

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

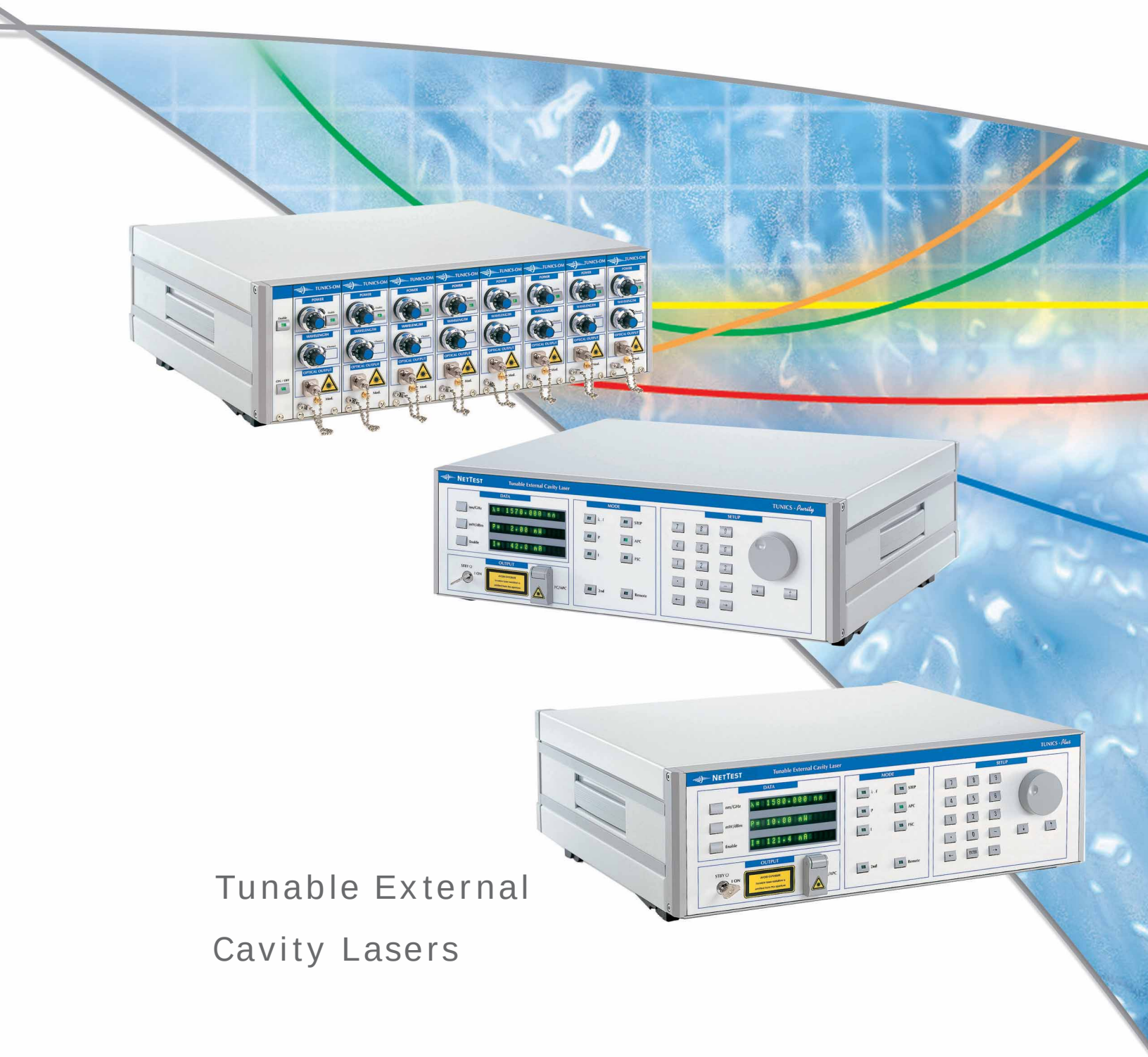
- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Exfo / NetTest / Photonetics TUNICS-BT* at our website: ***Click HERE***

TUNICS



Tunable External Cavity Lasers

www.nettest.com

NETTEST

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

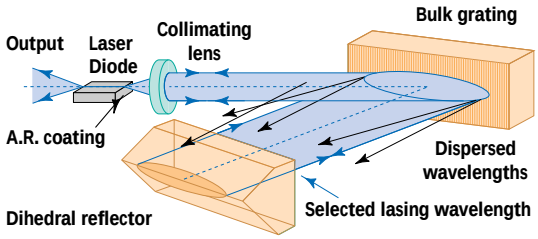
Ultimate Design Features For Outstanding Performance

TUNICS is a complete family of state-of-the-art tunable external-cavity lasers designed to meet the most demanding requirements in fiber-optic component and system testing, in particular for DWDM applications. Its novel, proprietary optical design features provide a unique range of user benefits.

ULTRA-STABLE SELF-ALIGNED LASER CAVITY

TUNICS external laser cavity design guarantees long-term top performance because of its self-aligned configuration. In most laser cavities, minute changes in the position of the optical elements, caused by mechanical drifts over time, can rapidly degrade both the power and spectral purity.
In contrast, the patented TUNICS cavity design uses a dihedral rear reflector made with a 180° folding prism that acts as a "1D corner cube," in order for the laser resonator to remain perfectly in tune, irrespective of small misalignments.

Finally, the optical head is constructed entirely of invar, a zero-thermal-expansion metal, and therefore no temperature control of any kind is required to perform to full specifications. Benefits include instant start-up and low power dissipation.



