RAY-MOTION
dedicated to motion
www.ray-motion.com

Quantum 10/12/14/20/30/50



Quantum Series

Totally digital 2D galvanometer system. System operate based on the embedded platform. It is compact, stable and high quality. More fast and accuracy. The offset drift and gain drift are very low. Mirrors of typical laser wavelength is available and optimized for inertial and stiffness. Suitable for high end application like ITO scratching, laser micro processing etc. Added water and air cooling function to improve the stability of the system.

昆腾系列

全数字的二维扫描振镜系统，使用先进的控制算法实现振镜马达的高速高精度运行。产品结构紧凑、质量稳定可靠、性能指标高。零点漂移和增益漂移非常低，而这些参数对于很多高端应用特别重要。相比于亚腾系列，昆腾具有更高的响应速度。特别适合一些高速高精度的应用场合，例如ITO薄膜蚀刻，激光微加工系统等。增加水冷及风冷功能，提高系统的稳定性.

鞍山精准光学扫描技术有限公司
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Quantum Specifications
昆腾规格参数

所有角度均为光学角 /All angles are in optical degrees

	Quantum10	Quantum12	Quantum14	Quantum20	Quantum30	Quantum50
输入光束孔径 Aperture	10mm	12mm	14mm	20mm	30mm	50mm
光束偏移 Beam displacement	13mm	14.5mm	18.1mm	26.5mm	36mm	55mm
追踪时间 Tracking error time	120us	135us	160us	360us	550us	1.8ms
重量 Weight	2.05kg	2.05kg	2.85kg	4.9kg	6.5kg	7.5kg
阶跃响应时间 /Step response time						
1% 全范围响应时间 1% of full scale	0.3ms	0.3ms	0.5ms	0.83ms	3.04ms	–
10% 全范围响应时间 10% of full scale	0.8ms	0.8ms	1ms	1.34ms	6.29ms	–
标记速度 Marking speed (1)	2.5m/s	2m/s	2m/s	1m/s	0.7m/s	0.3m/s
定位速度 Positioning speed (1)	15m/s	11m/s	8m/s	6m/s	2m/s	1.2m/s
书写速度 Writting speed (2)						
Good quality	800cps	660cps	550cps	320cps	220cps	–
High quality	500cps	410cps	350cps	210cps	150cps	–
最大激光功率 Max laser power	250W	400W	500W	1000W	2500W 5000W (3)	6000W 10000W (3)

接口协议 Interface	XY2-100
工作环境温度 Operating temperature	25±10°C
额定电源容量 Power requirements	±15V DC, 150W . RMS max 3A
驱动方式 Driver mode	Digital
位置分辨率 Resolution	16Bit

零点漂移 Offset drift	30urad/K
增益漂移 Gain drift	50ppm/K
可重复性 Repeatability	<15urad
8小时以上长期漂移 Drift over 8 hours (环境温度恒定且接有水冷系统 After 30min warm-up and with water cooling)	<0.1mrad
标准扫描角度 Typical scan angle	40 degrees

1.速度计算方法

在其他镜头焦距下的速度 = 实际使用的镜头焦距(单位为毫米) / 160 * V(标记速度 或 跳转速度)

Calculation of speed

Speed at other focal lengths = Focal length in use (in mm) / 160 * V(V_marking or V_positioning)

2.Single-stroke characters of 1mm height

3.The mirror of 1064nm can stand max laser power,with air cooling.

