



VIS AND UV/VIS SPECTROPHOTOMETERS



ANALYTICAL INSTRUMENTS

*New generation of VIS and UV/Vis spectrophotometers
color touch screen display, spectrum scan on-board¹,
USB flash drive recovery*

PASSION - EXPERIENCE - PERFORMANCE - COMFORT - CONVENIENCE



Smart design

A modern design, simple, compact, with all the most common features available directly on the interface. ONDA Touch Series is the perfect instrument for your lab bench top in term of space and solidity



Touchscreen

A 5" TFT high definition color display for a new level of experience
Easy interface, build-in features (photometry, quantitation, spectrum scan¹)
In addition to File management, System Utility and Performance verification



Connectivity and Storage

USB Flash drive connection for data and methods recovery
PC remote control², RS-232 port for micro printer connection, Internal memory to save your methods and data



Easy access, easy maintenance

Removable front panel, anticorrosive material holder, leaky hole inside sample compartment: all designed to protect the instrument from accidental spills, time wear and damage



Lamp room

Removing the top panel for easier and faster access to the source compartment, allows directly control, check of alignment and lamp replacement



Multi language

Select the language of your preference and improve your experience with Onda Touch instruments

English, German, Spanish, French, Italian, Portuguese

¹ Spectrum feature available only on SCAN models
² optional software required

Applications



Brewery



Winery



Food&Beverage



Process water



Drinking water



Bottled water



Waste water



Vegetable Oil/fat



Sugar industry

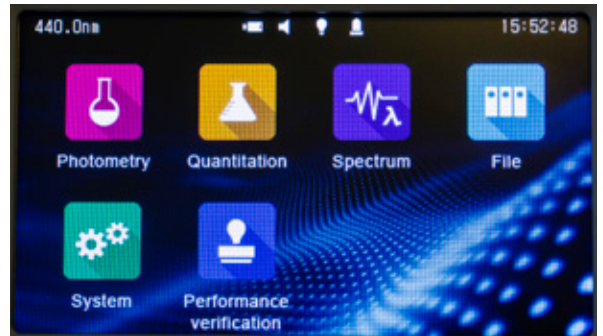


Bacterial cell number

THE NEXT GENERATION OF VIS AND UV/VIS SPECTROPHOTOMETERS

New User Interface

With the new user interface the ONDA Touch series spectrophotometers are ideal for laboratory routine quality control, excellent for applications in education. Work with these innovative instruments as with your smartphone or tablet and enjoy the intuitive, icon-based menu.



Photometry

Basic photometric measure:
Absorbance
Transmittance
Energy



Quantitation

Creation of calibration curve from standard solutions
Comfortable calibration of customized methods



Spectrum Scans¹

High-precision live scans
Analysis and automatic peak detection



File Management

Save, delete or copy data and methods on internal memory and USB flash drive. Import/export to CSV and TXT files



System utility

System calibration, lamp management, date/time, memory, multi-language



Performance verification

Regularly check the instrument functionality for the quality assurance of your results

	Internal memory		USB flash drive		Data transfer USB ↔ device
	Export to CSV file		Export to TXT file		Data point/Peak detection
	Print data and methods		Calibration Curve		Method Detail

Calibration Report

All Onda Spectrophotometers are supplied with a **Calibration Report** executed according to ISO 17025 requirements, for measuring with traceability.

On the **Calibration Report** are reported:

- Wavelength accuracy
- Photometric accuracy
- Stray light test
- Measurement uncertainty
- Traceability statement

CERTIFICATE OF CALIBRATION

Test Standard for Instrument Performance Validation. Performed with Certified Reference Materials (CRM, GSP, Ph.Eur.)