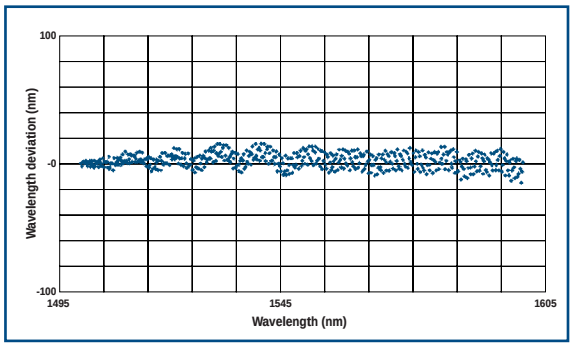
Self-aligned external laser cavity

MODE-HOP-FREE OPERATION

Mode hops plague most tunable laser designs and are a major probleme in many applications. Their most conspicuous manifestation is the sudden, unpredictable, and non-reproducible wavelength shifts, which make the sweep discontinuous.

The scanning mechanism in TUNICS has a geometry that maintains at all times the cavity length at a fixed multiple of the wavelength.
In addition, TUNICS-*Plus* features a new active control of the cavity.

This guarantees a large range of smooth spectral sweep, free of any mode hops over the entire (min. 100 nm) tuning range.



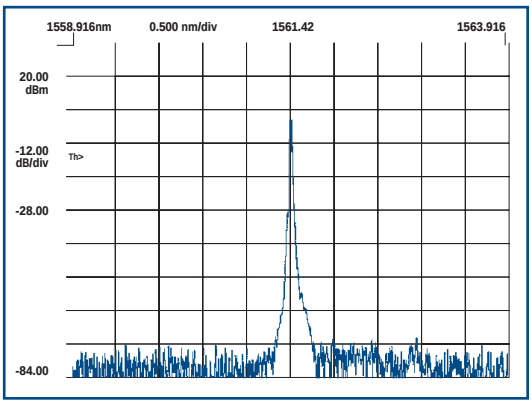
Mode-hop-free characteristic

INTERNAL WAVELENGTH REFERENCING

The wavelength accuracy of an external cavity laser depends on sub-micrometer variation of the cavity length.
TUNICS-*Plus* incorporates an internal referencing system to precisely measure the emitted wavelength, thus avoiding the need of an additional wavelength-meter in test systems.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

FULL-POWER ASE-NOISE-FREE OPERATION

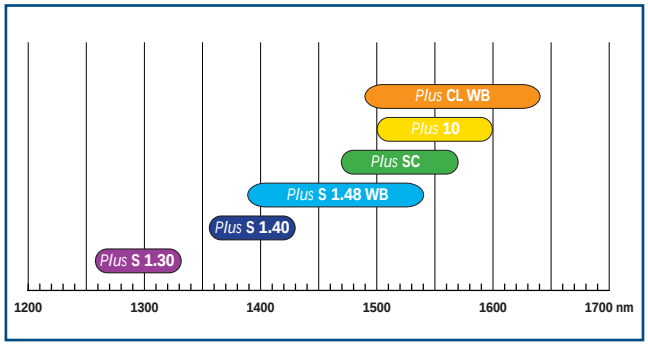


TUNICS-Purity
ASE-noise-free spectrum

An external-cavity laser-diode emits a single line, but also some background broadband amplified spontaneous emission (ASE).
This residual ASE noise must be filtered out to perform an accurate testing of components and amplifiers.

TUNICS-*Purity* is the perfect solution because it emits a truly pure ASE-noise-free single-mode laser line while maintaining a high power and all features of state-of-the-art external cavity lasers. TUNICS-*Purity* features a new patended intra-cavity filtering design and avoids the need of an additional filter that often causes drift and loss.

AMPLE OPTICAL POWER FROM 1260 TO 1640 nm

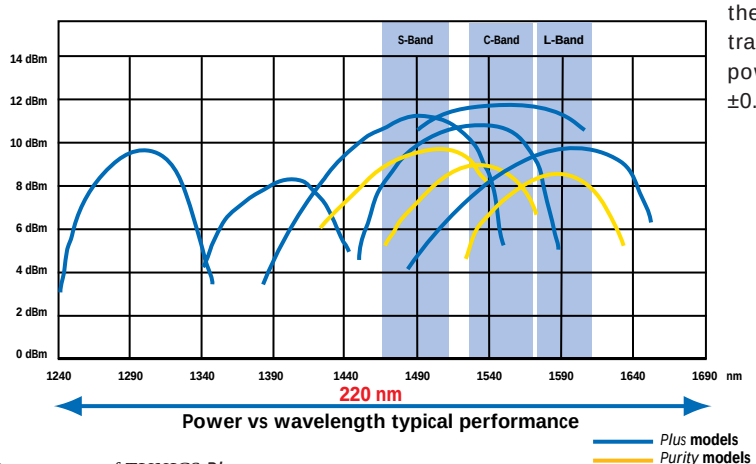


Wide choice of wavelength ranges

Fast, reliable, noise-free measurements of high-performance telecommunication components and systems often present challenging power-budget constraints, which only a high-power, yet low-noise source can resolve.

The high-performance laser diodes used in TUNICS and the highly-efficient external cavity design lead to a high output power over a wide tuning range. More than +6 dBm is routinely available at the optical connector of TUNICS in the central portion of their spectral range.

A full suite of specifically designed laser diodes covers the 1260 nm to 1640 nm spectral range for the present and future needs for DWDM transmission systems. In all cases, the automatic power control holds power constant within ±0.01 dB over time.



Output power of TUNICS-Plus and TUNICS-Purity models

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

THE TUNICS FAMILY

BENCHTOP INSTRUMENTS

NetTest offers a complete line of benchtop instruments to fulfill the most demanding needs of optical communications. Instinctive, user-friendly keyboard and display are optimized for natural, easy, and flexible operation and the instruments are fully programmable through the universal IEEE-488 and RS-232 interfaces. External analog inputs and outputs are also provided for fine wavelength tuning, amplitude modulation, and instant recording of spectral sweeps.

TUNICS-*Plus*

TUNICS-*Plus* is the result of many years of NetTest leadership in high-performance tunable external cavity lasers. Based on an ultra-stable self-aligned cavity, it now uses an active control to ensure a perfect mode-hop-free operation over its full wavelength tuning range. It also integrates an internal wavelength referencing system.
TUNICS-*Plus* models comfortably cover a very wide range from **1260 nm to 1640 nm** and up to +10 dBm output power.
Now an unequalled wavelength range of over 150 nm, completely mode-hop-free, is available.

NEW



TUNICS-*Purity*

TUNICS-*Purity* provides the latest breakthrough in external cavity laser performance. It utilises a new proprietary intra-cavity filtering scheme to fully eliminate background ASE noise and emits a pure single-mode laser line without any compromise to wavelength stability. TUNICS-*Purity* models cover the S-, C- and L-band from 1430 nm to 1625 nm and feature up to +3 dBm output power, with an accuracy of 0.05 pm.



TUNICS-BT

TUNICS-BT offers in a compact package all the basic features of NetTest's prime benchtop tunable lasers at a more affordable price. Its 80 nm wavelength range and 1 pm resolution make it the ideal tool for every optical bench. TUNICS-BT covers the complete S-, C- and L-band and +10 dBm high output power is available as an option.



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

MODULAR SOURCES

To complement its benchtop instrument series, NetTest also offers modular TUNICS sources optimized for multi-wavelength transmission system testing. From affordable manually-tunable sources to fully-controlled platform modules, NetTest products cover a wide range of applications from advanced laboratory experiments to automated factory test set-ups.

TUNICS-OM



TUNICS-OM is a modular 8-channel tunable source with manual adjustments for wavelength and power level. It is the popular multiple-wavelength solution when wavelengths are occasionally modified.

OSICS-ECL



OSICS is a new generation platform that builds on the backbone of TUNICS technology. Its sophisticated electronics, with its large display, control and set both the power and wavelength of up to 8 tunable external-cavity-laser modules. These OSICS-ECL modules can be mixed and matched various modules (DFB, EDFA, ASE and LD) to provide a truly convenient multi-channel test platform.

TUNICS-*Plus*

TUNICS-*Plus* is the result of many years of NetTest leadership in tunable laser sources. It covers the various bands of optical DWDM and extended short ranges. Its performance is unparalleled in the world of tunable external-cavity laser sources.



> *Active control for mode-hop-free operation*

For ultimate performance, Tunics-*Plus* features a new proprietary active control that ensures perfect mode-hop-free operation and accurate wavelength sweep over its entire tuning range.

> *High output power*

Up to +10 dBm for TUNICS-*Plus* 10 model eases the experiment power budget and provides high-dynamic range measurements.

> *Wide, fast, truly continuous tunability*

Extremely smooth scans over 100 nm, with an unsurpassed 1 pm resolution, allow a fine analysis over a wide spectral range.

NEW

Wide band option provides models for which the wavelength tuning range is wider than **150 nm** without compromising other specifications.

> *Multiple modulation possibilities*

A full range of amplitude modulation capabilities and mode-locked operation satisfy any specific modulation requirement.

> *Wavelength monitoring*

NEW

By connecting part of the light to a wavemeter, TUNICS-*Plus* is able to adjust internally the output wavelength to the required wavelength within the wavemeter accuracy. This function can be activated from the keyboard or through GPIB. It is compatible with wavemeters providing RS 232.C remote control (contact us for compatible wavemeter list).

> *Optical frequency fine tuning*

The external or internal wavelength fine tuning down to sub-MHz resolution and the coherence-control capability, which provides a linewidth broadening, are other useful features provided by Tunics-*Plus*.

> *Internal wavelength referencing*

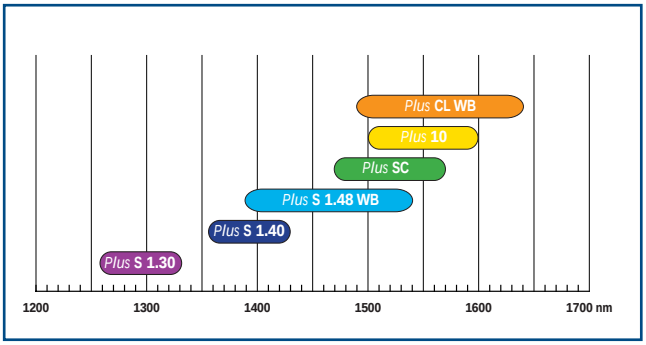
Better than ±40 pm absolute wavelength accuracy with its internal referencing system.

> *Wide choice of wavelength ranges*

Wide choice of tuning ranges which overlap to comfortably cover from the very short and short bands (S_{XX} models) to the long band (L model). SC model covers S- and C-band. CL model covers C- and L-band.

TUNICS-*Plus* 10 provides +10 dBm output power in the C-band.

