HAN'S COMPONENTS

UltraScan Scan Head

ULTRA-SCAN I II

The product is mainly used for the processing of non-metallic and partial metallic materials.

Application

- Packaging Industry
- Building Materials and Accessories
- Electronics and Consumer Goods
- Precision Processing Applications
- Identification and Marking

Features

- Low noise, high linearity and low drift.
- Applicable to a variety of F-theta lenses.
- Modular design, easy integration and maintenance.
- Standard protocol: 16bit XY2-100, 20bit ST2-100.

Technical Parameters

	UltraScan I						
	10 mm ①	10 mm ②	10 mm ③	14 mm	20 mm	30 mm	50 mm
Input Beam Aperture (mm)	10	10	10	14	20	30	50
Beam Displacement (mm)	12.54	12.54	12.54	16.42	25.25	35.61	62.25
Tracking Error (ms)	0.14	0.14	0.14	0.23	0.45	0.70	1
Repeatability (μrad)	< 2	< 3	< 2	< 2	< 2	< 2	< 2
Offset Drift (μrad/K)	< 15	< 15	< 15	< 15	< 15	< 15	< 15
Gain Drift (ppm/K)	< 80	< 80	< 80	< 80	< 80	< 80	< 80
Long-Term Drift over 8h (mrad)	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
1% of Full Travel (ms)	0.40	0.30	0.35	0.65	0.80	1.20	1.5
10% of Full Travel (ms)	1.20	1.00	1.10	1.60	2.50	4.50	6.5
Positioning Speed (m/s)④	10.0	20.0	15.0	10.0	5.0	3.0	1
Scan Angle (°)⑤	± 25						
Gain Error (mrad)	< 5						
Offset Error (mrad)	< 5						
Nonlinearity (%)	<0.4						
Power Requirements	± 15 VDC , ≥ 3 A						
Communication Protocol	16 bit: XY2 - 100 20bit: ST2-100⑥						
Operation Temperature (°C)	25 ± 10						
Weight (kg)	1.9	1.9	1.9	2.3	5.0	5.2	8.8

▶ All specifications are typical data and subject to change without notice due to product improvements.

▶ ① Customization for precision marking
② Customization for marking on the fly
③ Customization for FPC and SLA applications
④ Test using F-theta lens with focal length F = 160 mm
⑤ All angles above are optical angles
⑥ 10-20 mm supports ST2-100 protocol

Technical Parameters

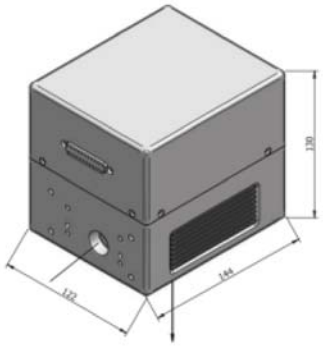
	UltraScan II				
	7 mm	10 mm	14 mm	20 mm	30 mm
Input Beam Aperture (mm)	7	10	14	20	30
Beam Displacement (mm)	9.77	12.54	16.42	25.25	35.53
Tracking Error (ms)	0.12	0.12	0.15	0.45	0.6
Repeatability (μrad)	< 2	< 2	< 2	< 2	< 2
Offset Drift (μrad/K)	< 12	< 12	< 12	< 12	< 12
Gain Drift (ppm/K)	< 50	< 50	< 50	< 50	< 50
Long-Term Drift over 8h (mrad)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1% of Full Travel (ms)	0.22	0.3	0.35	0.70	1.10
10% of Full Travel (ms)	0.76	0.8	0.90	2.40	4.40
Positioning Speed (m/s)①	25	18.0	14.0	6.0	4.0
Scan Angle (°)②	± 25				
Gain Error (mrad)	< 5				
Offset Error (mrad)	< 5				
Nonlinearity (%)	<0.4 <0.2(UltraScan III)				
Power Requirements	± 15 VDC , ≥ 3 A				
Communication Protocol	16 bit : XY2 - 100				
Operation Temperature (°C)	25 ± 10				
Weight (kg)	1.6	1.9	2.3	5.0	5.2

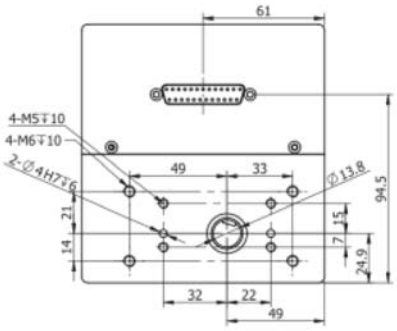
▶ All specifications are typical data and subject to change without notice due to product improvements.

