LCM IV

The LCM IV is a reliable color instrument which replaces conventional visual color evaluation with an objective measurement. It is ideal for routine production control of clear, transparent liquids like resins, adhesives and solvents.

- Large 7" touch-screen display with intuitive user guidance for simple operation
- Automatic cuvette detection – avoids faulty data measurement
- Works with 10 and 50 mm rectangle as well as 11 mm round cuvettes for optimum precision
- Easy to exchange rectangular cell compartment
- Gardner, Hazen (APHA/PtCo), Iodine, Saybolt and Mineral oil scales come standard with instrument
- Reference beam design to maximize the accuracy and precision
- Front USB interface for PC or printer connection
- Easy data transfer into existing networks through integrated Ethernet (LAN) interface

Standards

ASTM	D 156, D 1045, D 1209, D 1544, D 1500
DIN	6162
ISO	4630, 6271, 2049

Ordering Information

Cat. No.	Description
9561	LCM IV

Comes complete with:
Instrument with dust cover
External power supply
Adapter for 10 mm rectangle cuvettes
addista® – color standards
Disposable plastic cuvettes (10x50 mm) – pack of 10
Disposable glass cuvettes (11mm) – pack of 10
Operating manual

Technical Specifications

Voltage	100 - 240 V, 50 / 60 Hz
Type	Single-beam photometer with reference beam path
Spectral Range	380 to 720 nm, 10 nm resolution
Repeatability	± 2 Hazen[1], ± 0.1 Gardner[2]
Reproducibility[3]	± 0.3 Iodine, ± 5 Hazen, ± 0.3 Gardner
Light Source	Tungsten Halogen Lamp
Illuminant/Observer	C/2°
Indices	Hazen / APHA (0 to 1000), Gardner (0 to 18), Iodine (0 to 120), Saybolt (-16 to 30), Mineral Oil (ASTM D 1500) 0 to 8
Memory	400 color measurements
Data Export	*.csv file to USB memory stick or Ethernet
Interface	2x USB Typ A, 2x USB Typ B, 1x Ethernet (LAN)
Operating Temperature	10 - 40 °C (50 - 104 °F)
Humidity	up to 80%, 35 °C (95 °F); non condensing
Dimensions	151 x 350 x 250 mm (5.9 x 13.7 x 9.8 in.)
Weight	4.2 kg (9.25 lbs)

[1] Based on data with 11 mm cuvette
[2] Based on data with 50 mm cuvette
[3] Based on data with 50 mm cuvette for Hazen and 11 mm cuvette for Iodine and Gardner

LCS IV

The LCS IV is a highly precise color instrument which spectrally measures all color shades of optically clear, transparent liquids using the dual beam principle. Besides the conventional visual color numbers (Gardner, Iodine, Hazen (APHA) etc.) the LCS IV can also measure opponent color systems such as CIELab, CIELCh and Hunter Lab under the conditions of illuminant A, C, D65 and 2°/10° Standard Observer.

- Stand alone unit with built-in 7" touch-screen display allows use without the need of a PC
- All important color scales and indices included
- Automatic cuvette detection – avoids faulty data measurement
- Automatic zero and calibration memory for all type of cuvettes – ensures use of correct calibration data
- Designed for the use of disposable plastic cuvettes, high precision glass cuvettes or 11 mm test tubes
- Easy to exchange rectangular cell compartment
- High measurement reliability is guaranteed by comprehensive verification kits
- User profile memory with password protection for individual configurations – including GLP documentation
- Open sample compartment for ease of operation
- Front USB interface for PC or printer connection
- Easy data transfer into existing networks through integrated Ethernet (LAN) interface

Standards

AOCS	Method Cc 13e; Method BS 684 Iy/Lr
ASTM	D 156, D 848, D 1045, D 1209, D 1544, D 1925, D 1500, D 5368, E 308
DIN	5033, 6162, 6174
ISO	4630, 6271, 2049, 27608

Ordering Information

Cat. No.	Description
9562	LCS IV

Comes complete with:
Instrument with dust cover
External power supply
Adapter for 10 mm rectangle cuvettes
addista® – color standards
Disposable plastic cuvettes (10x50 mm) – pack of 10
Disposable glass cuvettes (11mm) – pack of 10
Operating manual

Technical Specifications

Voltage	100-240 V / 50 / 60 Hz
Geometry	0° / 180° rectilinear
Spectral Range (Colorimetric)	380 to 720 nm, 10 nm resolution
Spectral Range (Photometric)	320 to 1,100 nm, 1 nm resolution
Repeatability	0.1 ΔE*, 1 σ
Reproducibility[1]	± 0.2% transmission
Light Source	Tungsten Halogen Lamp
Illuminant/Observer	A, C, D65 / 2°, 10°
Color Scale	CIELab; CIELCh; Hunter Lab
Color Difference	ΔE* and component differences, text descriptor, tolerances
Indices	Gardner; Hazen/APHA; Iodine; Saybolt; Lovibond; Hess-Ives; European, US and Chinese Pharmacopoeia; Mineral oil; Yellowness; Acid Wash Test; Chlorophyll A; ADMI
Spectral	% transmission; % absorbance, concentration
Memory	3000 color measurements, 100 color references, 1000 photometric readings
Data Export	*.csv file to USB memory stick or Ethernet
Interface	2x USB-A; 2x USB-B; 1x Ethenet (LAN)
Operating Temperature	10 to 40 °C (50 to 104 °F)
Humidity	up to 85%, 35 °C (95 °F);non condensing
Dimensions	151 x 350 x 250 mm (5.9 x 13.7 x 9.8 in)
Weight	4.2 kg (9.25 lbs)

[1] Referred to distilled water