Wavelength ranges of TUNICS-Plus models



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TUNICS-*Plus* SPECIFICATIONS

	TUNICS-*Plus* S 1.30	TUNICS-*Plus* S 1.40	TUNICS-*Plus* S 1.48	TUNICS-*Plus* SC	TUNICS-*Plus* CL	TUNICS-*Plus* 10 High Power
Tuning characteristics						
Wavelength range (mode hop free)						
P = 0 dBm	1260-1330 nm	1360-1430 nm	1430-1530 nm	1470-1570 nm	1525-1625 nm	1500-1600 nm
P = 3 dBm	1280-1310 nm	1380-1410 nm				
P = 6 dBm			1440-1500 nm	1480-1560 nm	1540-1620 nm	1510-1580 nm
P = 8 dBm			1450-1490 nm	1510-1550 nm	1560-1600 nm	
P = 10 dBm						1530-1570 nm
Absolute wavelength accuracy (1)	±0.04 nm					
Tuning repeatability (typ.)	±0.005 nm					
Wavelength setting resolution	0.001 nm					
Optical frequency fine tuning	±2 GHz					
Tuning speed (typ.)	1 s (100 nm)					
Laser output characteristics						
Power stability (2)	±0.01 dB					
Side mode suppression ratio (3)	> 45 dB					
Signal to source spontaneous-emission ratio (4)	> 55 dB					
Relative intensity noise (3) (5)	> 145 dB/Hz					
Interfaces						
Optical connector	FC-APC					
Output fiber	SMF-28™					
Output isolation	35 dB					
Return loss	60 dB					
Remote control	RS-232 C and IEEE-488.1					
Low frequency modulation	10 KHz to 8 MHz					
High frequency modulation	30 KHz to 1 GHz					
Mode-lock frequency	5 GHz					
Environment						
Operating temperature range	+15 to +30°C +60 to +85°F					
Power supply	100 to 240 V 50 to 60 Hz					
Dimensions (W x H x D)	448 x 133 x 370 mm^3					
Weight	12.5 kg					

NOTES

Specifications are given after 2 hours warm-up.
(1) After self calibration.
(2) Over one hour at a constant temperature.
(3) Measured with 0 dBm output power.
(4) Spontaneous emission measured on a 0.1 nm bandwidth at ±5 nm from the signal
(5) Measured at an electrical frequency of 100 MHz.

OPTIONS

M . . . . . *Polarization maintaining output fiber (orientation TE in slow axis, in line with connector key)*
WB . . . . . *Wide Band (for TUNICS-Plus S 1.48 and TUNICS-Plus CL)*

NEW

150 nm @ 0 dBm

	TUNICS-*Plus* S 1.48 Wide Band	TUNICS-*Plus* CL Wide Band
Wavelength range (mode hop free)		
P = 0 dBm	1390-1540 nm	1490-1640 nm
P = 6 dBm	1420-1520 nm	1520-1630 nm
P = 8 dBm	1440-1510 nm	1540-1610 nm

ACCESSORIES

Labview driver for TUNICS-Plus
Fiber optic jumper FC-APC/FC-APC
Fiber optic jumper FC-APC/FC-PC
Polarization maintaining fiber optic jumper FC-APC/FC-APC
Polarization maintaining fiber optic jumper FC-APC/FC-PC
Field carrying case 2U

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TUNICS-*Purity*

TUNICS-*Purity* provides the latest break-through in external-cavity laser sources with full power ASE-noise-free emission.

It utilises ultra-stable self-aligned cavity, wide continuous tunability and multiple modulation possibilities.



> *ASE-noise-free operation*

A new patented configuration yields an intra-cavity filtering of the background broadband ASE noise. The equivalent full width at half maximum (FWHM) of this filtering is as narrow as 0.15 nm which makes the residual ASE almost unmeasurable.
TUNICS-*Purity* provides a pure ASE-noise-free operation with no compromise to other key features of state-of-the art tunable external-cavity laser-diodes.

> *High output power*

TUNICS-*Purity* provides up to +3 dBm output power and covers S-, C- and L-band.

> *Wavelength accuracy*

TUNICS-*Purity* offers now a ±50 pm wavelength accuracy after internal referencing.

NEW

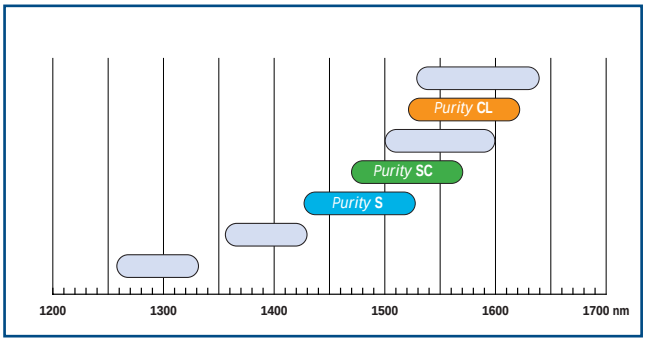
> *Ideal instrument for components testing*

TUNICS-*Purity* emits a pure high-power single-frequency laser line, thus enabling direct spectral measurements of filters and multiplexers with an unsurpassed dynamic range.
This avoids complex set-ups requiring an additional tracking filter, which often causes loss or the combination with an optical spectrum analyzer.

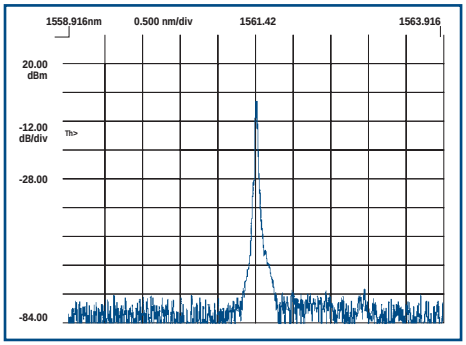
> *Multiple modulation possibilities*

A full range of amplitude modulation capabilities and mode-locked operation satisfy any specific modulation requirement.