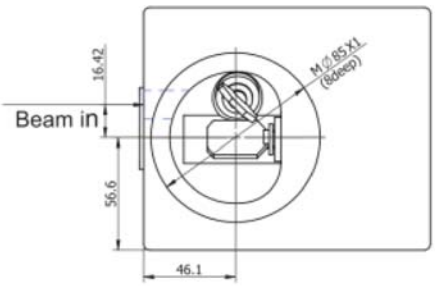
▶ ① Test using F-theta lens with focal length F=160mm
② All angles above are optical angles

Laser Dimensions (mm)

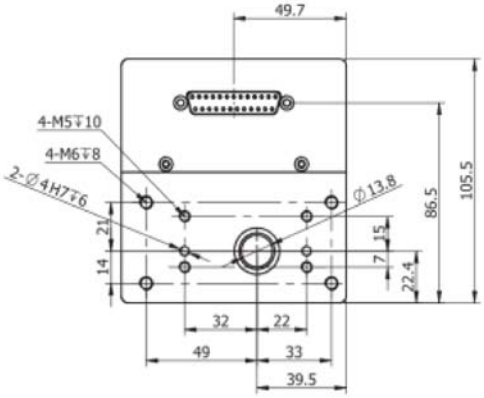
UltraScan I 14mm

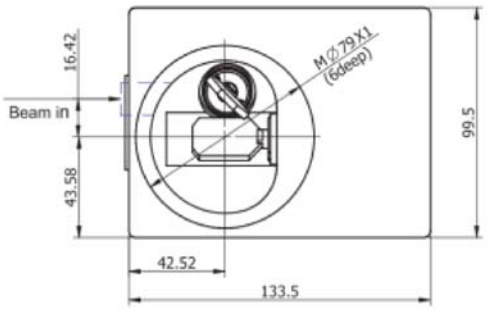




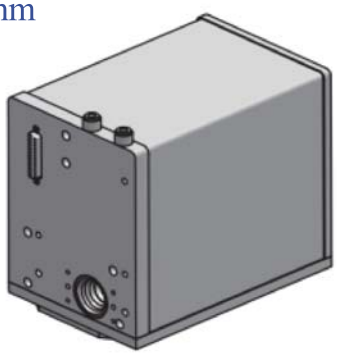


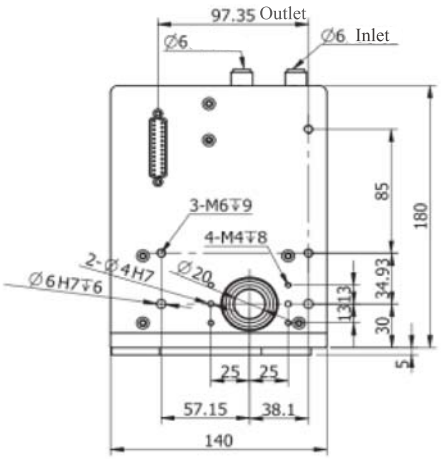
UltraScan II(III) 14mm

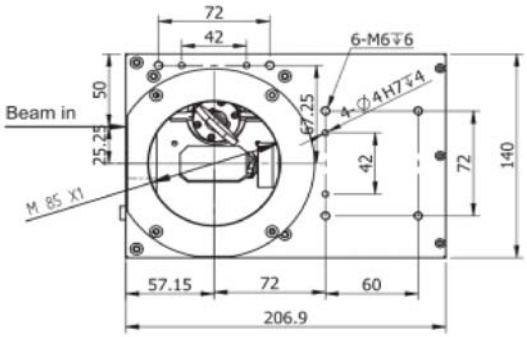




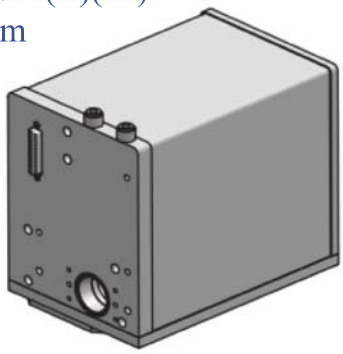
UltraScan I(II)(III) 20mm

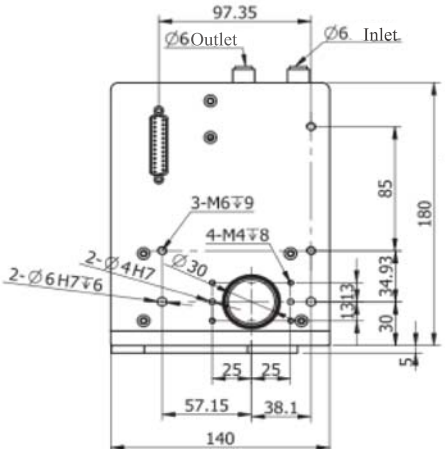


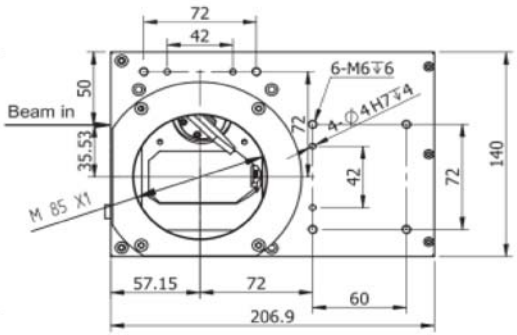




UltraScan I(II)(III) 30mm

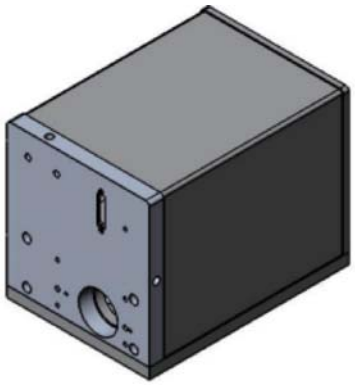


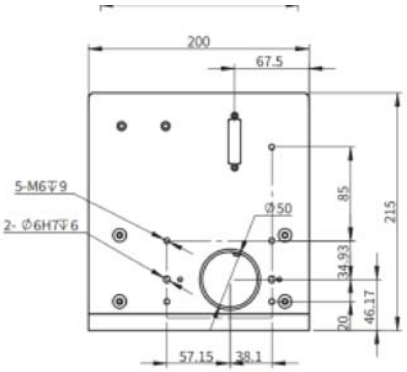


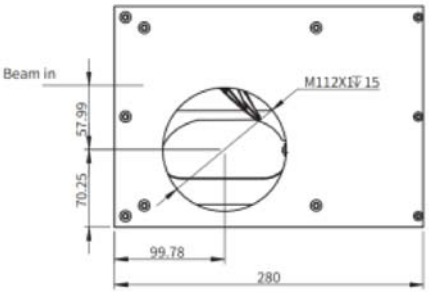


Laser Dimensions (mm)

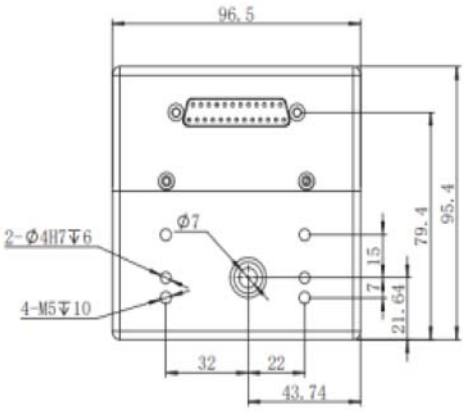
UltraScan
50mm

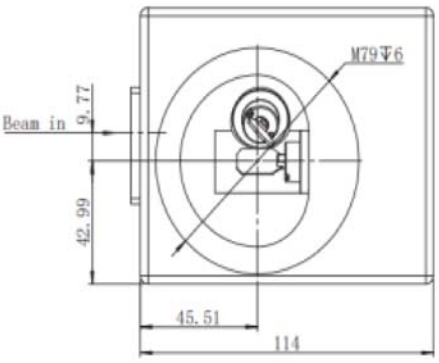






UltraScan II(III)
7mm





UltraScan I(II)(III)
10mm