



The world leader in advanced metrology solutions

## DIGITAL AUTOCOLLIMATOR 2000

The Digital Autocollimator 2000™ is the advanced version of API's Precision Angle Measurement System. It is a high-precision, dual axis angle measurement system that combines state-of-the-art photonics and digital imaging technologies to measure the two angular positions relative to the reflective surface. This system can also be used for flatness measurement. An optional optical module enables the Autocollimator to measure the perpendicularity of two adjoining surfaces.

The Digital Autocollimator 2000™ can be operated with a remote computer or as a stand-alone instrument. The controller contains an LCD display, which enables the unit operable in stand-alone mode. The LCD display shows the accurate deflection of reflective mirror. As a stand-alone unit, the LCD menu provides a complete set of functions for Autocollimator setup, alignment and measurement, as well as other useful functions and information. For operation with a computer, the controller has a RS232 interface (or USB cable using RS232 adapter). When used with a computer, the Autocollimator functions are expanded with a powerful software package. The Autocollimator rests on a three point mounting system, which establishes a planar reference. A leveling base provides 3 dimensional adjustment control which allows fine adjustment in azimuth and elevation in the range of  $\pm 4^\circ$ , and  $\pm 1^\circ$  roll adjustment.

The Digital Autocollimator 2000™ has a resolution of 0.05 arc-seconds in both axes. The system accuracy is  $\pm 0.1$  arc-seconds at close range and  $\pm 0.5$  seconds in overall range ( $\pm 1000$  seconds). The system is also capable of measuring surface flatness of the object. The instrument will accurately regain the angle

measurement if the line of sight is momentarily blocked. The Digital Autocollimator 2000™ is precision measurement equipment, which is designed to operate in the lab, as well as, in a machine shop environment. It operates without performance degradation in variant temperature, humidity and pressure conditions.

### Specifications

Range:	1500 x 1800 arc-seconds
Resolution:	0.05 arc-second
Accuracy:	$\pm 0.1$ arc-second (over the range $\pm 20$ second)
Accuracy (overall):	$\pm 0.5$ arc-second (over $\pm 1000$ second)
Repeatability:	0.1 arc-second
Warm-Up Time:	10 minutes

### Weight

Autocollimator:	4.1kg
Controller:	2.6kg

### Dimensions

Autocollimator:	307mm x 127mm x 124mm
Controller:	216mm x 229mm x 102mm