Wavelength ranges of TUNICS-Purity models



TUNICS-Purity spectrum



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TUNICS-*Purity* SPECIFICATIONS

	TUNICS-*Purity* S S band	TUNICS-*Purity* SC S and C band	TUNICS-*Purity* CL C and L band
Tuning characteristics			
Wavelength range			
P = 0 dBm	1430-1530 nm	1470-1570 nm	1525-1625 nm
P = 3 dBm	1450-1510 nm	1510-1570 nm	1560-1620 nm
Mode hop spacing		> 70 nm	
Absolute wavelength accuracy (1)		±0.05 nm	
Tuning repeatability (typ.)		±0.005 nm	
Wavelength setting resolution		0.001 nm	
Optical frequency fine tuning		±2 GHz	
Tuning speed (typ.)		1 s (100 nm)	
Laser output characteristics			
Power stability (2)		±0.01 dB	
Signal to source spontaneous-emission ratio (3)		> 90 dB	
Relative intensity noise (4) (5)		> 145 dB/Hz	
Interfaces			
Optical connector		FC-APC	
Output fiber		SMF-28™	
Output isolation		35 dB	
Return loss		60 dB	
Remote control IEEE-488.1		Yes	
Remote control RS-232 C		Yes	
Low frequency modulation		10 KHz to 8 MHz	
High frequency modulation		30 KHz to 1 GHz	
Mode-lock frequency		5 GHz	
Environment			
Operating temperature range		+15 to +30°C +60 to +85°F	
Power supply		100 to 240 V 50 to 60 Hz	
Dimensions (W x H x D)		448 x 133 x 370 mm^3	
Weight		12.5 kg	

NOTES

Specifications are given after 2 hours warm-up.
(1) After self calibration.
(2) Over one hour at a constant temperature.
(3) Spontaneous emission measured on a 0.1 nm bandwidth at ±5 nm from the signal
(4) Measured with 0 dBm output power.
(5) Measured at an electrical frequency of 100 MHz.

OPTIONS

M *. . . . . Polarization maintaining output fiber (orientation TE in slow axis, in line with connector key)*

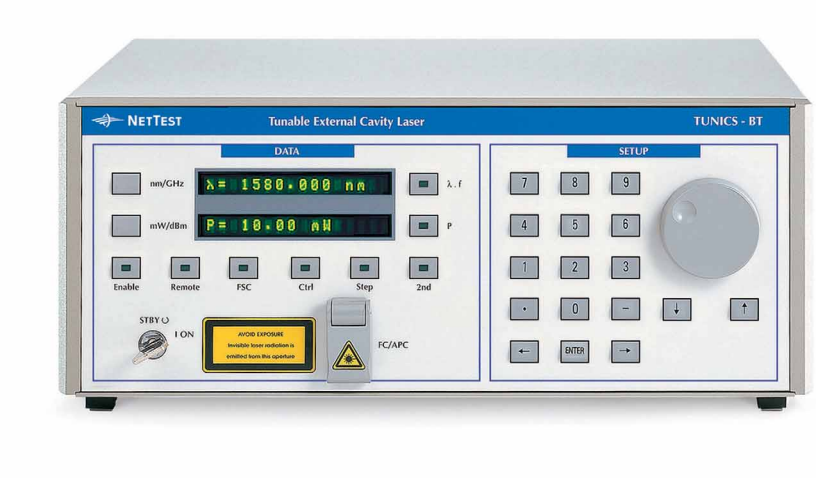
ACCESSORIES

Labview driver for TUNICS-Purity
Fiber optic jumper FC-APC/FC-APC
Fiber optic jumper FC-APC/FC-PC
Polarization maintaining fiber optic jumper FC-APC/FC-APC
Polarization maintaining fiber optic jumper FC-APC/FC-PC
Field carrying case 2U

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TUNICS-BT

TUNICS-BT is a general-purpose bench-top "work-horse" tunable laser, offering the basic features of the TUNICS prime benchtop models in a more compact package.



> Affordable price

With its affordable price and state-of-the-art high-performance, TUNICS-BT should equip the bench of each and every contributor in the field of optical fiber communications.

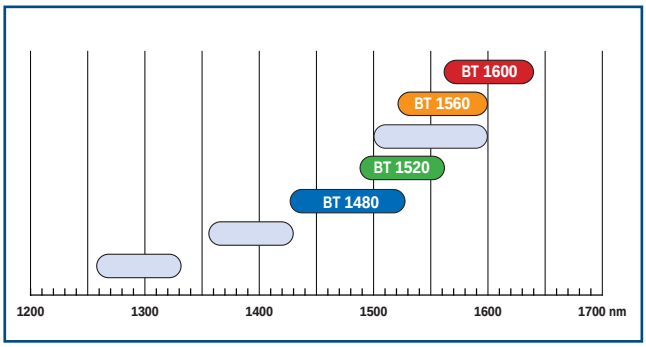
> High power options

Two options are available: +6 dBm or +10 dBm.

> Standard configuration

The standard configuration features a 1 pm resolution, a 0 dBm output power ranging from either 1440 to 1520 nm, 1480 to 1560 nm, 1520 to 1600 nm, or 1560 to 1640 nm and fine scanning and coherence-control functions.

