## **STM Tip Etcher**



**APPNANO** STM Tip Etcher is a compact, easy to use system for etching custom STM tips with a user controlled timed etch. The etcher features an automatic tip etch stop, an automatic dip and retract, and a live tip etch view. The machine uses pulse etching technology for highly controlled and reproducible tip radius of curvature and aspect ratio. The pulse width is variable for creating custom tip shapes. An optional electroplating mode is capable of nanometer scale metal deposition.

## **Technical Specifications**

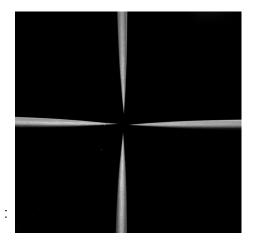
Etch Type:	DC PWM
Etch Voltage:	1.5V to 12V
Maximum Current :	1A
Slow Etch:	0.1% to 4% "on" at 10Hz
Fast etch:	4% to 40% "on" at 100Hz
<b>Optical View:</b>	~200X digital microscope
Surface Detect:	Electronic
Tip Etch Control:	Linear Servo 15 mm travel and
	0.02 mm step resolution
Tip Taper Distance:	2 mm (can be specified shorter or le

## **Applications**

Polycrystalline tungsten tips available in the market are normally require cleaning the surface to expose conducting surface. A compact production tool allows in-house manufacturing of sharp tungsten tips for R&D, Laboratory Experiments and Industrial applications. Key applications of these tips are :

- (i) Scanning Tunneling Microscopy
- (ii) Probing micro/nano integrated electrical circuits
- (iii) Manipulating biological structures.





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