



Technical Specifications:

QPatch Compact - semi-automated patch clamp

Performance/features	QPatch Compact
Channels	8
Manual cell preparation	√
Stimulation mode	Voltage-gated
	Ligand-gated
	Current clamp
Recording temperature control	√
Temperature control range	18 - 40°C (64 - 104°F)
Temperature control accuracy	± 0.5°C
Manual control of voltage protocol application, liquid addition during experiments	√
Adaptive voltage clamp (V_{∞}) - enables real-time estimation of individual activation and inactivation characteristics, used for stimulation and/or holding potential	√
Adaptive current clamp (I_{Adapt}) - enables real-time measurement of cell-specific parameters that can be used to apply a unique current value for each cell	√
Recording configuration	Whole-cell
Cell types	Cell lines
	iPSC
QPlate compatibility	Single hole
	Multi-hole
No electrode maintenance	√
Electrode stability	Drift in voltage offset ($V_{off} < 0.005$ mV/min)
Giga-Ohm seals	True gigaseal in physiological IC/EC solutions
Use of seal enhancing agents	Optional
Test compound – volume applied	5 μ l
Fast series resistance compensation <400 μ s	√
Series resistance compensation >400 μ s	√
Analyzer software	√
Motorized 1-channel and 8-channel hand pipette	√
Live View Panel during recording	√

Amplifiers	
Number of amplifiers	8 in parallel
Clamp	Voltage and current
Bandwidth	20 kHz
RMS noise	< 12 pA @ full bandwidth
Sampling rate	500 kHz, digitally downsampled to 50 kHz, 16 bit
Current range available (user selected)	±25 nA
	±50 nA
	±100 nA
Voltage range	
Minimum/maximum voltage in clamp voltage mode.	±800 mV
Minimum (maximum measured voltage in current clamp mode)	±250 mV
Resolution	16 bit
Compensations	C-total, C-fast, C-slow, R-series, P/n (leak)

Dimensions	QPatch Compact
Width	608 mm (23.9")
Depth	332 mm (13.1")
Height	173 mm (6.8")
Weight	22 kg (49 lbs) + 4.8 kg (10.6 lbs) touch screen+stand +7 kg (15.4 lbs) thermoelectric circulator

Requirements	QPatch Compact
Power supply	100-240 Vac, 50-60 Hz, Max 2A
Pressure	4 - 8 bar (68 - 116 psi), peak consumption of 3 L /min
Vacuum	Min. -700 mbar (~-10 psi), peak consumption of 3 L /min

Requirements	Thermoelectric circulator
Power supply	100-240 Vac, 50-60 Hz, Max 2A



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