Wavelength ranges of TUNICS-BT models



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TUNICS-BT SPECIFICATIONS

	TUNICS BT 1480	TUNICS BT 1520	TUNICS-BT 1560	TUNICS-BT 1600
Tuning characteristics				
Wavelength range				
P = 0 dBm	1440-1520 nm	1480-1560 nm	1520-1600 nm	1560-1640 nm
P = 6 dBm (P6 option)		1510-1550 nm	1530-1580 nm	1570-1620 nm
P = 10 dBm (P10 option)			1540-1580 nm	
Mode hop spacing	>40 nm	>40 nm	>40 nm	>40 nm
Absolute wavelength accuracy	±0.2 nm			
Tuning repeatability (typ.)	±0.005 nm			
Wavelength setting resolution	0.001 nm			
Optical frequency fine tuning	±2 GHz			
Tuning speed (typ.)	10 s (70 nm)			
Laser output characteristics				
Power stability (1)	±0.01 dB			
Side mode suppression ratio (2)	> 45 dB			
Relative intensity noise (3)	> 145 dB/Hz			
Interfaces				
Optical connector	FC-APC			
Output fiber	SMF-28™			
Output isolation	35 dB			
Return loss	60 dB			
Remote control IEEE-488.1	Yes			
Remote control RS-232 C	Yes			
Low frequency modulation	10 KHz to 8 MHz			
High frequency modulation	30 KHz to 1 GHz			
Mode-lock frequency	no			
Environment				
Operating temperature range	+15 to +30°C +60 to +85°F			
Power supply	100 to 240 V 50 to 60 Hz			
Dimensions (W x H x D)	340 x 133 x 308 mm^3			
Weight	7.5 kg			

NOTES

Specifications are given after 2 hours warm-up
(1) Over one hour at a constant temperature.
(2) Measured with 0 dBm output power.
(3) Measured at an electrical frequency of 100 MHz.

OPTIONS

P6 . . . . . *.High output power : 6 dBm*
P10 . . . . . *.High output power : 10 dBm*
M . . . . . *Polarization maintaining output fiber (orientation TE in slow axis, in line with connector key)*

ACCESSORIES

Labview driver for TUNICS-BT
Fiber optic jumper FC-APC/FC-APC
Fiber optic jumper FC-APC/FC-PC
Polarization maintaining fiber optic jumper FC-APC/FC-APC
Polarization maintaining fiber optic jumper FC-APC/FC-PC
Field carrying case 2U

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

OSICS-ECL

OSICS is a new generation platform with a sophisticated full-control electronics to set the parameters of up to 8 plug-in modules.

The OSICS-ECL module is an external cavity laser based on TUNICS technology.



> Full automatic control

Both the wavelength and optical power can be selected and controlled from the front panel of the instrument, or through IEEE-488 and RS-232 interfaces.

> Standard configuration

The standard configuration features a 10 pm resolution and a 0 dBm output power ranging from either 1440 to 1520 nm, 1480 to 1560 nm, 1520 to 1600 nm, or 1560 to 1640 nm. In addition, the modules and the mainframe offer a full suite of internal and external modulation capabilities.

> High power options

Options include a +6 dBm or +10 dBm output power.

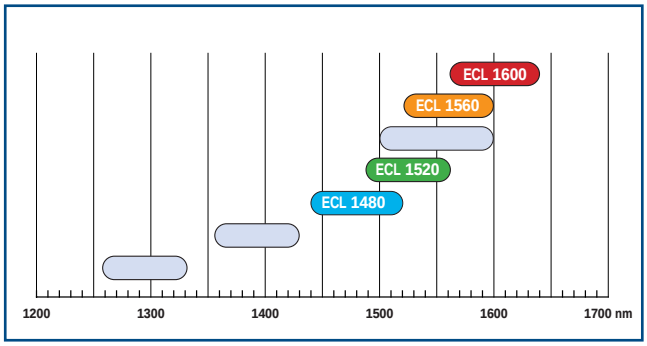
> High resolution

1 pm resolution over the entire spectral range.

> Mix and match

OSICS-ECL modules can be mixed with DFB laser modules to provide a convenient and versatile multi-wavelength sources.
OSICS can also host OSICS-ASE, amplified spontaneous emission fiber source modules, OSICS-EDFA, erbium-doped fiber amplifier modules and OSICS-LD, laser diode modules thus fulfilling all needs for applications requiring multi-wavelength sources and amplifiers.
A specific data sheet that describes the OSICS product line is available.

Wavelength ranges of OSICS-ECL models



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

OSICS-ECL SPECIFICATIONS

	OSICS-ECL 1480	OSICS-ECL 1520	OSICS-ECL 1560	OSICS-ECL 1600
Tuning characteristics				
Wavelength range				
P = 0 dBm	1440-1520 nm	1480-1560 nm	1520-1600 nm	1560-1640 nm
P = 6 dBm (P6 option)		1510-1550 nm	1530-1580 nm	1570-1620 nm
P = 10 dBm (P10 option)			1540-1580 nm	
Absolute wavelength accuracy	±0.2 nm			
Wavelength stability[1][2]	±0.01 nm/h ; ±0.01 nm / 24 h (typ.)			
Wavelength setting resolution	0.01 nm			
Tuning repeatability (typ.)	±0.01 nm			
Wavelength setting	Front panel or remote control			
Laser output characteristics				
Power setting	Front panel or remote control			
Power stability[1][2]	±0.01 dB/h ; ±0.01 dB / 24 h (typ.)			
Side mode suppression ratio (typ.)[1]	> 45 dB			
Relative intensity noise (typ.)[3]	> 145 dB/Hz (typ.)			
Interfaces				
Output connector	FC-APC			
Output fiber	SMF-28™			
Output isolation	35 dB			
Return loss	60 dB			
Remote control	RS-232 C and IEEE-488.2			
Modulation analog	150 Hz to 1 GHz (external)			
Modulation digital	500 Hz to 1 MHz (internal or external)			
Environment				
Number of modules per rack	Up to 8			
Operating temperature range	+15 to 30° C			
	+60 to +85°F			
Power supply (autoselect)	100 to 240 V			
	50 to 60 Hz			
Module dimensions (W x H x D)	35 x 130 x 250 mm³			
Mainframe dimensions (W x H x D)	448 x 133 x 370 mm³			
Weight	16.1 kg (for 8-module platform)			

NOTES

Specifications are given after 2 hours warm-up.
(1) Measured with 0 dBm output power.
(2) Over one hour at a constant temperature.
(3) Measured at an electrical frequency of 100 MHz.

