

TIDAS S-100 Diode Array Spectrophotometer

Overview

Unmatched measurement speed combined with modern data processing techniques ensure that, as a user, you can rely 100% on the results obtained. Independent parallel data processing permits spectral analysis at very high rates, even for fast kinetic applications, while still ensuring the information content of the spectral data.

Designed for Flexibility with Fibre-Optics

The TIDAS S-100/116 spectrophotometer has been designed from the beginning for the efficient application of fibre-optic technology. Both internal and external measurements are possible within the same unit thus allowing use either on the laboratory bench or in remote applications without the need for re-validation etc.



True Application Flexibility

The almost unlimited possibilities for using all types of containers and measuring arrangements make the TIDAS S-100/116 the spectrophotometer of choice for all fibre-optic applications in the future. The following examples give an indication of the many possibilities available with this kind of system:

Small, large, micro, ultra-micro or flow-through cells and many other tube types can be measured using the appropriate cell holders.

Colour measurements using integrating spheres of various sizes.

Reflection accessories for various angles are easily installed in seconds.

Integration into applications using microscopes for measurement on the smallest particles.

High Energy Throughput

For the first time, various kinds of measuring arrangements can be used without the loss of light usually associated with external fibre-optics. This is made possible by the use of a ceramic diode array module, which has been purpose-designed for fibre-optic applications and a specially designed multiplexing technique, both of which are to be found only in the TIDAS S-100/116 Diode Array Spectrophotometer from J&M.

Large Sample Compartment

Total and easy access to the large sample compartment from the top. The standard unit is supplied with a single cell holder which makes calibration and validation of the system very easy. An optional automatic cell changer for up to 16 cells is available.

Specifications

Optical design	Diode Array Spectrometer with ceramic chassis, single beam system, fibre-optic beam shaper, multilayer filter, optimized for fibre-optics.
External optics	External fibre-optic coupling free of light losses and switched by the controlling software.
Light sources	30 W deuterium- and 7.5 W tungsten lamp, light mixing using Y-fibre
Measuring speed	adjustable, 12 milliseconds to 10 seconds per spectrum
Number of diodes	1024
Pixel Resolution	approx. 0.8 nm per pixel
Resolution	better than 2 nm FWHM
Wavelength accuracy	± 1 nm (240 nm - 650 nm, NIST 2034)
Wavelength precision	± 0.005 nm (10 consecutive measurements, NIST 2034)
Noise at 254nm	± 0.00005 AU (254 nm, ASTM 0,5)
Photometric accuracy	± 0.01 AU (according to EUP standard)
PC-Interface	Ethernet
Dimensions (H x W x D)	165 x 555 x 490 cm
Weight	25 kg

All specifications may be subject to change for technical reasons.