# Halo VIS-10

## Visible Spectrophotometer

Designed for reliability and value, the Halo VIS-10 combines full scanning capability with excellent resolution applicable to a wide range of routine and advanced procedures in the visible spectrum.

### Optimum Optical Performance

The advanced single beam system utilizes a concave diffraction grating monochromator requiring fewer mirrors thus ensuring a shorter optical path and resulting in fewer aberrations and brighter optics (further enhanced with the high energy, long life halogen tungsten lamp). The outcome is greater compactness complemented with increased efficiency and reliability. The silicon photodiode detector commonly utilized in more advanced models also provides superior sensitivity. Furthermore a convex lens focuses the light beam and is especially useful for smaller volume samples.

### Spectral Features

The spectral bandpass of 5nm ensures optimum performance with excellent spectra and peak resolution.

Other specifications include a wavelength accuracy of ±1nm, noise level 0.5% T (500nm, 100%T) and stray light ≤0.5% (360nm $NaNO_2$).

### Built-in and Diverse Range of Measurement Modes

Photometry Mode. Perform quantitative analyses in either absorbance or transmittance modes. Select from single wavelength and set up calibration curves with up to 8 standards for concentration measurements.

Wavelength scan: Perform a full spectral scan from 330 to 999nm at a selectable scan speed ranging from a high resolving 60nm/minute up to a quick 800nm / minute. Data is displayed as either numerical values or a graphical spectrum in either absorbance or transmittance modes.

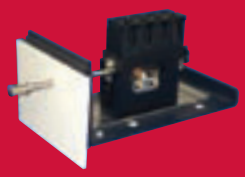
### User friendly operation and information rich LCD display

The 89mm, backlit LCD screen with adjustable brightness control is sufficiently large to display a large array of data even in a graphical format. Data and spectra are also displayed in real time. The seamless and chemical resistant, keypad is designed with fewer keys for easier and quicker operation and also protects against liquid spills.

### Validation Functions

To ensure continued instrument performance, a self-diagnostic function incorporating a number of parameters is executed each time the Halo VIS-10 is switched on. Furthermore the Halo VIS-10 is equipped with a built-in self calibration function which checks and verifies wavelength accuracy with a holmium oxide glass filter. The system memory then stores the wavelength scan baseline as a reference spectrum for blank subtraction.

### Cuvette Holder and Large Sample Compartment



A cuvette holder / changer with a 4 cuvette capacity is supplied as standard. Therefore measurement can be expedited by inserting the 4 cuvettes in tandem and manually sliding the holder / changer forwards or backwards to select the appropriate cuvette for measurement. The cuvette holder /changer is easily removed for cleaning purposes. The spacious sample compartment can accept a variety of accessories for various applications including tall test tubes (with optional test tube holder).

Dynamica

# VIS-10 Accessories

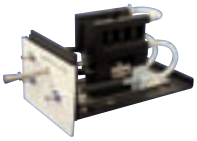
## Rectangular Long-Path Cuvette Holder

Designed for low concentration or low absorbance samples

> Accommodates 4 x long–path cvettes

> Accepts cuvettes with 6 optical path lengths of: 10, 20, 30, 40, 50 & 100 mm

## Thermostatic Cuvette Holder



Designed for applications requiring incubation and/or maintenance of a sample at a constant temperature

> Water circulation maintains temperature stability

> Operating temperature range: Room Temperature to +40°C

> Temperature stability: ±0.3°C

> Complete with tubing for quick connection to water source (such as circulating water bath)

## Test Tube Holder

Designed for the direct measurement of samples in a test tube with the need to transfer to a cuvette

> Spring mechanism automatically adjusts and accepts test tubes with diameters from 12- 18 mm

> High ceiling cover accommodates even the tallest test tubes

| HALO VIS-10 SPECIFICATIONS | |
|---|---|
| Optics | Concave diffraction grating / Single Beam Principle |
| Wavelength Range | 330nm -999 nm |
| Spectral Bandwidth | 5nm |
| Stray Light | 0.5%T (360nm $NaNO_2$) |
| Wavelength Accuracy | ±1nm |
| Photometric Range | Absorbance: -0.17 to +2<br>%T: 0% to 150% |
| Wavelength Scan Speed | 60 - 800 nm/minute |
| Baseline Flatness | ±0.005 Abs |
| Noise Level | 0.2%T (500nm, 0%T) / 0.5%T (500nm,0%T) |
| Light Source | Tungsten-Halogen Lamp |
| Detector | Silicon Photodiode |
| Display | Back-lit LCD 89(W) x 89(H) mm |
| Dimensions | 400(W) x 360(D) x 180(H) mm |
| Net Weight | 15Kg |
| Gross Weight | 19Kg |
| Power Requirements | AC 110-220V ± 10%, 50/60Hz |

## Ordering Information

| PRODUCT | CATALOG NUMBER# |
|---|---|
| Halo VIS-10 Visible Spectrophotometer 220V ±10%, 50/60Hz | VIS-10-220 |
| Rectangular Long-Path Cuvette Holder (holds 4 x cuvettes) | VIS-10-LPH |
| Thermostatic Cuvette Holder with tubing (excludes long-path cuvettes) | VIS-10-TCH |
| Test Tube Holder (includes High Ceiling Cover) | VIS-10-TTH |