

# Piezo Z-Stage

“The New Standard for High Performance Piezo Microscope Focusing”



*99A600 Piezo Z-stage*

## Piezo Z-stage

Advances in image processing and image acquisition have redefined the requirements for rapid, precise focus control. The LEP Piezo Z-stage insert addresses these requirements and provides the highest performance in a convenient form-factor that is easily adapted to most inverted motorized stages.

The insert provides a stable platform for large and small specimens including industry standard multi-well plates, 1”x3” and 2”x3” glass slides as well as culture dishes. The flexible design of the LEP Piezo Z-stage enables the use of custom specimen holders for many different specialized applications as well as general microscopy. A full 200 microns of travel; equivalent to two full turns of the fine focus on most microscopes further adds to the utility of system.

The Piezo Z-stage integrates with the MAC 5000 automation controller system through a dedicated MAC 5000 module providing full 16 bit resolution, digital position feedback and sophisticated electronic triggering options. No external control boxes are necessary. Digital control of the SGS position feedback eliminates manual offset adjustments for long-term accuracy.

Software bridge commands for the Piezo Z-stage are compatible with standard MAC 5000 motor commands. Most software developed for the standard motorized focus, will integrate transparently.

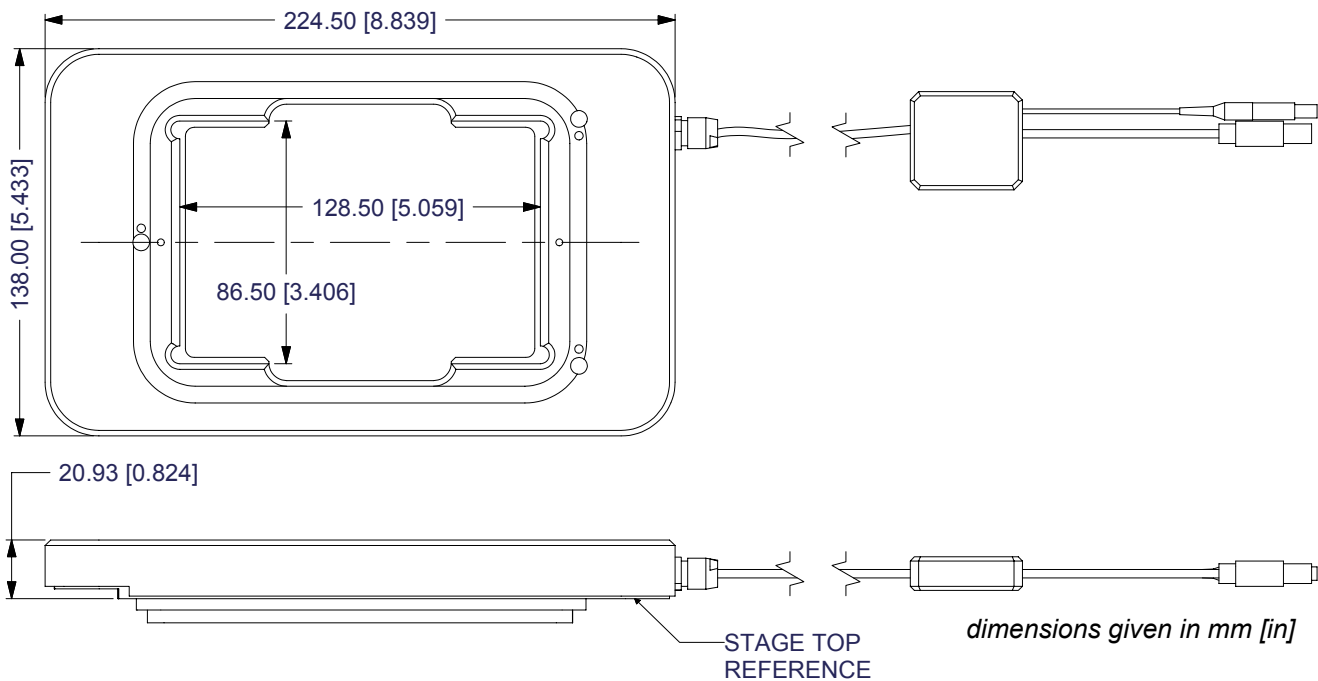


*99A600 Piezo Z-stage with 99S108 BioPrecision2 inverted stage*



**Ludl Electronic Products Ltd.**

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### Performance Characteristics

Travel Range	200 $\mu\text{m}$	Stiffness	3 N/ $\mu\text{m}$
Repeatability	1 nm	Resonant Frequency	1 kHz
Accuracy (full travel)	0.5 %	Maximum Load	500 g
Resolution	16 bit	Bandwidth	200 Hz
Inplane tilt	10 $\mu\text{rad}$		

**Note on characteristics:** General characteristics are provided for reference. The complex dynamics of the Piezo transducers and feedback systems make the performance dependent upon characteristics specific to the sample as well as application requirements.

### Ordering Information

The Piezo Z-stage can be an add-on to an existing MAC 5000 system or as a stand-alone unit when included with the 995001 MAC 5000 base system.

Part Number	Description
<i>add-on for existing MAC 5000 system</i>	
99A600	Piezo Z-stage insert for LEP Inverted stage
73005063	MAC 5000 Piezo control module
<i>stand-alone system</i>	
99A600	Piezo Z-stage insert for LEP inverted stage
995001	MAC 5000 base system, includes power supply and interface



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