

Specification Sheet

Liquid Chromatograph Mass Spectrometer

LCMS-2050

The LCMS-2050 is a single quadrupole mass spectrometer with the most compact instrument size, made possible by the meticulous technologies acquired over the years of mass spectrometry development by Shimadzu. Compact, high-speed, sensitive and simple to use.

SIMPLY EFFORTLESS

- Seamless integration** with LC by design
 In product design, instrument control, and data analysis, we pursued usability as an LC detector.
- Superior detection** for added confidence
 Inherited and condensed Shimadzu's proprietary technologies for ionization and ion transmission over a wide mass range. Simply the best-performing single quadrupole mass spectrometer.
- Streamlined operation** for cost efficiency
 Total savings of operation, power consumption and laboratory space to maximize laboratory productivity.



Performance

Model	LCMS-2050		
Mass range	m/z 2 – 2000		
Sensitivity	ESI positive	Reserpine 1 pg	S/N >100 (RMS)
	ESI negative	<i>p</i> -nitrophenol 20 pg	S/N >600 (RMS)
	APCI positive	Acetophenon 10 ng	S/N >2500 (RMS)
Mass resolution	0.7 u		
Mass stability	0.1 u/48 h		
Mass accuracy	±0.1 u		
Scan speed	Max. 15,000 u/sec		
Polarity switching time	10 msec.		
Ionization mode	ESI/APCI (DUIS™)		
LC flow rate	ESI 1 µL/min – 3 mL/min		
Desolvation Line temp.	Max. 250°C		
Interface temp.	Max. 500°C		
Data acquisition mode	Centroid and profile scan, SIM		

Mass Analyzer and Detector

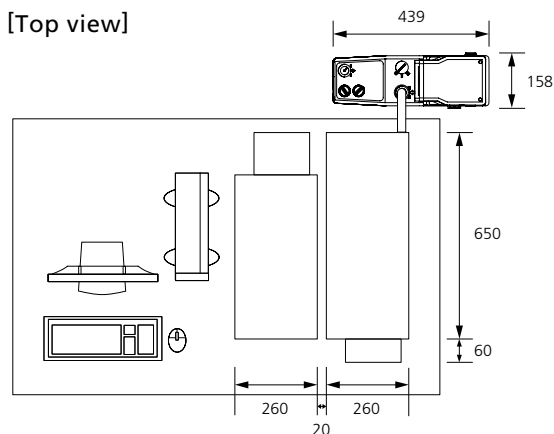
Quadrupole rod	High precision metal quadrupole rod
Detector	Electron multiplier with off axis conversion dynode
Detection mode	Ultra Fast polarity switching
Dynamic range (digital count)	8.0×10^6

Software

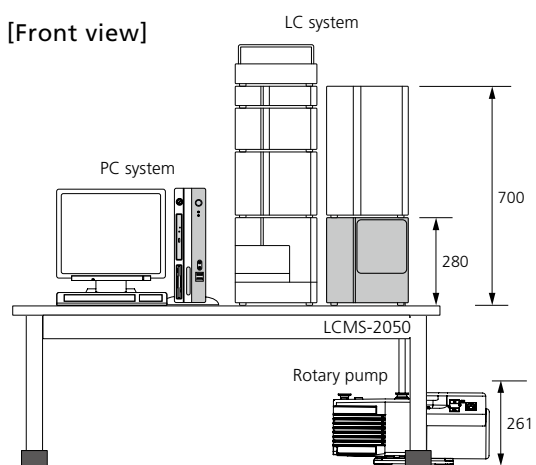
Workstation	LabSolutions™ LCMS
LC control	Nexera™ and Prominence™ series
Data acquisition mode	Scan/SIM/Profile scan/Positive ion/Negative ion/in source CID simultaneous measurement Scan (max. 1,000 events), SIM (max. 1,000 events × 32 channel)
Autotuning	Sensitivity and resolution optimized for both positive-ion and negative-ion modes

Installation Example

[Top view]



[Front view]



unit: mm

Installation Conditions

Temperature	18°C to 28°C
Humidity	20% to 80 % (no condensation)
Size	260 mm (W) × 650 mm (D) × 280 mm (H) (Front Ionization size 60 mm depth)
Weight	34.0 kg (MS unit without rotary pump)
Power supply	MS unit: Single phase AC 100 to 240 V, 1500 VA (50/60 Hz) include rotary pump PC unit: 100/120/220 V AC (50/60 Hz) LC unit: 100/120/220 V AC (current capacity varies with system configuration)
Gas consumption	Nitrogen gas: max. 15.0 L/min purity 90% or more.

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