II	Bidder Eligibility Criteria-II	Complied/ NotComplied	Reference Page No.
1.	The bidder/OEM should have supplied at least 3 units of similar bundles for single cell patch clamp electrophysiology to IITs, NITs, IISERs, CSIR Labs or other Govt. organizations in the last 5 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and may seek opinion of the customer, based on which the vendor's offer may be accepted or rejected.		
2.	Vendor should have a local presence with good track record of after-sales support in Chennai.		

2.0Technical Compliance:

S.No.	Description	Complied/ Not Complied	Cat. Pg.No	Remark if any
	A) Technical Specification			
1	General requirements			
1.1	Vendor should provide the latest model of the instruments and latest software version as applicable.			
1.2	The equipment should be compatible for patch clamp experiments and single channel experiments in tissue slices.			
2	Amplifier			
2.1	Capacity to perform the following experiments:			
2.1.1	whole-cell patch-clamp recording			
2.1.2	intracellular sharp electrode recording			
2.1.3	extracellular recording			
2.1.4	single channel recording			
2.2	Support a minimum of 2 headstages with an option to accommodate up to 4.			
2.3	Software control of all amplifier settings for automated optimization features, reduction of manipulation steps, and convenient, reliable telegraphing.			
2.4	Integrated seal test in voltage- and current-clamp mode for easy monitoring of membrane and cell health parameters.			
2.5	RMS noise less than ± 0.5 pA at 10kHz.			
2.6	Dual command potentials for processing input signals from two different sources.			
2.7	Pipette offset compensation of atleast 20pF.			
2.8	Smart telegraph for Gain, filter, capacitance, input/output scaling factors, recording mode - 2 channels			
2.9	Series resistance compensation to eliminate errors introduced by voltage drops due to series resistance.			

2.10	Capacity to compensate for 100pF of whole cell capacitance in voltage clamp mode.			
2.11	Automatic oscillation detection should prevent damage to a cell when electrical feedback occurs.			
2.12	Leak subtraction for automatic correction of leak currents with a smart, software-based algorithm.			
2.13	Mode switching which enables control of the transition between voltage and current clamp by an external trigger or depending on the recorded signal.			
2.14	A zap pulse of 1V in current clamp mode to facilitate sharp electrode access into cells.			
2.15	Fine-tunable 4-pole bessel and butterworth low-pass filters that can act as anti-aliasing filters for the output signal.			
3	**Digitizer**			
3.1	System should have the ability to eliminate 50/60 Hz line-frequency noise and associated high-frequency harmonics			
3.2	Should digitize a wide range of input signals from -10 to +10 V.			
3.3	Should eliminate a maximum noise amplitude of up to 20 V, peak-to-peak.			
3.4	8 analog input channels to digitize acquired signals up to 500 kHz independently.			
3.5	8 analog output channels to send command voltage output independently.			
3.6	8 digital out channels to control the periphery equipment used in sophisticated experiments.			
3.7	Independent analog-to-digital converters for each input channel.			
3.8	Should have USB connection that allows operation on virtually any current PC computer running Microsoft Windows 7 or 10 (32-bit or 64-bit) Operating System, including laptops.			
3.9	16-bit resolution data.			
3.10	The system should be capable of being triggered by external signals.			
4	**Software for data acquisition and analysis**			
4.1	Membrane test should support monitoring cell health between sweeps during a recording.			
4.2	Membrane and seal tests should be combined into a single resizable window.			
4.3	Support for up to eight stimulus waveforms.			
4.4	Control of eight digital outputs.			
4.5	Control of split-clock sampling per epoch during a sweep.			
4.6	Leak subtraction should automatically save both raw and corrected traces.			
4.7	All protocol durations should be entered in time units.			
4.8	Should have the ability to automate the execution of protocols with sequencing keys, a variety of recording modes from Gap-Free to Episodic Waveform stimulation			
4.9	Online filtering and leak subtraction, as well as online statistics and support of automatic quick graphs.			

4.10	Software should provide a convenient way to produce background recordings. Should be able to monitor cells during inter-sweep periods.			
4.11	Capable of analyzing, graphing, and formatting of all data.			
4.12	The analysis software ought to be made readily accessible for installation on multiple computers without any limitations imposed by security dongles for its usage.			
4.13	Should include an extensive array of filtering and fitting routines. Functionality should include I-V graphs, power spectrums, and special "linked data views" for threshold (Action Potential), template (minis), and single-channel modes of event detection and analysis.			
4.14	Capability to automatically detect and analyzes amplitude, rise and decay time, rise and decay slope, peak-to-peak frequency and time.			
4.15	Population spike analysis to automatically calculate amplitude, area under the curve, half-width, decay and rise time, decay and rise slope, coastline of spike, and paired pulses.			
4.16	Batch analysis to eliminate the need to define parameters for every data set. Saved macros can be applied to multiple data sets for automatic analysis.			
4.17	10 cursor pairs for regions of interest search, graph plotting tools such as I-V plot and histogram.			
5	**Accessories**			
5.1	Electrode holder for U-type head stages (2 nos.)			
5.2	Electrode holder Cone Washers 1.3 mm ID			
5.3	Electrode holder Cone Washers 1.5 mm ID			
5.4	Electrode holder Cone Washers 1.7 mm ID			
5.5	Model Cell for Whole cell/single channels (2 nos.)			
B) Other requirements				
1	Warranty of at least 1 year from the date of installation.			

**SIGNATURE OF BIDDER ALONG WITH
SEAL OF THE COMPANY WITH DATE**