Double Beam UV-Vis Spectrophotometer - 190-1100 nm Range - 0.5-6 nm Variable Bandwidth

Model **MSSP-LUV7600SWISS** | Brand **Master Science**








The Master Science Double Beam UV-Vis Spectrophotometer measures absorbance and transmittance from 190 to 1100 nm with a Czerny-Turner monochromator and a true double-beam optical path. Real-time reference correction cancels lamp and electronic drift, so baselines stay flat through long kinetic and scanning runs.

KEY HIGHLIGHTS

- Flexible resolution
- Accurate readings at high absorbance
- Stable baselines
- Lower running cost
- Fast lamp changes

AT A GLANCE

190 to 1100 nm WAVELENGTH RANGE	**0 to 200 %T; -4.0 to 4.0 A** PHOTOMETRIC RANGE
±0.3 nm WAVELENGTH ACCURACY	**≤ 0.1 nm** WAVELENGTH REPEATABILITY

Request a Quotation
Contact us for pricing, configuration options and delivery details.

support@themsci.com
www.themsci.com

Scan to view online

Overview

A spectral bandwidth adjustable from 0.5 to 6 nm in 0.1 nm steps lets the user balance resolution and signal for each method, from narrow pharmacopoeia bands to routine concentration checks.

Detailed performance data for the Master Science Double Beam UV-Vis Spectrophotometer is listed below.

Laboratories adding chromatographic separation to their spectroscopy work can also look at the Master Science quaternary HPLC system.

Everyday spectroscopy issues and how the Master Science Double Beam UV-Vis Spectrophotometer handles them:

Key Benefits

Flexible resolution
choose any bandwidth between 0.5 and 6 nm to match the sharpness of your absorption bands.

Accurate readings at high absorbance
stray light below 0.03 % keeps results linear for dense or strongly absorbing samples.

Stable baselines
the Master Science Double Beam UV-Vis Spectrophotometer compares sample and reference beams continuously to cancel drift.

Lower running cost
the long-life deuterium lamp is rated for more than 2000 hours of operation.

Fast lamp changes
pre-aligned lamps are replaced without removing the housing or realigning optics.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSSP-LUV7600SWISS
SKU	MSSP-LUV7600SWISS
Noise	≤ 0.1 %T at 100 %T; ≤ 0.05 %T at 0 %T
Scan Interval	0.05, 0.1, 0.2, 0.5, 1, 2 nm
Grating	1200 lines/mm
Power Supply	AC 90 to 250 V, 50/60 Hz

OPTICAL PERFORMANCE

Optical System	Double beam
Monochromator	Czerny-Turner
Wavelength Range	**190 to 1100 nm**
Wavelength Accuracy	**±0.3 nm**
Wavelength Repeatability	**≤ 0.1 nm**
Spectral Bandwidth	0.5 to 6.0 nm, variable in 0.1 nm steps
Photometric Accuracy	**±0.002 Abs (0 to 0.5 Abs), ±0.004 Abs (0.5 to 1.0 Abs), ±0.3 %T**
Photometric Repeatability	≤ 0.001 Abs (0 to 0.5 Abs), ≤ 0.002 Abs (0.5 to 1.0 Abs), ≤ 0.1 %T
Photometric Range	**0 to 200 %T; -4.0 to 4.0 A**
Stray Light	≤ 0.03 %T (220 nm NaI; 360 nm $NaNO_2$)
Baseline Flatness	±0.0008 A
Baseline Stability	≤ 0.0005 Abs/h
Scan Speed	High, medium, low, very low
Detector	Photocell
Light Sources	Long-life deuterium lamp and halogen tungsten lamp
Photometric Modes	T, A, Energy
Baseline drift during long runs	double-beam correction compensates for lamp and detector changes.
Non-linear results at high absorbance	very low stray light extends the usable range.
Frequent lamp replacement	long-life lamps reduce downtime and spare part cost.

OPTICAL PERFORMANCE	
Wavelength errors over time	**automatic wavelength verification keeps accuracy within ±0.3 nm.**

DISPLAY & DATA	
Display	7-inch color touchscreen
Interface	USB-A and USB-B

DIMENSIONS & WEIGHT	
Net / Gross Weight	24 kg / 50 kg
Instrument Dimensions (W × D × H)	600 × 470 × 220 mm
Package Dimensions (W × D × H)	800 × 670 × 570 mm

COMMON LABORATORY PROBLEMS AND HOW THIS SPECTROPHOTOMETER HELPS	
Paper records for regulated labs	optional audit-trail software keeps electronic traceability.

The Master Science Double Beam UV-Vis Spectrophotometer is used in

- **Pharmaceutical identification, assay and dissolution testing**
- **Food and beverage quality testing**
- **Water and environmental analysis**
- **Chemical and petrochemical quality control**
- **Biochemistry and university teaching laboratories**

Optics

- Czerny-Turner monochromator with 1200 lines/mm grating
- Double-beam path with digital proportional feedback
- Automatic wavelength check against built-in reference lines

Operation

- 7-inch color touchscreen for stand-alone use
- Wavelength scan, time scan, multi-wavelength and quantitative modes
- Method and data storage on the instrument

Software and Service

- USB connection to PC software for kinetics, scanning and quantitation
- Optional audit-trail software with user permission levels
- Auto-positioning lamp switching mirror

Optional Accessories

- Audit-trail PC software with user management