

CPMA7 Micro-processor Melting Point 4 sample 0.2C with Camera

Product Details

Product Number

PRO6276



Technical Specification:

OVERVIEW

The melting point of a substance is the temperature at which it changes from a solid to a liquid state. In organic chemistry, melting point determination is a fundamental tool for identifying the nature of a substance and an important method for assessing its purity. Melting point apparatuses therefore hold a key position in the chemical industry, medical laboratories and drug research, and are essential instruments for the production of pharmaceuticals, fragrances and other organic crystalline substances.

CPMA7 is Huazhi's high-end second-generation image analysis video melting point analyzer. It abandons classical photoelectric detection and uses leading machine vision **AUTO-ROI®** technology to capture all details of sample melting and automatically determine the melting point with a fully automatic detection level down to **0.2**. This represents a new technological leap in precise, traceable melting point determination.

KEY FEATURES

- **Melting point measurement module:** high-definition video image analysis with AUTO-ROI® technology for fully automatic measurement, high accuracy and excellent repeatability (automatic detection level up to 0.2).
- **Visual / manual evaluation:** HD video storage and playback give a clear view of the melting details and process, ideal for method development and verification.
- **7-inch capacitive touchscreen:** high-resolution true-colour display with simple touch operation and real-time display of melting video and curves.
- **High throughput:** simultaneous automatic measurement of up to **6 capillaries**, fast, economical and efficient.
- **Digital temperature control:** unique digital temperature control technology with precise temperature regulation, ultra-wide heating rate range and stepless speed adjustment.
- **Temperature linearity correction:** supports multi-point temperature linearity correction for high accuracy across the full range.
- **Flexible working modes:** three working modes — standard, long weld pitch and learning — to adapt to

various samples and application scenarios.

- **User management module:** super-user management mode; supports login, adding, deleting, editing and viewing users with flexible authorization settings.
- **Electronic signatures:** supports handwritten electronic signatures; measurement methods and reports are grouped and traceable by user.
- **Predefined methods:** up to **128 predefined measurement methods** can be stored, added, deleted, edited, viewed and quickly recalled.
- **Measurement report module:** automatically generates measurement reports which can be backed up, restored, viewed, exported and printed; report formats can be customized.
- **Regulatory compliance:** complies with national pharmacopoeia regulations and meets **FDA 21 CFR Part 11 / GMP / GLP** requirements for electronic records and data integrity.
- **Log management module:** logs are automatically generated, viewable, printable and exportable for full traceability.
- **Peripheral connection module:** RS232 interface for printer connection, USB for data export and connection of USB keyboard and mouse; optional Wi-Fi module for network connectivity.

TYPICAL APPLICATIONS

- Identification and purity testing of organic compounds
- Quality control in pharmaceutical production
- Research and development of APIs and intermediates
- Chemical industry QC and routine analysis
- Teaching and research in universities and institutes
- Fragrance, flavor and fine chemicals production
- Medical and clinical laboratory applications requiring precise melting point determination

MODELS & DIMENSIONS

Model	Capillaries per run	Working modes	Dimensions / weight
CMPA7	Up to 6 capillaries	Standard / long weld pitch / learning	See catalog (PDF)

TECHNICAL SPECIFICATIONS

Model	CMPA7
Measurement principle	High-definition video image analysis with AUTO-ROI® machine vision
Detection mode	Automatic detection (Level 0.2) and visual / manual evaluation
Capillaries per measurement	Up to 6 capillaries (simultaneous)
Display & operation	7" high-resolution true-colour capacitive touchscreen, real-time video & curve display
Temperature control	Digital temperature control with ultra-wide heating rate and stepless speed adjustment

Temperature linearity	Supports multi-point temperature linearity correction
Working modes	Standard, long weld pitch, learning mode
Predefined methods	Up to 128 predefined measurement methods
User management	Super-user management, user login, add / delete / edit / view, role-based authorizations
Electronic signatures	Supports handwritten electronic signatures; methods & reports grouped by user
Reports	Automatic report generation; backup, restore, view, export, print; customizable format
Log management	Automatic system & operation logs; view, print, export
Data integrity & compliance	Meets FDA 21 CFR Part 11 / GMP / GLP and national pharmacopoeia requirements
Interfaces	RS232 (printer), USB (data export, keyboard, mouse), optional Wi-Fi module
Power / dimensions / weight	See catalog (PDF) for detailed values

STANDARD DELIVERY & ACCESSORIES

- **CMPA7** image analysis video melting point analyzer
- Power cable
- Basic user manual / quick start guide
- Standard accessory kit (capillary holder set, basic consumables)*
- RS232 / USB connection kit for printer or PC*
- Optional: external printer (RS232)
- Optional: USB keyboard and mouse
- Optional: Wi-Fi module for network connectivity

**Exact contents as per current catalog and order confirmation.*

MAIN TECHNICAL PARAMETERS

Model	CMPA7
Test method	Image analysis AUTO-ROI® + visual
Sample loading way	Capillary tube method
Temperature range	Ambient ~ 320 °C
Min. temperature resolution	0.01 °C
Ramp rate	Stepless setting at 0.1–20 °C/min
Ramp rate error	≤ 5%
Accuracy	±0.2 °C (< 200 °C); ±0.4 °C (≥ 200 °C)

Reproducibility	0.1 □ (ramp rate 0.5 □/min) 0.2 □ (ramp rate 1 □/min)
Number of capillaries	4
Capillary dimensions	Φ1.4 mm external dia., Φ1.0 mm inner dia., 90 mm length
Fill height	3–5 mm
Display	7" true color (1024×600) HD capacitive touch screen
Screen function	Displays melting video and melting curve in real time
Length of video recording	500 min (optional up to 1000 min)
Ports	RS232 / USB (M) / Ethernet / WiFi (optional)
Printing	Included
Pre-set measurement methods	64 predefined measuring methods
Log store	Included
User management	Administrator + 32 operators (permission settings)
Hierarchical password	Administrator + 32 operators
E-signature	Included
Data provenance	Included
Measurement report	Manual / automatic generation and storage; customized format
Power supply	220 ±10% V AC, 50/60 Hz, 150 W
Dimensions (L × W × H)	345 × 245 × 215 mm
Weight	Approx. 5 kg

Accessories: