

AFSI 525N-60-SM Single-mode Optical Line Test Set Specifications

Optical Power Meter Specifications	
Power Measurement Range in dBm Wavelength \geq 850 - 1700nm	+10 to -65dBm
Wavelength Range	800 to 1700nm
Calibration Points	850, 980, 1300, 1310, 1480, 1550, 1625nm
Absolute Accuracy 1310nm with -10dBm Input Power	$\leq \pm 0.25\text{dB}$ (6%)
Linearity @ 1310nm Linearity Accuracy +10 to -3dBm	$\pm 0.22\text{dB}$
-3 to -55dBm	$\pm 0.05\text{dB}$
-55 to -65dBm	$\pm 0.22\text{dB}$
Optical Stability - OPM Channel Only	$\leq \pm 0.05\text{dB}$ (0 - 50°C \pm 1°C 24 hr @ > -30dBm) ¹
Setting Time, Auto-range	0.5 second (typical)
Optical Power Measurements	dBm, dB, Watt
Polarization Dependency	$\leq 0.10\text{dB}$
Mating Stability of SOC Connector	$\leq 0.02\text{dB}$
Repeatability	$\leq 0.05\text{dB}$
Optical Interface Power Meter Optical Interface MM LED Power Source	SOC Abapter UCI-UPC flat polish Adapter, 62.5/125um

1. While temperature is running a profile 0 to 50°C.

525N-60-SM Single-mode Optical Line Test Set Return Loss Specifications

Return Loss Specifications		
RL Measurement Range with Interface Connection UCI-UPC ORL > 30dB UCI-UPC ORL > 50dB	≤ 10 to 30dB ≤ 10 to 40dB	(Specific to connector type) (Specific to connector type)
Return Loss Accuracy		
UCI-UPC	10 to 45dB $< \pm 0.50\text{dB}$	(Best case for connector type)
Measurement Range	> 30dB	

AFSI 525N-60-SM Single-mode Optical Line Test Set, Specification Summary of LEDs

Specification Summary of LEDs		
Central Wavelength	1310nm \pm 30nm	1550nm \pm 30nm
Spectral Bandwidth	< 170nm	< 170nm
Stability		
Variation of $\leq \pm 10^{\circ}\text{C}$ from +17 to +40 ¹	$\leq \pm 0.25\text{dB}$	$\leq \pm 0.25\text{dB}$
Variation from +0 to +50 ²	$\leq \pm 0.75\text{dB}$	$\leq \pm 0.75\text{dB}$
Power Output ¹		
Continuous Wave	> -10dBm	> -10dBm
Typical (Factory Adjusted)	-04dBm \pm 1.0dB	-04dBm \pm 1.0dB
Mating Stability of Connector	$\leq 0.20\text{dB}$	$\leq 0.20\text{dB}$
Connector Interface	Universal Connector Interface (UCI-UPC)	

1. Within specified ambient environment of 20 to +20°C.

2. Instrument is ramped up from 0 to +50°C in 5°C steps/30 min. The instrument is allowed to stabilize at each of these temperatures for 30 minutes. The initial reference power level is measured at approximately +25°C.

AFSI 525N-60-SM Single-mode Optical Line Test Set, AutoTest Specifications

AutoTest Specifications	
Wavelength	1310/1550nm
Measurement Mode	Bi-directional Simplex
Measurement Range	<30dB

AFSI 525N-60-SM Single-mode Optical Line Test Set, Mechanical Specifications

Mechanical Specifications	
Dimensions	
Enclosure	6.50 x 1.75 x 3.90"
Rubber Boot	7.60 x 4.30 x 2.30"
Accessories	Soft, shock-proof boot, Tilt Up Stand, NIMH Battery Pack
Weight W/Batteries and Boot	2.20 lbs



How to Order

For more information on how to order or to obtain a price quote on our AFSI MTCK-005 525N-60-SM or other products, please call us at 800.472.4225. For international calls, please dial 214.547.2400 or email us at info@fibersystems.com.

About Amphenol Fiber Systems International

Amphenol Fiber Systems International (AFSI) designs, manufactures, markets and supports reliable and innovative fiber optic interconnect solutions that withstand the harsh environments of military, oil & gas, mining and broadcast applications. After more than a decade in business, AFSI continues to uphold its position as a global leader in fiber optic interconnect components and systems such as termini, M28876, MIL-ST, TFOCA and the TFOCA-II® connector, which AFSI developed and patented.

Altogether, AFSI has delivered millions of fiber optic connectors in more than 22 countries. Whenever there is a need for superior cost-effective fiber optic systems and products that will stand up to demanding operating environments, you can rely on AFSI for engineering know-how, top-quality products and expert technical support.

For more information about AFSI, please visit our web site at www.fibersystems.com.