Tested on: **UV/VISIBLE**

Model: **ONDA UV-20 SCAN**

Serial Number: **UV01080808**

Wavelength range: **190-1000 nm**

Optical bandwidth: **2 nm @ 20%**

Environmental Conditions: Temperature: **21.6 °C**, R.H.: **45%**, Test Date: **09/11/2018**

1. Wavelength Accuracy

Reference Material	UV500	UV500	UV500	UV500	UV500
Wavelength (nm)	222	222	222	222	222
λ, λ ¹	0.9518	0.9478	0.9214	0.9727	0.7489
Δλ ¹	0.0001	0.0008	0.0043	0.0025	0.0008
Δλ ²	0.0001	0.0010	0.0020	0.0010	0.0003
Expanded uncertainty	0.0002	0.0020	0.0050	0.0050	0.0010

2. Stray Light

Potassium Chloride 12g/l solution, traceable to NIST SRM 999:

Wavelength (nm)	Specification (%)	Y.R. (Transmittance)
222	0.020	0.020

3. Photometric Accuracy

Reference Material	UV500	UV500	UV500	UV500	UV500
Optical Density (Abs)	0.020	0.020	0.020	0.020	0.020
Optical Density (Abs)	0.9518	0.9478	0.9214	0.9727	0.7489
ΔA	0.0001	0.0008	0.0043	0.0025	0.0008
ΔA ¹	0.0001	0.0010	0.0020	0.0010	0.0003
Expanded uncertainty	0.0002	0.0020	0.0050	0.0050	0.0010

Traceability: All calibration is performed with one of a series of reference materials. The reference material is tested and confirmed with a reference spectrophotometer. The instrument is tested and confirmed to perform to the manufacturer's written specification over the analytical range used for the reference material calibration.

The following reference and procedures are used in the quality performance procedures relating to the qualification of the spectrophotometer performance:

Accuracy: Small Quantity Assay glass fiber filter (NIST SRM 999)

Potassium Chloride 12g/l solution (NIST SRM 999)

Wavelength: Potassium Chloride 12g/l solution (NIST SRM 999)

Stray Light: Potassium Chloride 12g/l solution (NIST SRM 999)

2: Δλ¹ = Standard error; 2: Y.R. = Test Result; 0: Error = 2 Δλ¹ - Δλ²

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UV-31 SCAN

UV/Visible Spectrophotometer

190 – 1100 nm

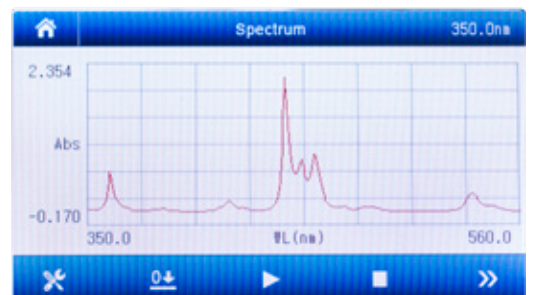
2 nm bandwidth

Scan speed 4200nm/min



UV-31 Scan is the complete scanning UV-Vis spectrophotometer, ideal for high level educational, the best choice in precision for your qualitative and quantitative analysis. High level of accuracy for sensible detections. The free software included **Easy Uv Basic** allows to perform quantitative, kinetic and photometric single wavelength analysis.

- *Low level of stray light for high linearity performance*
- *Photometry, quantitation, spectrum scan*
- *Self-calibration system at each switching on*
- *Preheating countdown*
- *USB flash drive for data and methods recovery*



Spectrum scan and detection of peaks

Part No.	Description
11000082	ONDA TOUCH UV-31 SCAN Spectrophotometer, TOUCH SCREEN color display, range 190 - 1100 nm, bandwidth 2 nm, single beam, flash memory USB port, multilanguage OS. Functions: photometric, quantitation, SPECTRUM scan , file management. Including 4 optical glass cells, 2 quartz cells , 10mm 4-cell holder, power cable, dust cover, USB flash drive and Calibration Report, software Easy UV Basic .



V-11 SCAN

Visible Spectrophotometer

320 – 1100 nm

4 nm bandwidth

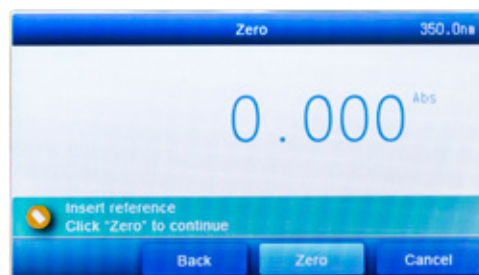
Scan speed 4200nm/min



V-11 Scan is the scanning Visible spectrophotometer, ideal for high level colorimetric analysis, quantitative detections and qualitative control in the visible range.

The free software included **Easy Uv Basic** allows to perform quantitative, kinetic and photometric single wavelength analysis.

- *Photometry, quantitation, spectrum scan*
- *Self-calibration system at each switching on*
- *Preheating countdown*
- *USB flash drive for data and methods recovery*



Easy calibration with the online instructions



Part No.	Description
11000062	ONDA TOUCH V-11 SCAN Spectrophotometer, TOUCH SCREEN color display , range 320 - 1100 nm, bandwidth 4 nm, single beam, flash memory USB port, multilanguage OS. Functions: photometric, quantitation, SPECTRUM scan , file management. Including 4 optical glass cells , 10mm 4-cell holder, power cable, dust cover, USB flash drive and Calibration Report , software Easy UV Basic .



UV-21

UV/Visible Spectrophotometer

195 – 1050 nm

4 nm bandwidth



UV-21 is the UV-Vis spectrophotometer, ideal for routine analysis and quantitative detections. The functionality of **basic photometry** and **quantitation** make it the perfect instruments for fast and accurate analysis in many application fields. The free software included **Easy Uv Basic** allows to perform quantitative, kinetic and photometric single wavelength analysis.



Part No.	Description
11000072	ONDA TOUCH UV-21 Spectrophotometer, TOUCH SCREEN color display , range 195 - 1050 nm, bandwidth 4 nm, single beam, flash memory USB port, multilanguage OS. Functions: photometric, quantitation, file management. Including 4 optical glass cells, 2 quartz cells , 10mm 4-cell holder, power cable, dust cover, USB flash drive and Calibration Report, software Easy UV Basic.



V-10 Plus

Visible Spectrophotometer

325 – 1000 nm

4 nm bandwidth









V-10 Plus is the Visible spectrophotometer for colorimetric application and routine measurements, widely used in basic photometry, **OD600** in microbiological application and wine color analysis. Solid design and high quality components ensures excellent performance.







ONDA V-10 Plus is supplied with **Basic Software for PC** (Windows based OS) for the remote control of the device; the application range is expanded to **kinetic** measurement, improving data analysis and file management.







In combination with the optional **ONDA ProWine Color Software for PC** it is the best aid for fast and accurate color analysis of wine (**Chromatic Characteristics OIV-MA-AS2-07B**)

Part No.	Description
11000052	ONDA V-10 Plus Spectrophotometer , including: 4 optical glass cells , 4-position cell holder, power cable with EU plug, Basic PC software, dust cover, Calibration Report

Cuvettes

Optical glass 320 – 1400 nm						
Path length (mm)	1	10	20	30	50	100
External dimension WxLxH (mm)	12.5x3.5x45	12.5x12.5x45	12.5x22.5x45	12.5x32.5x45	12.5x52.5x45	12.5x102.5x45
Volume (ml)	0.4	3.5	7.0	10.5	17.5	35.0
Polished windows	2	2	2	2	2	2
Teflon lid	✓	✓	✓	✓	✓	✓
Number of cells	2	4	4	4	4	4
Part number	11000382	11000252	11000262	11000272	11000282	11000292

Quartz 190 – 1400 nm						
Path length (mm)	1	10	20	30	50	100
External dimension WxLxH (mm)	12.5x3.5x45	12.5x12.5x45	12.5x22.5x45	12.5x32.5x45	12.5x52.5x45	12.5x102.5x45
Volume (ml)	0.4	3.5	7.0	10.5	17.5	35.0
Polished windows	2	2	2	2	2	2
Teflon lid	✓	✓	✓	✓	✓	✓
Number of cells	2	2	2	2	2	2
Part number	11000522	11000302	11000312	11000322	11000332	11000342

Special cells						
Path length (mm)	10	10	10	10	10	10
External dimension WxLxH (mm)	12.5x12.5x45	12.5x12.5x45	12.5x12.5x45	12.5x12.5x45	12.5x12.5x45	12.5x12.5x45
Beam height (mm)	15	15	15	15	15	15
Volume (µl)	100	200	500	1000 (1ml)	700	700
Material	Quartz	Quartz	Quartz	Quartz	Optical glass	Quartz
Range (nm)	190 -1400	190 -1400	190 -1400	190 -1400	320 -1400	190 -1400
Flowing flux	–	–	–	–	✓	✓
Polished windows	2	2	2	2	2	2
Teflon lid	✓	✓	✓	✓	–	–
Number of cells	1	1	1	1	1	1
Part number	11000352	11000362	11000372	11000392	11000492	11000502

In the following pages useful guide for choice of holder and accessories suitable for your spectrophotometer is provided.

Software Pro-Wine Color for V-10 Plus

Pro-Wine Color is the application software based on Windows operating system for the remote control of **ONDA V-10 Plus Spectrophotometer**. The special application measures absorbance at 420nm, 520nm and 620nm, and calculates automatically Color Intensity and Shade, considering also a Dilution Factor.

Functions:

Photometry, Quantitative, *Kinetics*, *Multi wavelength*, *Wine Chromatic Analysis* (*Color Intensity and Shade compliance to OIV-MA-AS2-07B*)

Code to order:

11000962, including USB cable, USB dongle key, User manual (the connection PC-instrument requires two USB port on PC)



	4 position for up to 10mm path	4 position for up to 50mm path	4 position for up to 100mm path	Single micro cell, 10mm path	Single test tube ø 8-24mm (max height 110mm)	5° Reflectance measurement	Solid sample (50x30x2mm)	8 position, automatic, 10mm path	5 position automatic Up to 100mm path	Test tube ø 16 mm
UV-31 SCAN 	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
UV-21 	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
V-11 SCAN 	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
V-10 PLUS 	✓	✓	✓	✓	✓	✓	✓	-	-	-
Part number	11000202	11000212	11000222	11000232	11000402	11000412	11000422	11000242	11000432	11000532



IQ/OQ paper manual

Printed IQOQ manual, to verify the installation and operation of the spectrophotometer on site.

Part number: 11000192

Software Easy UV for ONDA TOUCH Series

Easy UV is the application software based on Windows operating system for the remote control of **ONDA Touch Series instruments**. The application range, data analysis and file management function are greatly expanded, for example to clinical application (hemoglobin oxygen saturation) and basic biotechnology research (range DNA 0.2-70 µg/ml).

Functions:

Photometry, Quantitative, Kinetics, **Multi wavelength, Spectrum scan, DNA/protein** (UV methods)

Code to order:

11000972, including USB Installer, USB cable, USB dongle key, User manual (the connection PC-instrument requires two USB port on PC)



A-1101 Sipper (flowing system)	A-1201 Peltier (Thermostatic system)	A-100 1Sipper/ Peltier (Thermostat flowing system)	Micro Printer (normal paper)	Thermal Printer	PC Software Pro-Wine Color	PC Software ONDA Touch Easy UV	Tungsten-Halogen lamp (VIS) Vertical filament	Tungsten-Halogen lamp (VIS) Horizontal filament	Deuterium lamp (UV)
✓	✓	✓	✓	-	-	✓	-	✓	✓
✓	✓	✓	✓	-	-	✓	-	✓	✓
✓	✓	✓	✓	-	-	✓	-	✓	-
✓	-	-	-	✓	✓	-	✓	-	-
11000552	11000562	11000572	11000442	11000452	11000962	11000972	11000912	11000942	11000922

In the following pages useful guide for choice of the appropriate holder suitable for different applications.



Cuvette adapter 1mm
10x10 mm

cod.11000582

4 position for up to
10mm path
(standard)



4 position for up to
50mm path



4 position for up to
100mm path



Single micro cell,
10mm path



		4 position for up to 10mm path (standard)	4 position for up to 50mm path	4 position for up to 100mm path	Single micro cell, 10mm path
1mm path, 12.5x3.5x45mm		✓ cod.11000582 required	-	-	-
10mm path, 12.5x12.5x45mm		✓	✓	✓	-
20mm path, 12.5x22.5x45mm		-	✓	✓	-
30mm path, 12.5x32.5x45mm		-	✓	✓	-
50mm path, 12.5x52.5x45mm		-	✓	✓	-
100mm path, 12.5x102.5x45mm		-	-	✓	-
Test tube ø16mm, 90mm height		-	-	-	-
Solid sample 50x30x2mm		-	-	-	-
Solid sample 20x20x4mm		-	-	-	-
Micro-cell 12.5x12.5x45mm		-	-	-	✓
Flow-cell 12.5x12.5x45mm		-	-	-	✓
Part Number		11000202	11000212	11000222	11000232

Single test tube ø 8-24mm (max height 110mm)	Test tube ø 16 mm	5° Reflectance attachement	Solid sample (50x30x2mm)	8 position, auto- matic, 10mm path	5 position, automatic, up to 100mm path
					
-	-	-	-	✓ cod.11000582 required	✓ cod.11000582 required
-	-	-	-	✓	✓
-	-	-	-	-	✓
-	-	-	-	-	✓
-	-	-	-	-	✓
-	-	-	-	-	✓
✓	✓	-	-	-	-
-	-	-	✓	-	-
-	-	✓	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
11000402	11000532	11000412	11000422	11000242	11000432

ONDA VIS AND UV/VIS SPECTROPHOTOMETERS

Technical Specification	UV-31 SCAN	UV-21	V-11 SCAN	V-10 PLUS
Spectrophotometer	UV-VIS		VIS	
Optical system	Single beam			
Light source	Tungsten-Halogen / Deuterium Lamps		Tungsten-Halogen	
Detector	Silicon photodiode			
Spectral bandwidth (nm)	2	4	4	4
Wavelength range (nm)	190 - 1100	195 - 1050	320 - 1100	325 - 1000
Wavelength accuracy (nm)	±0.8	±1.0	±1.0	±2
Wavelength repeatability (nm)	±0.2	±0.4	±0.2	±0.8
Wavelength resolution (nm)	0.1	0.1	0.1	0.1
Photometric range	-0.3 to 3 Abs / 0 to 200 %T / 0 to 9999.9 Conc			
Photometric accuracy	±0.5 %T at 0 - 100 %T			
Photometric repeatability	±0.2 %T at 0 - 100 %T			±0.3 %T at 0 - 100 %T
Photometric resolution (Abs)	0.001			
Stability	±0.002 Abs/hr (at 500nm after 2hours warmup)			
Stray light	<0.1 %T	<0.2 %T	<0.1 %T	<0.3 %T
Display	5 inches color touchscreen display, fixed, 480x272 px			LCD display 128x64 px
Keypad	touchscreen			Membrane keypad
Standard cell holder	4 positions, 10mm path square cells, manual holder			
Sample compartment	Accessible from top and front			Accessible from top
Basic photometry	✓	✓	✓	✓
Quantitation	✓	✓	✓	✓
Spectrum scan	✓	-	✓	-
File management	✓	✓	✓	-
System management	✓	✓	✓	-
Performance verification	✓	✓	✓	-
Connectivity	USB-A (flash drive) USB-B (PC connection) ¹ RS-232 (printer) ²			USB-B (PC connection) Serial port (printer) ²
Memory	236 kB (internal memory) expandable with USB flash drive ³			200 raw of data
Languages	English, Spanish, French, German, Italian, Portuguese			English
Dimensions WxDxH (mm)	456 x 360 x 185			490 x 360 x 210
Weight (kg)	10.7		10.5	12
Power supply	100 - 240 V AC, 50/60 Hz			
Power consumption (W)	120		75	
Warranty	2 years ⁴			
Part number	11000082	11000072	11000062	11000052

¹ Optional PC software required

² Optional thermal printer required

³ USB flash drive included with ONDA Touch series

⁴ On electronic and optical part (light source excluded)

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ISO 9001