Cyto-Mine® Chroma

Technical Specifications

System Specifications	
Weight	**Main Instrument:** 85 kg (187 lbs) **Laser module:** 17kg (38 lbs)
Dimensions	**Main Instrument:** (w x h x d) 874 x 570 x 481 mm (34 x 23 x 19 in) **Laser Module:** (w x h x d) 314 x 158 x 493 mm (12 x 6 x 19 in)
Voltage and Frequency	**Main Instrument:** 100 V - 240 VAC ± 10% 50 Hz / 60 Hz **Laser Module:** 12 V DC [use provided power supply]
Fuse	**Main Instrument:** Fast Acting, 10A HBC 250V, 5x20 mm
Power Consumption	**Main Instrument:** 300 W (typ.) **Laser Module:** 36 W (typ.) **Monitor:** 12 W (typ.)
Electrical Safety	According to EN 61010-1, Overvoltage category II
Compressed Air Supply	ISO 8573-1:2010 Class 2.3.2 3.5 to 6.0 bar (50.8 - 87.0 psi) 0.85 L/min free air (0.03 cfm) minimum.
LASER Product Classification	CLASS 1 - BS EN / IEC 60825-1:2014
Sound Level	Sound pressure level less than 70 dB(A)
Work Environment	
Humidity	30 - 50%, non-condensing
Operating Temperature	18°C to 25°C (65-77°F)
Altitude	Suitable for up to 2,000 meters above sea level
Pollution Degree	According to EN 61010-1, Pollution Degree 2
Containment	Suitable to use in a biological safety cabinet
Storage Environment	
Ambient temperature	10-40°C (50-104°F)
Relative humidity	5-80%, non-condensing and non-corrosive
Assay Specifications	
Sample input format	Cell suspension in culture medium containing bioassay probes.
Sample volume	0.5-1 mL
Number of picodroplets generated per run	1, 1.5, 2 million per experiment. User definable.
Selected Picodroplets	50,000 maxiumum, per sort

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Incubation time	0-24 hours
Picodroplet volume	450 pL
Dispensing mode	Single picodroplet dispensing or pooled dispensing
Single droplet dispensing speed	Application dependent, typically 1 well per second
Run time	Application dependent, typically 5 hours
Detectors	
Detection modes	Laser induced Fluorescence (LIF) Fluorescence Intensity (FI) Brightfield Imaging
Cyto-Mine® Chroma LIF	**Excitation wavelengths:** 405 nm, 488 nm, 561 nm, 638 nm **Detection wavelengths:** Blue 446/34 nm Green 520/18 nm Orange 605/20 nm Far-Red 678/30 nm
Processor	
Computer	Embedded internally as part of Cyto-Mine® Chroma
PC operating system	Microsoft Windows 11 LTSC
Monitor	24" Color LCD
Cyto-Mine® data formats	.bmp, .pdf, .csv, .xml, PostgreSQL
External Connections - Main Instrument	
USB	USB 3.0 Type A, Cable: Basic Insulation, Shielded [supplied]
Ethernet	Cat 6 RJ-45, non-PoE, Cable: Basic Insulation, Shielded [not-supplied]
Power Inlet	IEC C13, max. 268V AC 10 A, Cable: double insulation, protection class 1 (earth required) [supplied]
Display Connector	Mini-DisplayPort, DisplayPort 1.2 or newer, Cable: Basic Insulation, Shielded [supplied]
LASER Module Control Connector	M12 Connector to LASER Module only. Cable: Basic Insulation, Shielded [supplied]
External Connections - Laser Module	
Power Inlet	4-pin mini-DIN, 12V DC, Cable: Basic Insulation [supplied]
LASER Module Control Connector	M12 Connector to Cyto-Mine Main Instrument only, Cable: Basic Insulation, Shielded [supplied]
USB	USB 2.0 Type B, Cable: Basic Insulation, Shielded [supplied]
Analogue and Digital Modulation	SMA connectors, function not enabled Analogue Modulation signal, 0...5V TTL (1,2kohm impedance) Digital Modulation signal, 5V TTL (5kohm impedance)
Software Specification	
System control software	Cyto-Mine® Studio Software Suite: Instrument Control, Data Manager and Data Analysis
Monoclonality verification	Image capture and processing
Electronic records	US FDA 21 CFR part 11 ready

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Consumables	
Microfluidic biochips	Cyto-Cartridge®
Specialist chemicals	Cyto-Surf® A and B Solutions
Microplate compatibility	24-well culture plates, 96- and 384-well culture and PCR plates

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