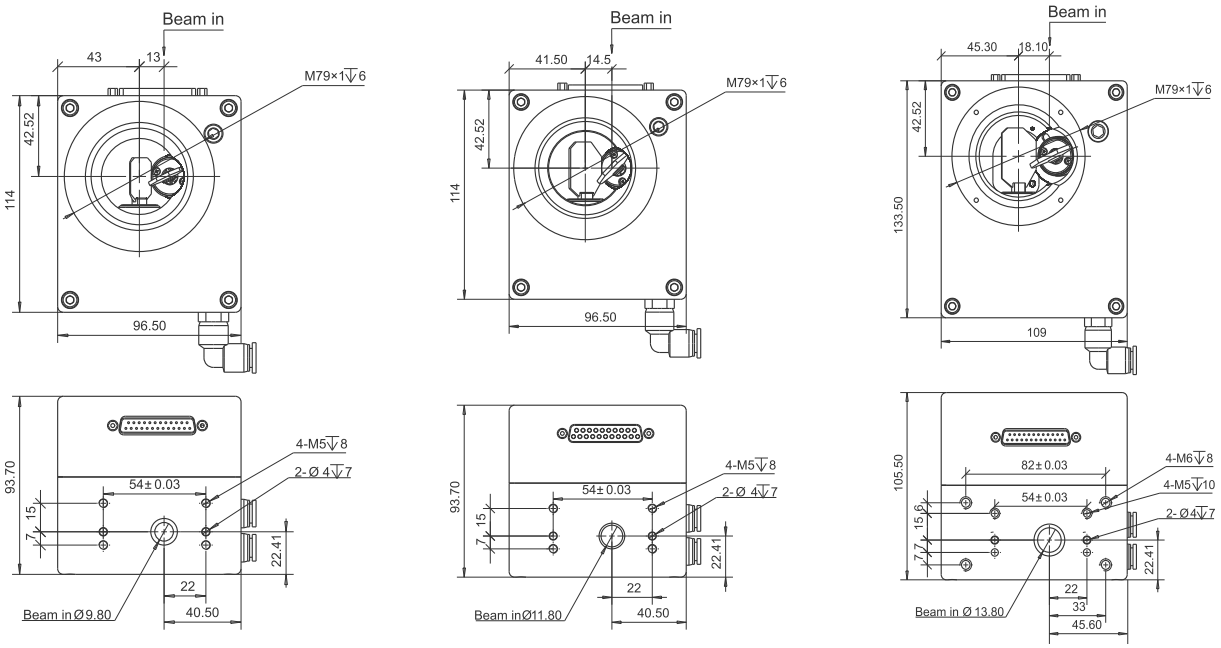
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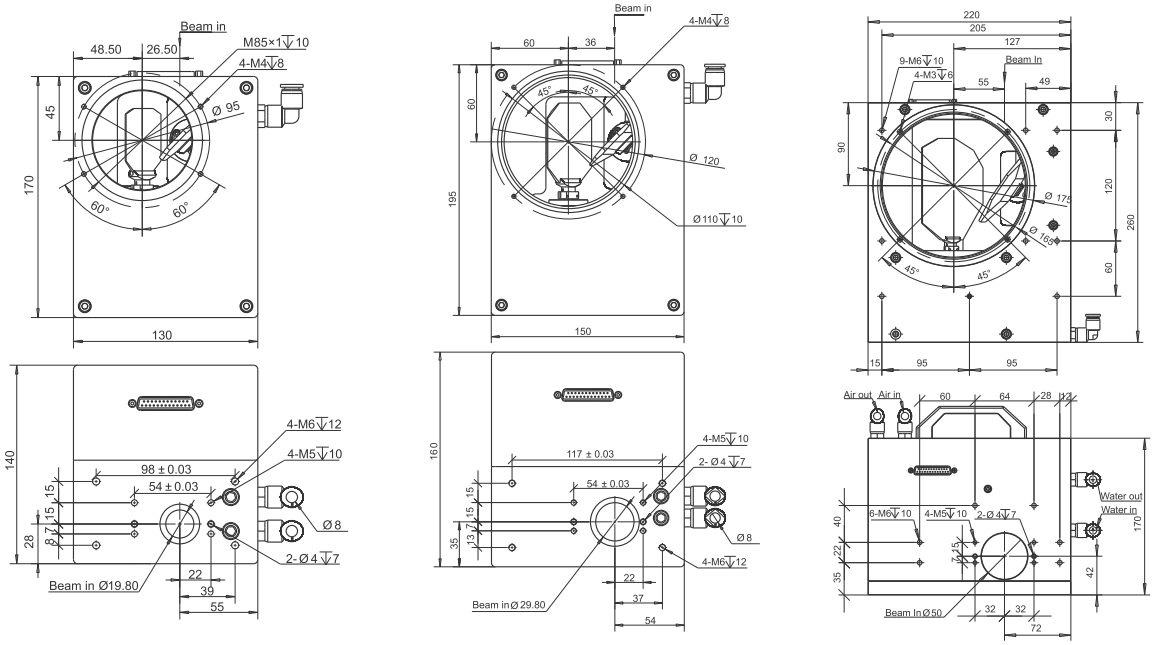
Quantum 10/12/14 Dimensional schematic

昆腾 10/12/14 尺寸示意图



Quantum 20/30-A/50 Dimensional schematic

昆腾 20/30-A/50 尺寸示意图



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