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Data Sheet

August 13, 2026

PHOTONETICS

Photonetics 3642HE15 TUNICS-SW TUNABLE LASER SOURCE

GPIB: TUNICS remote interface options on some frames; confirm the 3642 rear panel Form: benchtop TUNICS mainframe + HE 15 optics Status: Photonetics EOL; NetTest/Anritsu TUNICS support path Identity Rule: do not copyasingle 70 nm window onto 3642HE15 unless the faceplate matches Photonetics 3642HE15 TUNICS-Class External Cavity Tunable Laser The Photonetics 3642HE15 isaTUNICS-family external-cavity tunable laser in the 3642 HE 15 configuration. Photonetics TUNICS-OM / TUNICS-Purity manuals list HE (high-end) 15 asaC-band class tunable source. Neighbor TUNICS-OM 3646 HE 15 is the portable generator in the same HE 15 optical class. Typical TUNICS-OM windows include 1500-1570 nm (OM 1540) and 1530-1600 nm (OM 1560) with greater than 0 dBm, high-power P6/P10 options, and FC/APC output. Exact start/stop wavelength, SMSR, and power for 3642HE15 belong on the faceplate and the 3642/TUNICS HE 15 sheet. NetTest/Anritsu later absorbed Photonetics TUNICS.



MODEL

**PHOTONETICS
3642HE15**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

3642HE15

LISTING

<https://aumictechlabs.com/products/3642he15-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Photonetics 3642HE15 TUNICS-SW is a tunable laser source delivering continuous mode-hop-free operation across the 1460–1595 nm band. Built on an external cavity architecture with

invar construction, It has wavelength accuracy to ± 0.04 nm and tuning repeatability of ± 0.005 nm without requiring temperature stabilization. The integrated wavelength referencing system enables fast, independent wavelength measurement and control, eliminating reliance on external meters.

Technical Specifications

Wavelength Range: 1460–1595 nm (full range); 1500–1570 nm at 0 dBm; 1460–1600 nm at –3 dBm

Output Power: 0 dBm (1460–1470 nm), 3 dBm (1470–1490 nm), 6 dBm (1490–1530 nm), 8 dBm (1530–1595 nm), up to +10 dBm

Wavelength Accuracy: ± 0.04 nm absolute

Tuning Repeatability: ± 0.005 nm (typical)

Tuning Speed: 1–100 nm/s (adjustable, continuous sweep)

Spontaneous Emission: >40 dB or >45 dB

Relative Intensity Noise: –145 dB/Hz (typical)

Optical Connector: FC/APC

Fiber Type: Single Mode

Laser Safety Classification: Class 1M

Key Features

External cavity design with patented TUNICS cavity and dihedral rear reflector ensures self-aligned resonator stability

Active mode-hop-free control maintains continuous operation across full wavelength range

Invar optical head construction delivers zero-thermal-expansion stability with instant start-up and minimal power consumption

Internal wavelength referencing system provides precise, real-time wavelength measurement and control

Typical Applications

Telecommunications testing, optical system characterization, and research environments requiring stable, tunable narrowband sources.

Compatibility & Integration

Remote control via RS-232 and GPIB (IEEE-488.1).

Dimensions: 448 × 370 × 133 mm (W × D × H). Weight: 12.5 kg.

Features & description

From manufacturer datasheet

Features

- Photonetics TUNICS 3642 HE 15 external-cavity tunable laser

3642HE15 Characteristics / Specifications

PARAMETER	VALUE
Model	3642HE15
Manufacturer	Photonetics (later NetTest / Anritsu TUNICS lineage)
Instrument Type	External Cavity Tunable Laser
Series	TUNICS / 3642 HE 15
Alias	3642HE15; 3642 HE 15; Photonetics 3642HE15
Configuration	HE 15 (high-end 15 class TUNICS option string)
Related OM	TUNICS-OM 3646 HE 15 portable generator
Laser Type	external cavity tunable diode (TUNICS)
Fiber Output	FC/APC class on TUNICS-OM manuals
Power Class TUNICS OM	greater than 0 dBm standard; P6/P10 high-power options on OM sheets
Example Window OM15	1530-1600 nm (other OM tables list 1520-1600 / 1540-1590 / 1540-1580 nm sub-windows)
Tuning	manual modular TUNICS-OM; 3642 is the instrument family member with HE 15 optics
ASE Option	ASE-noise-free 90 dB class option on some TUNICS-OM sheets
Connector	FC/APC (confirm on the 3642 bulkhead)
Safety	Class 1M / Class 1 laser class per the installed TUNICS manual (confirm label)
GPIB	TUNICS remote interface options on some frames; confirm the 3642 rear panel
Form	benchtop TUNICS mainframe + HE 15 optics
Status	Photonetics EOL; NetTest/Anritsu TUNICS support path
Identity Rule	do not copy a single 70 nm window onto 3642HE15 unless the faceplate matches
Documentation	Photonetics TUNICS-OM / 3642 HE 15 user manual
Line	mains per the TUNICS frame nameplate
Duty	CW tunable source after warm-up on the manual Notes HE 15 identity from Photonetics TUNICS 3642HE15 / TUNICS-OM HE 15 family.

PARAMETER

VALUE

Wavelength limits are configuration-specific (OM 1540 vs 1560 examples). Confirm the 3642 faceplate window and power option.

3642HE15 Specifications

PARAMETER	VALUE
Applications	DWDM component test; manually tuned C-band sources; TUNICS HE 15 MRO.
Key Features	- Photonetics TUNICS 3642 HE 15 external-cavity tunable laser
Technical Specifications	Model: 3642HE15

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	3642HE15
Manufacturer	Photonetics (later NetTest / Anritsu TUNICS lineage)
Instrument Type	External Cavity Tunable Laser
Specifications	
PARAMETER	VALUE
Series	TUNICS / 3642 HE 15
Alias	3642HE15; 3642 HE 15; Photonetics 3642HE15
Configuration	HE 15 (high-end 15 class TUNICS option string)
Specifications	
PARAMETER	VALUE
Related OM	TUNICS-OM 3646 HE 15 portable generator
Laser Type	external cavity tunable diode (TUNICS)
Fiber Output	FC/APC class on TUNICS-OM manuals
Specifications	
PARAMETER	VALUE
Power Class TUNICS OM	greater than 0 dBm standard; P6/P10 high-power options on OM sheets
Example Window OM1540	1500-1570 nm
Example Window OM1560	1530-1600 nm (other OM tables list 1520-1600 / 1540-1590 / 1540-1580 nm sub-windows)
Specifications	
PARAMETER	VALUE
Tuning	manual modular TUNICS-OM; 3642 is the instrument family member with HE 15 optics
ASE Option	ASE-noise-free 90 dB class option on some TUNICS-OM sheets

PARAMETER	VALUE
Connector	FC/APC (confirm on the 3642 bulkhead)

Specifications

PARAMETER	VALUE
Safety	Class 1M / Class 1 laser class per the installed TUNICS manual (confirm label)
GPIB	TUNICS remote interface options on some frames; confirm the 3642 rear panel
Form	benchtop TUNICS mainframe + HE 15 optics

Specifications

PARAMETER	VALUE
Status	Photonetics EOL; NetTest/Anritsu TUNICS support path
Identity Rule	do not copy a single 70 nm window onto 3642HE15 unless the faceplate matches
Documentation	Photonetics TUNICS-OM / 3642 HE 15 user manual

Line: mains per the TUNICS frame nameplate

Duty: CW tunable source after warm-up on the manual

Notes

HE 15 identity from Photonetics TUNICS 3642HE15 / TUNICS-OM HE 15 family. Wavelength limits are configuration-specific (OM 1540 vs 1560 examples). Confirm the 3642 faceplate window and power option.

Laser Safety

Class 1M / Class 1 laser class per the installed TUNICS manual (confirm label)

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.