OPTIONS

P6 . . . . . *.High output power : 6 dBm*
P10 . . . . . *.High output power : 10 dBm*
M . . . . . *Polarization maintaining output fiber (orientation TE in slow axis, in line with connector key)*
R . . . . . *High resolution: 1 pm*

ACCESSORIES

Labview driver for OSICS-ECL
Fiber optic jumper FC-APC/FC-APC
Fiber optic jumper FC-APC/FC-PC
Polarization maintaining fiber optic jumper FC-APC/FC-APC
Polarization maintaining fiber optic jumper FC-APC/FC-PC
Field carrying case 2U

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TUNICS-OM

TUNICS-OM is a compact and modular manually-tunable source for use in multi-wavelength test systems.



> Up to 8 modules in a single instrument

Up to 8 TUNICS-OM modules can be assembled into an affordable single 19" instrument.
A multi-turn knob allows the wavelength to be adjusted over 70 nm with a resolution of better than 10 pm.

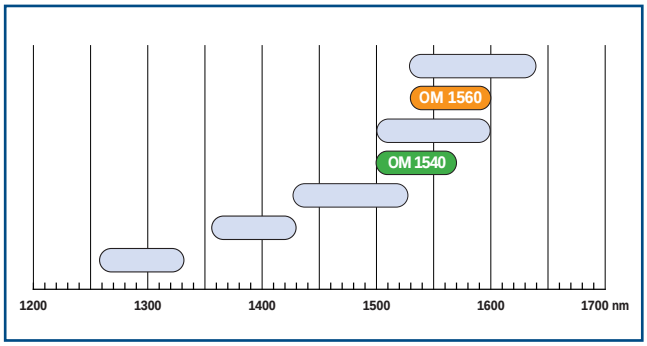
> Standard configuration

Each module incorporates an adjustable automatic-power-control diode driver and provides more than 0 dBm of truly-single-mode optical power over the tuning range. Two wavelength ranges are available, 1500-1570 nm or 1530-1600 nm. An external input allows each unit to be intensity modulated from 10 kHz to 1 GHz.

> High power option

For more power-hungry applications, GN Nettest offers +6 dBm and +10 dBm high-power options.

Wavelength ranges of TUNICS-OM models



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TUNICS-OM SPECIFICATIONS

	TUNICS-OM 1540	TUNICS-OM 1560
Tuning characteristics		
Wavelength range		
P = 0 dBm	1500-1570 nm	1530-1600 nm
P = 6 dBm (P6 option)	1520-1570 nm	1540-1590 nm
P = 10 dBm (P10 option)	1530-1570 nm	1540-1580 nm
Wavelength stability [1] [2]	0.1 nm	
Wavelength setting resolution	0.01 nm (typ.)	
Wavelength setting	Multi-turn knob (16 nm/turn)	
Laser output characteristics		
Power setting	Single-turn knob	
Power stability [1][2]	±0.01 dB	
Side mode suppression ratio (typ.)[1]	> 45 dB	
Relative intensity noise (typ.)[3]	> 145 dB/Hz	
Interfaces		
Output connector	FC-APC	
Output fiber	SMF-28™	
Output isolation	35 dB	
Return loss	60 dB	
Remote control	no	
Modulation analog	10 KHz to 1 GHz	
Environment		
Number of modules per rack	Up to 8	
Operating temperature range	+15 to +30°C +60 to +85°F	
Power supply (autoselect)	100 to 240 V 50 to 60 Hz	
Module dimensions (W x H x D)	50 x 128 x 167 mm^3	
Mainframe dimensions (W x H x D)	448 x 133 x 370 mm^3	
Weight	15.1 kg (for 8-module platform)	

NOTES

Specifications are given after 2 hours warm-up.
(1) Measured with 0 dBm output power.
(2) Over one hour at a constant temperature.
(3) Measured at an electrical frequency of 100 MHz.

OPTIONS

P6 . . . . . *.High output power : 6 dBm*
P10 . . . . . *.High output power : 10 dBm*
M . . . . . *Polarization maintaining output fiber (orientation TE in slow axis, in line with connector key)*

ACCESSORIES

Fiber optic jumper FC-APC/FC-APC
Fiber optic jumper FC-APC/FC-PC
Polarization maintaining fiber optic jumper FC-APC/FC-APC
Polarization maintaining fiber optic jumper FC-APC/FC-PC
Field carrying case 2U

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

The Tunics Family at a Glance

	Plus	*Purity*	**BT**	**OSICS-ECL**	**OM**
Benchtop instruments	X	X	X		
Modular sources				X	X
Number of channels	1	1	1	up to 8	up to 8
Full internal control	yes	yes	yes	yes	
Manual adjustment					yes
ASE-noise-free operation		yes			
Mode-hop-free operation	full range	yes	yes		
High resolution (1 pm)	yes	yes	yes	option	
Internal wavelength referencing	yes				
Pigtailed output	yes	yes	yes	yes	yes
Polarization maintaining output	option	option	option	option	option
Remote control	yes	yes	yes	yes	
Power modulation capability	yes	yes	yes	yes	yes
Mode-lock capability	yes	yes			
Optical frequency fine tuning	yes	yes	yes	option	
Coherence control capability	yes	yes	yes	option	

