

高精度光电自准直仪 PRECISION ELECTRONIC AUTO-COLLIMATOR



AutoMAT 5000是精度、稳定性和易用性达到完美结合的新一代光电自准直仪系列产品，是精密机械制造和精密光学装配环节的理想角度测量仪器。系列产品采用自主设计的高解像力成像物镜、稳定可靠的光机部件和全数字电路应用技术相融合，每一台仪器都经过严格的调校和校准，均可确保出厂技术指标和精度可溯源性。

The **AutoMAT 5000** autocollimator is a combination of high-precision, stability and ease of use which can responds optimally to different customer requirements and can cover a large range of applications in mechanical and optical field.

As the integration of a dedicate designed high-resolution and low-distortion lens, internal optical parts, ideal mechanical construction and fully digital design technology, results up to 0.1 arcsec ultra high accuracy for angle measurement. The precise and highly reliable measurement system excels in ease of use. The new ergonomically adapted measurement software ensures a maximum usability with complete functionality.

规格 (Specifications)

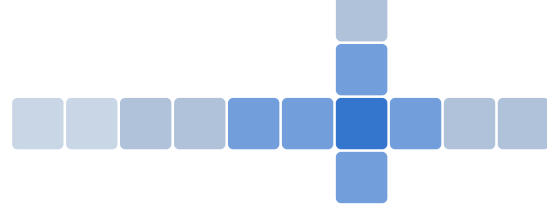
型号	Order Number	5000U-3050	5000UH-3050
物镜焦距 (Focal Length)		300mm	300mm
物镜口径 (Lens Diameter)		50mm (NA. = 90%)	50mm (NA. = 90%)
光源类型 (Light Source)		大功率半导体光源 LED Light Source (中心波长 $\lambda=630\text{nm}$)	
探测器 (Sensors)		两个科学级高分辨率探测器 (High Resolution Linear Sensors)	
目镜 (Viewfinder)		软件显示的大视野电子目镜 (Electronic Viewfinder with Software Crosshair)	
测量频响 (Measuring Frequency)		25Hz TYP.	
接口 (Interface)		USB 2.0 High Speed Interface	
测量距离 (Measuring Distance)		25米 (25 meter MAX.)	10米 (10 meter MAX.)
最大读数视场 (Measuring Range)		4000" (arc sec. 角秒)	4000" (arc sec. 角秒)
分辨率 (Resolution)		0.01" (arc sec. 角秒)	0.01" (arc sec. 角秒)
精度 (Accuracy)	$\pm 100''$ (arc sec. 角秒)	0.2" (arc sec. 角秒)	0.1" (arc sec. 角秒)
	$\pm 1000''$ (arc sec. 角秒)	0.5" (arc sec. 角秒)	0.3" (arc sec. 角秒)
重复性 (Repeatability)		0.05" (arc sec. 角秒)	0.05" (arc sec. 角秒)
外形尺寸 (Dimensions)		405mm (L) \times 130mm (W) \times 168mm (H)	
重量 (Weight)		6.3KG	

产品特性 (Features)

- 高达0.1角秒测角精度 (0.1 arc sec accuracy);
- XY双轴同时测量 (Dual-axis measurements);
- 大视野电子目镜 (Expanded large-field electronic viewfinder);
- 科学级高分辨率CCD传感器 (High resolution CCD Sensors);
- 长寿命LED光源 (LED Light Sources);
- 全数字信号处理 (Digital image processing technology);
- 即插即用USB接口 (USB 2.0 high speed interface);
- 丰富的测量配附件 (Rich accessories);

典型应用 (Applications)

- 精密机械安装定位 (Alignment of machinery);
- 机械产品直线度、平面度、垂直度、平行度等精度保障 (Proof for straightness, flatness, parallelism of rails, tables and linear stage etc.);
- 精密旋转台检测 (Rotary table measurement);
- 航空航天 (Alignment of astronomical system);
- 光学产品装配及调整 (Assembly and adjustment of optical components like mirrors, prisms, windows, wedges etc.);
- 物理及光学实验室 (Alignment of components for the beam control in high energy physics);



AutoMAT 5000 Series

Measure with Precision

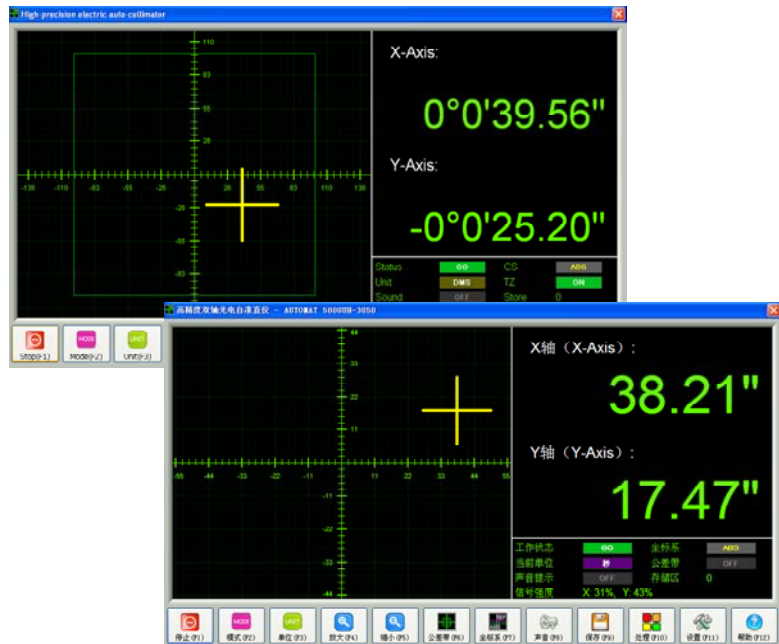


软件功能 (Software Support)

- 数据格式兼容Excel软件 (Excel data format compatible);
- 直线度测量软件 (Straightness measuring software);
- 平面度测量软件 (Flatness measuring software);
- 垂直度、平行度测量软件 (Squareness and parallelism measuring software);
- 旋转台及分度台测量分析软件 (Rotary table measurement and analysis software);
- 定制测量软件 (Custom designed software available);

AutoMAT 5000由高精度电子读数头、物镜管、二维可调底座、反光镜、显示控制器、激光找像器等构成。运行于显示控制器的测量软件可显示大视野的电子目镜及测量数据，并将数据保存为Excel兼容格式，显示控制器与主机之间仅需一条USB线缆连接，即插即用的特点使得现场应用及其简单；激光找像器提供了25米距离内的快速找准和对准调整，远距离调整工作变得极为高效。用户选配的无线遥控器可提供最长30米的遥控距离，极大地提高了产品的易用性。

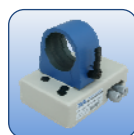
用户可通过选配其它测量配附件及测量软件模块完成对角度、直线度、垂直度、平行度、平面度、旋转工作台、多齿分度台等的高精度测量。



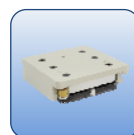
标准附件 (Standard Accessories)



MA60
标准反光镜
Standard Mirror



DZ65
二维可调底座
Adjustable Holder



MB60
反光镜磁性底座
Magnetic Base



LF65
激光找像器
Laser Attachment