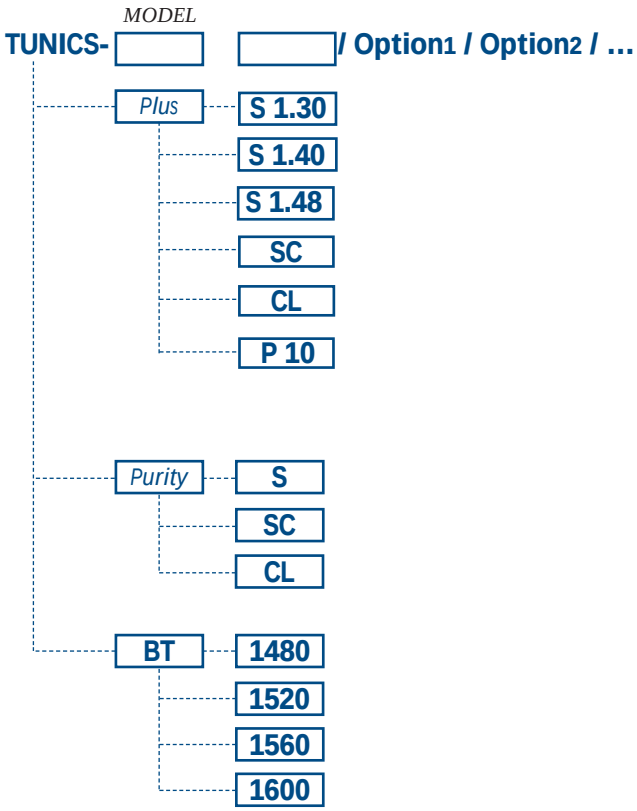
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ORDERING INFORMATION
BENCHTOP INSTRUMENTS

For each benchtop instrument desired, please specify the model name followed by the options:



OPTIONS

> Use the following code references that correspond to the available options for the bench-top instrument:

P6	High output power: 6 dBm (TUNICS-BT)
P10	High output power: 10 dBm (TUNICS-BT)
M	Polarization maintaining output fiber (all models)
WB	Wide Band (available on TUNICS-*Plus* CL and TUNICS-*Plus* S 1.48)

ACCESSORIES

> Use the following references that correspond to the available accessories:

LabView driver for TUNICS-BT
LabView driver for TUNICS-*Purity*
LabView driver for TUNICS-*Plus*
FO Jumper FC-APC/FC-APC
FO Jumper FC-APC/FC-PC
Polarization Maintaining FO Jumper FC-APC/FC-APC
Polarization Maintaining FO Jumper FC-APC/FC-PC

NETTEST

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Ordering Information (cont.)
Modular Sources

For the modular sources, please specify the rack and/or the module type as follows:

TUNICS-OM-rack — For the TUNICS-OM 19" rack

TUNICS-OM — *MODEL* [ ] **/ Option1 / Option2** — For the TUNICS-OM module

- **1540**
- **1560**

OSICS-mainframe — For the OSICS mainframe without module

OSICS-ECL — *MODEL* [ ] **/ Option1 / Option2 / ...** — For the ECL module

- **1480**
- **1520**
- **1560**
- **1600**

OPTIONS

> Use the following code references that correspond to the available options for the different modular sources:

P6	High output power: 6 dBm (TUNICS-OM, OSICS-ECL)
P10	High output power: 10 dBm (TUNICS-OM, OSICS-ECL)
M	Polarization maintaining output fiber (TUNICS-OM, OSICS-ECL, orientation TE in slow axis, in line with connector key)
R	High resolution: 1pm (OSICS-ECL)

ACCESSORIES

> Use the following references that correspond to the available accessories:

LabView driver for TUNICS-BT
LabView driver for TUNICS-*Purity*
LabView driver for TUNICS-*Plus*
FO Jumper FC-APC/FC-APC
FO Jumper FC-APC/FC-PC
Polarization Maintaining FO Jumper FC-APC/FC-APC
Polarization Maintaining FO Jumper FC-APC/FC-PC
Field Carrying Case 2U (TUNICS-OM)

© 2001 September NetTest A/S. All Rights Reserved - 3640

NETTEST

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TUNICS

Photonetics now NetTest Photonics Division

NetTest A/S
Kirkebjerg Allé 90, DK- 2605 Brøndby Denmark Tel +45 72 11 22 00 Fax +45 72 11 22 10
com@nettest.dk - www.gnnettest.com

NetTest Sales Companies
• Australia +61 39 890 6677 • Canada +1 905 479 8090 • China +86 10 64 67 88 88
• Nordic +45 72 11 23 00 • France +33 (0)1 61 34 34 34 • Germany South office +49 8191 9477 90 •
Germany North office +49 5131 7017 0 • Italy +39 02 95 12 621 • Singapore +65 220 9575
• Spain +34 91 372 92 27 • Sweden +46 8 555 410 65 • UK +44 1295 26 77 55
• USA +1 978 535 73 33

NetTest develops, manufactures and markets advanced equipment and systems for the test and measurement of telecommunication, data communication and optical networks. We provide carriers, vendors, enterprises and research laboratories with the network testing solutions they need to troubleshoot and optimise performance in today's complex, hybrid networks and in those planned for tomorrow.

NetTest undertakes a continuous and intensive product development program to ensure that its instruments and systems perform to the highest technical standards. As a result, the specifications in this document are subject to change without notice.



All TUNICS models comply with IEC 60825-1 and FDA (21CFR Subchapter J) laser safety standards. The proprietary configuration of TUNICS is patented. (US patents # 5,594,744 and # 5.802.085 and # 6.252.718 B1)

NETTEST

© 2001 September NetTest A/S. All Rights Reserved - 3640

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP