N3D Focus after Dynamic marking kit

0 delay autofocus marking

Marking software, board card, 3D galvanometer, laser distance sensor

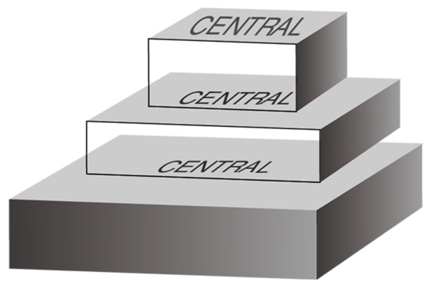
- Hi-lo position marking
- Flying marking
- Spot control
- Deep carving/relief
- Cutting

Product Application

产品功能应用

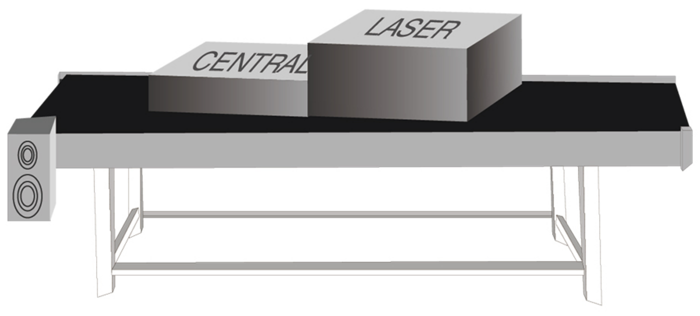
Static high-low marking

Can mark a variety of workpieces of different heights at one time, within the focal length range;



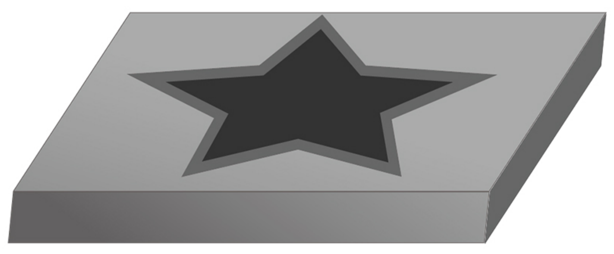
Flying high-low marking

Marking of the same product at different height positions; One-time marking of different products at different height positions;



Deep carving/relief

Break through the limitation of 2D marking focus depth, marking depth easily more than 2mm.

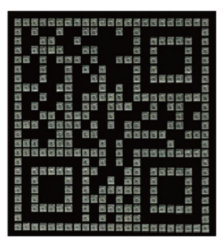


Precision cutting

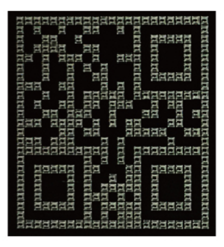
The Z-axis can control the change of focal length and perform precise cutting operations on the workpiece;

Spot control-marking more faster

The marking time greatly shortened, which is twice as fast as 2D marking.and the filling density will be reduced by spot setting.



3D time: 0.2s



2D time: 0.5s

Spot control-clearer marking

The control of the large spot makes the marking lines thicker and the marking more clearer;

3D Marking

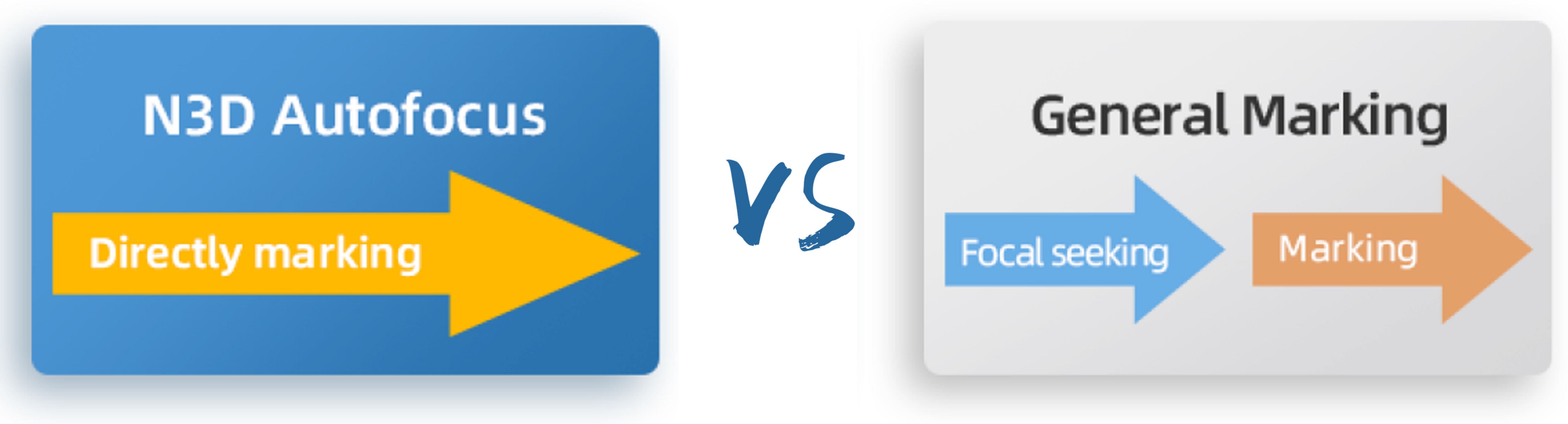
2D Marking

Scalable 0 delay autofocus

Simplified marking process, no manual focus;

Different workpiece height, no need toadjust the lens' position, directly marking;

With automatic marking, simplify designand operation;



Expand the pipeline process control function

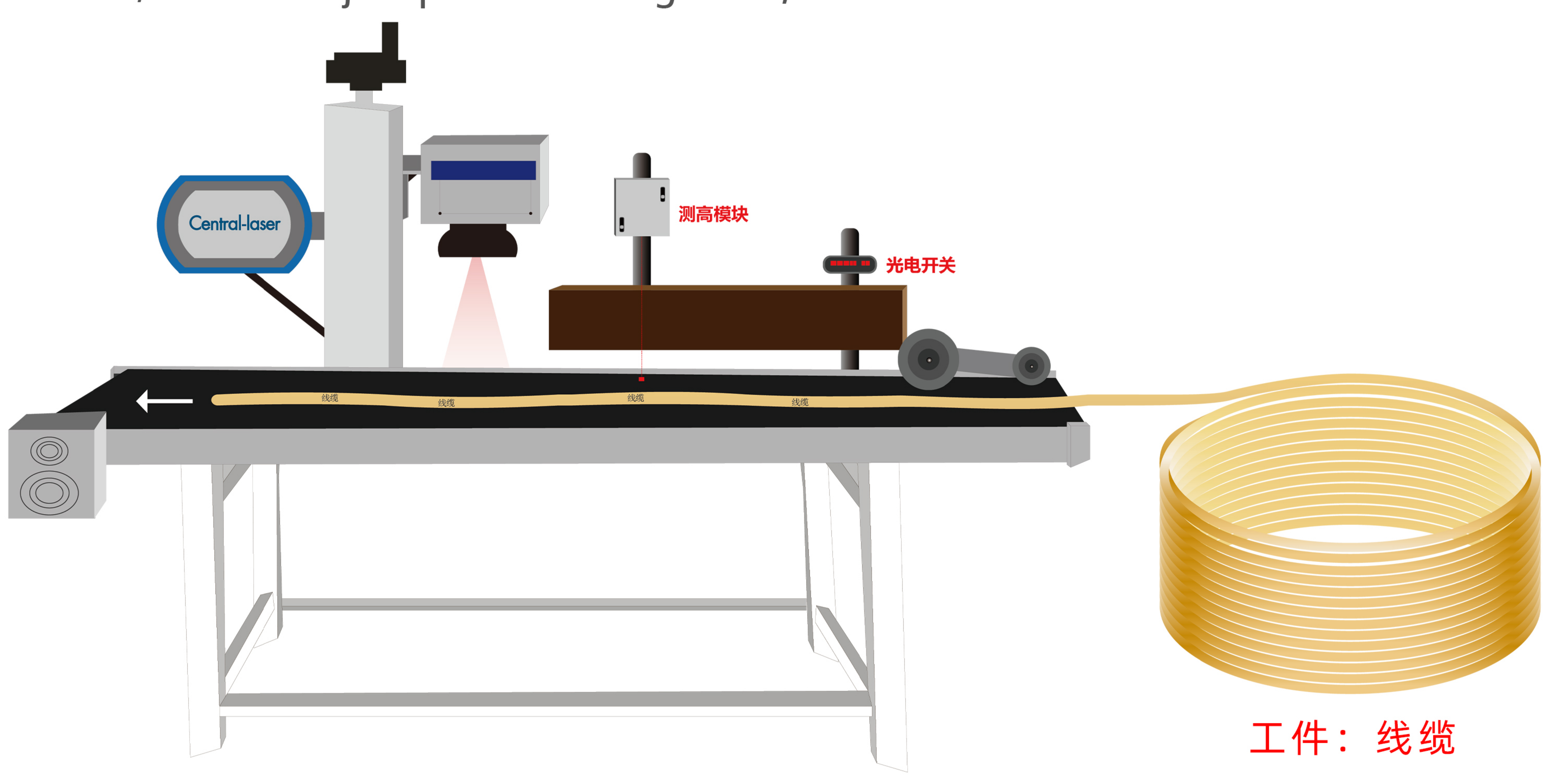
For Static Marking with Automated Settings, When Objects of Same or Different Height Objects Are Marked on the Assembly Linembly Idomative Moving Object TS, Obtain Its Status and Control Objects Stop to Mark. Objects Will Continue to Move after Marking, Greatly Improving Static Marking Efficience.

- Simplify the marking process and eliminate manual operations. The same system can realize marking &assembly line control, saving operating steps with external controllers (including wiring, parameter adjustment, controlling the start and stop of the assembly line, etc.).

- Perfectly solves the problem of missed printing of QR codes and other contents during flight marking.

Expand cable instant zoom function

The focus can be adjusted in real time for different heights of workpieces and marked to ensure processing precision;
Solve the height difference caused by cable bending and deformation,And the problem of poor focus during flight marking;
Suitable for cable/uneven object plane marking work;



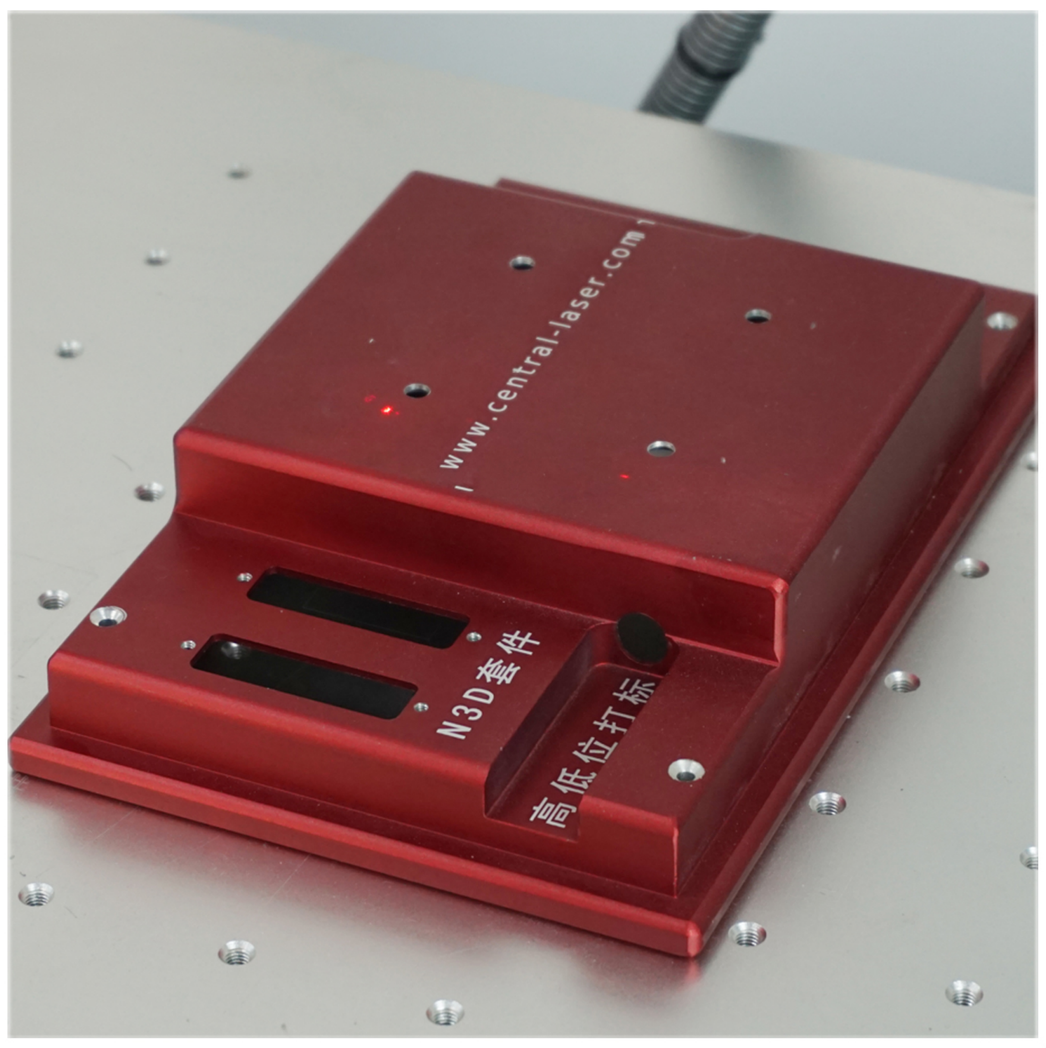
Product Adavntages

产品优势

With N3D laser marking controller

- Using hardware DSP chip marking card, lus calculation is completed,10us real-time positioning, to ensure high-speed flight without missing play, no deformation;
- Meet more than 95% of laser flight engraving application requirements;
- Provides 2 independent marking environment settings: static and flight;
- Supports online editing, missing marking detection function, head marking function, And over working range marking;
- No engraving of intersection points, remote network marking, and quick system maintenance and update functions;

Craft display

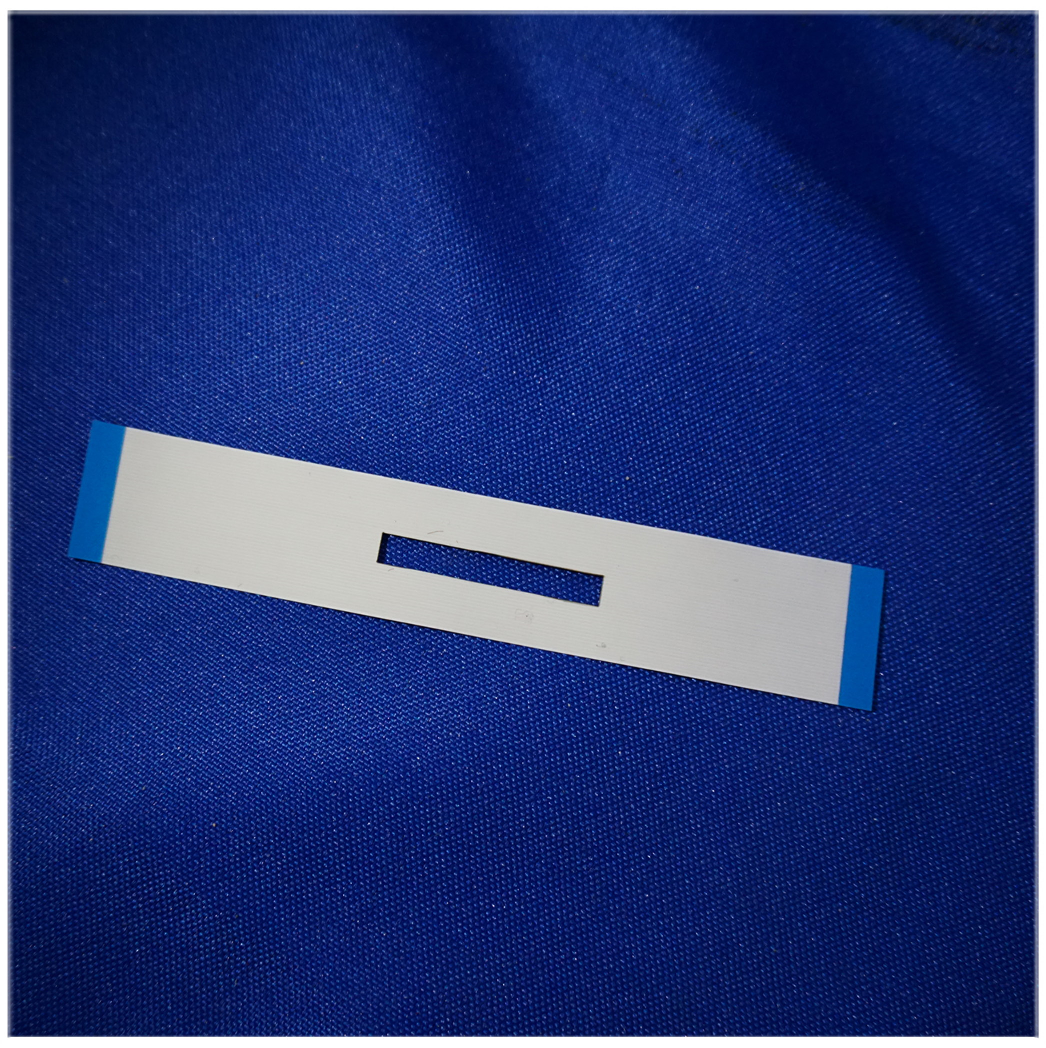


High-low position marking

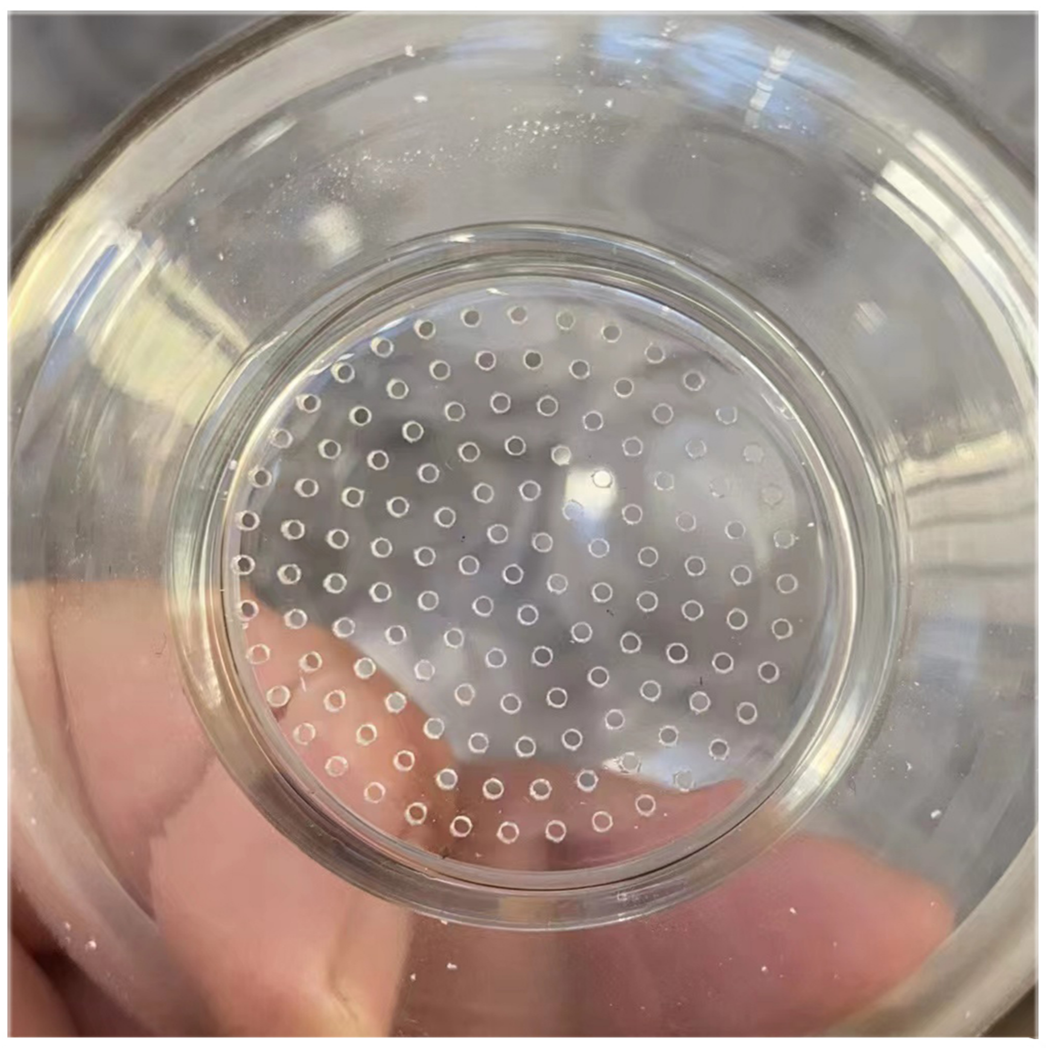
Pharmaceutical packaging

Aluminum plate deep carving/relief

Flight automation applications



Chip cutting



Glass cutting

Fiber focus after FB-P10

High-low position marking, Laser spot control,
deep engraving/relief

Specifications of Galvanometer	Aperture size	10mm
	Input spot	7mm
	Speed of XY axis	≤7000mm/s
	Speed of dynamic Z-axis	≤3000mm/s
	Lens	100*100 （Max. option 600*600mm)
	Repeat scale accuracy	5urad

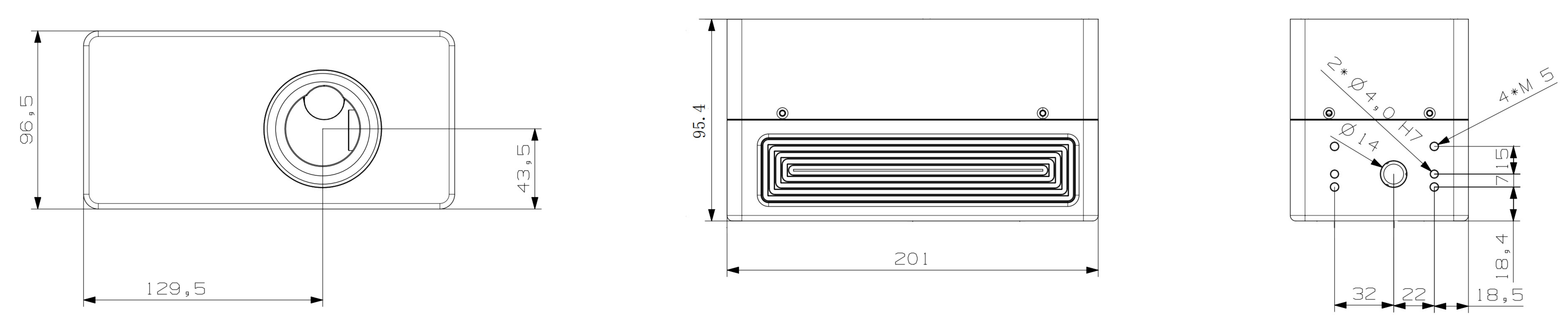
Specifications	Input voltage	±15V 5A
	Size	201*95.4*96.5mm
	Weight	3kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	FIBER	
	Max. and Min. focal lengths	Range of variable focal length
70*70［F100］	85～92	7
100*100［F160］	176～201	25
150*150［F210］	225～272	47
200*200［F290］	291～372	81
250*250［F380］	346～475	129
300*300［F420］	402～578	176
400*400［F650］	640～912	272

Structure diagram of Fiber 3D galvanometer



Fiber focus after FB-P10 (water cooling)

Forced water cooling, suitable for cutting

Specifications of Galvanometer	Aperture size	10mm
	Input spot	7mm
	Speed of XY axis	≤7000mm/s
	Speed of dynamic Z-axis	≤3000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

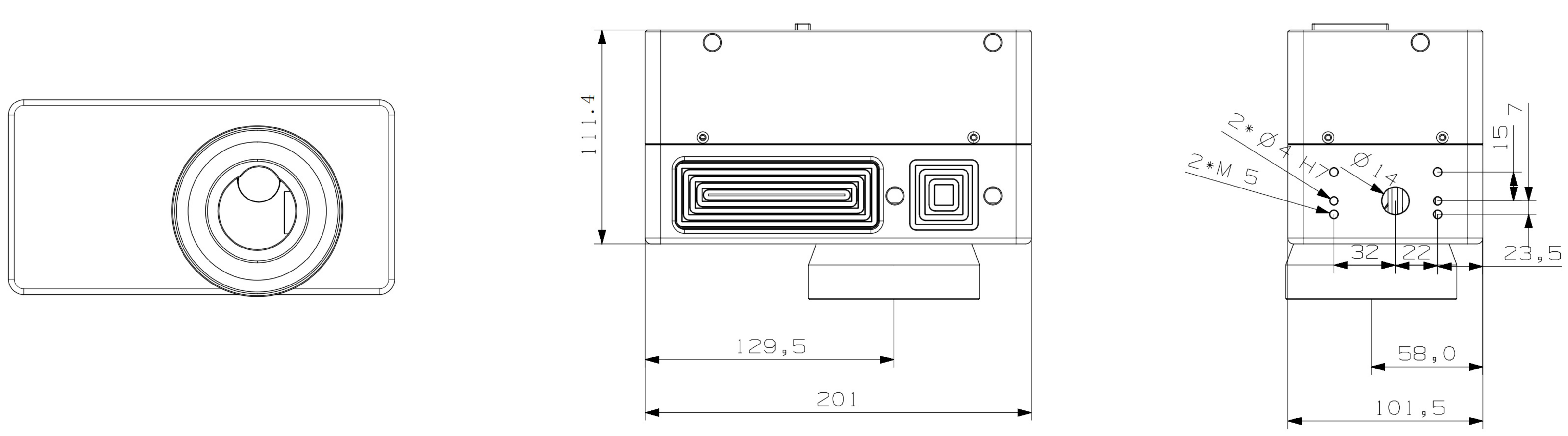
Specifications	Input voltage	±15V 5A
	Size	201*111.4*101.5mm
	Weight	3.16kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	FIBER	
	Max. and Min. focal lengths	Range of variable focal length
70*70 [F100]	85~92	7
100*100 [F160]	176~201	25
150*150 [F210]	225~272	47
200*200 [F290]	291~372	81
250*250 [F380]	346~475	129
300*300 [F420]	402~578	176
400*400 [F650]	640~912	272

Structure diagram of Fiber 3D galvanometer



Fiber focus after FB-P10N

Compact, precise, fast, and better suited for high-temperature

Specifications of Galvanometer	Aperture size	10mm
	Input spot	7mm
	Speed of XY axis	≤7000mm/s
	Speed of dynamic Z-axis	≤3000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

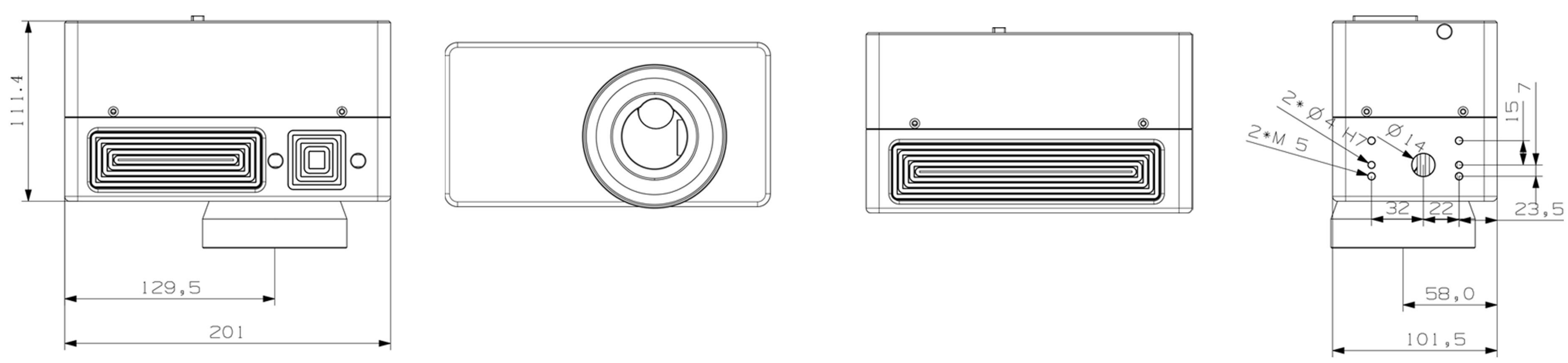
Specifications	Input voltage	±15V 5A
	Size	201*111.4*101.5mm
	Weight	3.2kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	FIBER	
	Max. and Min. focal lengths	Range of variable focal length
70*70［F100］	85～92	7
100*100［F160］	176～201	25
150*150［F210］	225～272	47
200*200［F290］	291～372	81
250*250［F380］	346～475	129
300*300［F420］	402～578	176
400*400［F650］	640～912	272

Structure diagram of Fiber 3D galvanometer



Fiber focus after FB-P14

The spots are delicate, stronger, and more suitable fordeep engraving and cutting.

Specifications of Galvanometer	Aperture size	14mm
	Input spot	7mm
	Speed of XY axis	≤2000mm/s
	Speed of dynamic Z-axis	≤2000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

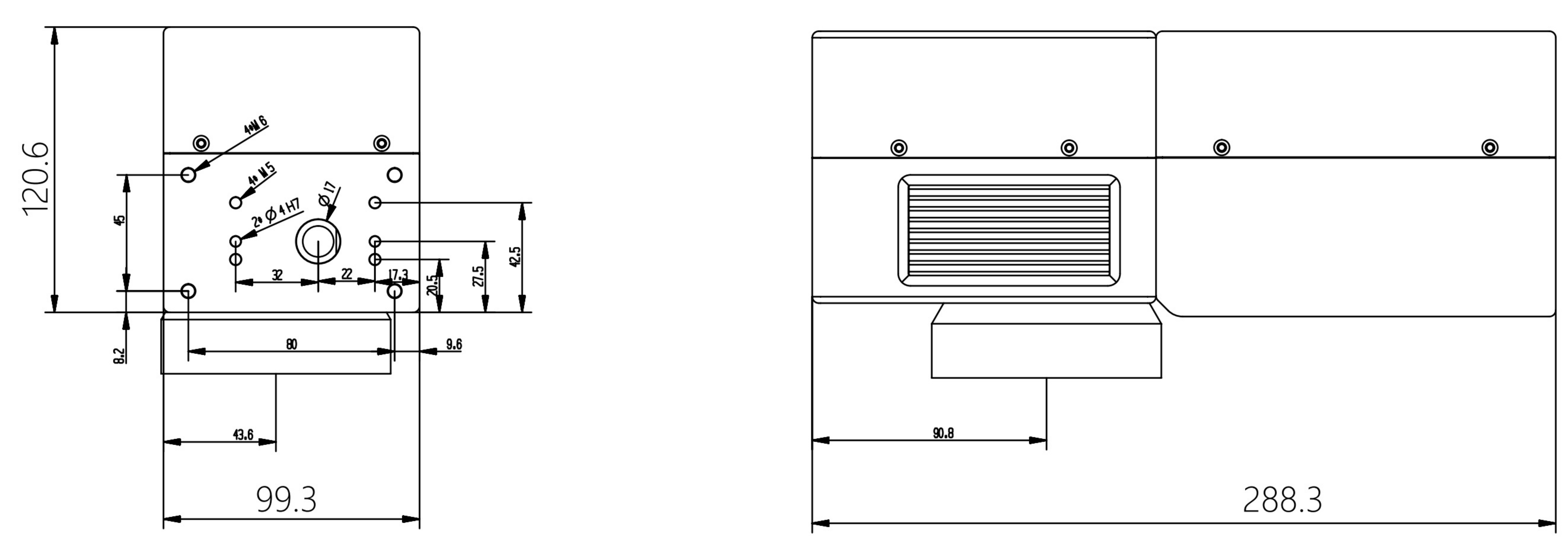
Specifications	Input voltage	±15V 5A
	Size	288.3*120.6*99.3mm
	Weight	4.66kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	FIBER	
	Max. and Min. focal lengths	Range of variable focal length
70*70 [F100]	109~113	4
110*110 [F160]	170.5~179.5	9
150*150 [F210]	221.5~236.5	15
200*200 [F290]	304~334	30
300*300 [F420]	424~487	63
400*400 [F580]	566~680	114
600*600 [F900]	785~1039	254

Structure diagram of Fiber 3D galvanometer



Fiber focus after FB-P14 (water cooling)

The spots are delicate, stronger, and more
suitable fordeep engraving and cutting.

Specifications of Galvanometer	Aperture size	14mm
	Input spot	7mm
	Speed of XY axis	≤2000mm/s
	Speed of dynamic Z-axis	≤2000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

Specifications	Input voltage	±15V 5A
	Size	288.3*120.6*99.3mm
	Weight	4.66kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	FIBER	
	Max. and Min. focal lengths	Range of variable focal length
70*70 [F100]	109～113	4
110*110 [F160]	170.5～179.5	9
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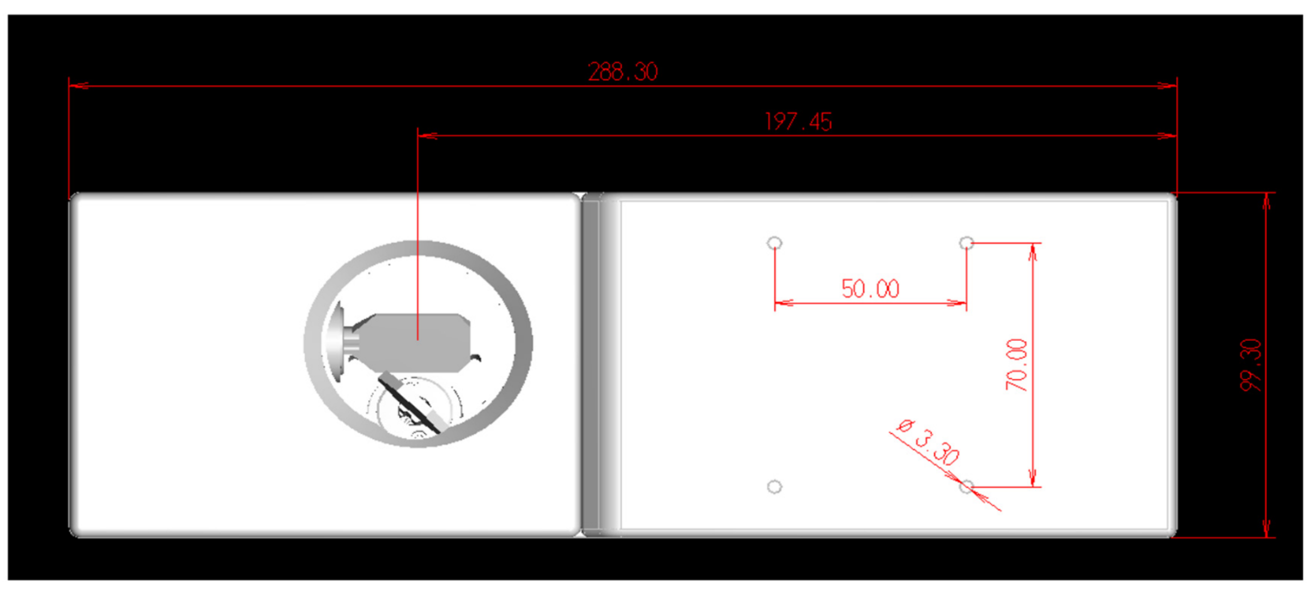
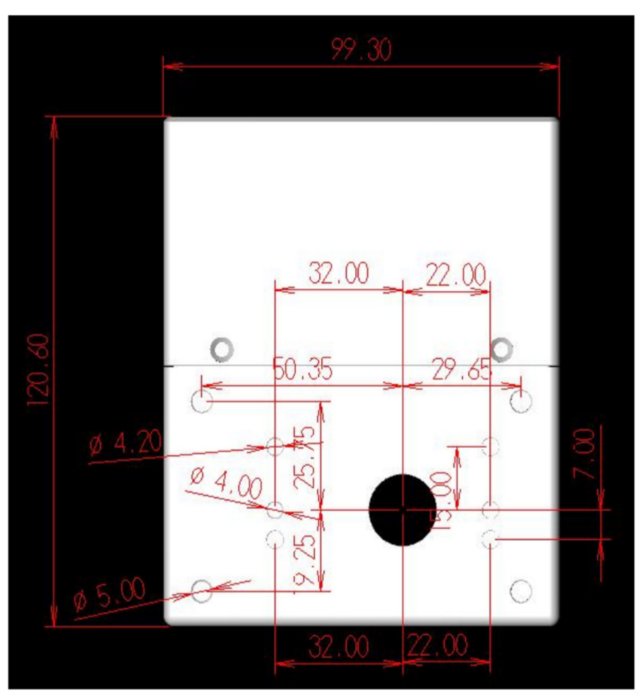
400*400 [F580]	566～680	114
600*600 [F900]	785～1039	254

Structure diagram of Fiber 3D galvanometer





UV focus after UV-P10

High-low position marking, Laser spot control,
deep engraving/relief

Specifications of Galvanometer	Aperture size	10mm
	Input spot	7mm
	Speed of XY axis	≤7000mm/s
	Speed of dynamic Z-axis	≤3000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

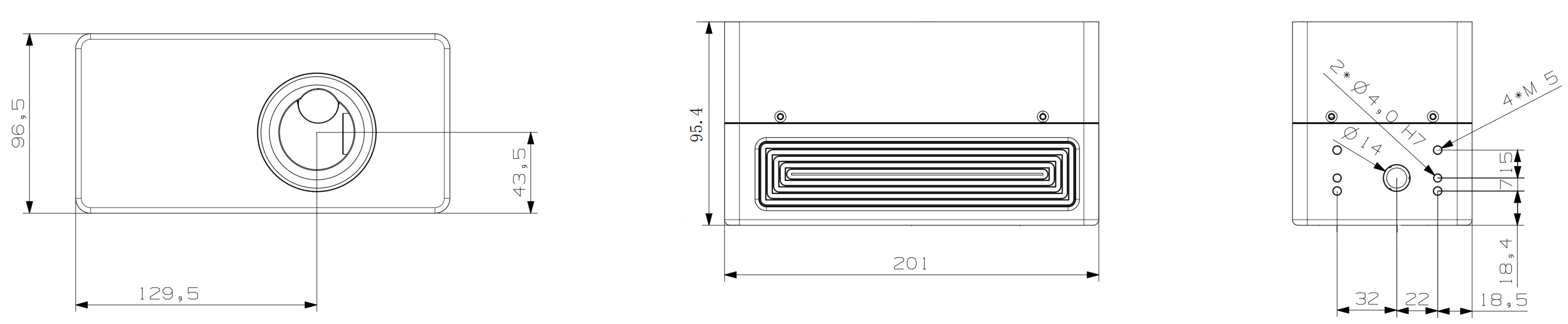
Specifications	Input voltage	±15V 5A
	Size	201*95.4*96.5mm
	Weight	3kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3＋＋
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	UV	
	Max. and Min. focal lengths	Range of variable focal length
70*70 [F100]	133～140	7
100*100 [F160]	204～217	13
150*150 [F210]	313～348	35
200*200 [F290]	373～432	59
300*300 [F420]	483～574	91

Structure diagram of UV 3D galvanometer



UV focus after UV-P10 (water cooling)

Forced water cooling, suitable for cutting

Specifications of Galvanometer	Aperture size	10mm
	Input spot	7mm
	Speed of XY axis	≤7000mm/s
	Speed of dynamic Z-axis	≤3000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

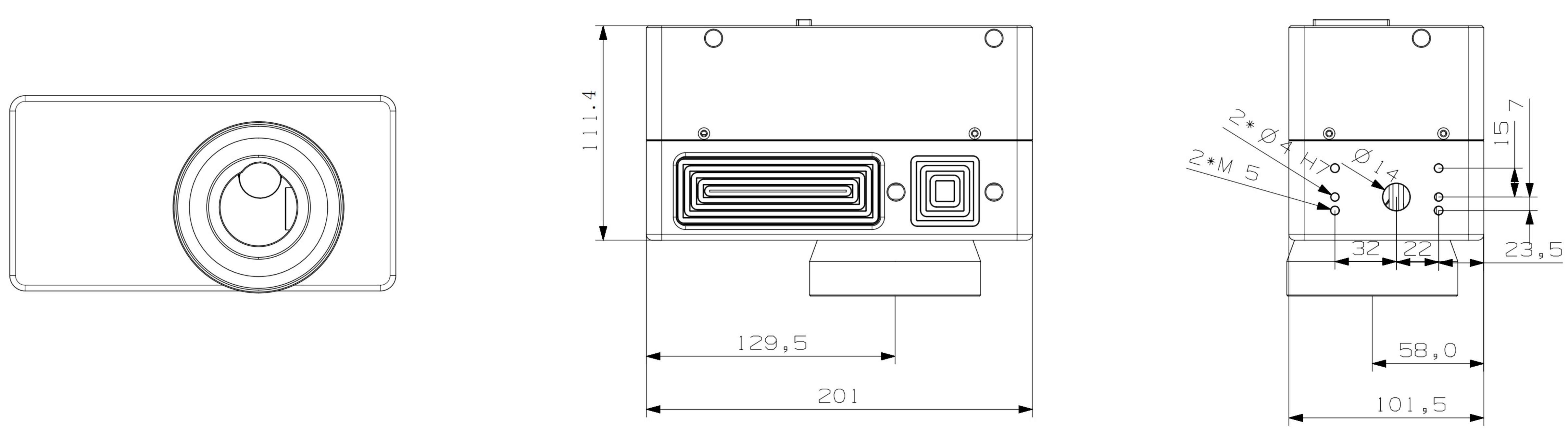
Specifications	Input voltage	±15V 5A
	Size	201*111.4*101.5mm
	Weight	3.16kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	UV	
	Max. and Min. focal lengths	Range of variable focal length
70*70 [F100]	133~140	7
100*100 [F160]	204~217	13
150*150 [F210]	313~348	35
200*200 [F290]	373~432	59
300*300 [F420]	483~574	91

Structure diagram of UV 3D galvanometer



UV focus after UV-P10N

Compact, precise, fast, and better suited for high-temperature

Specifications of Galvanometer	Aperture size	10mm
	Input spot	7mm
	Speed of XY axis	≤7000mm/s
	Speed of dynamic Z-axis	≤3000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

Specifications	Input voltage	±15V 5A
	Size	201*111.4*101.5mm
	Weight	3.2kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	UV	
	Max. and Min. focal lengths	Range of variable focal length
70*70 [F100]	133～140	7
100*100 [F160]	204～217	13
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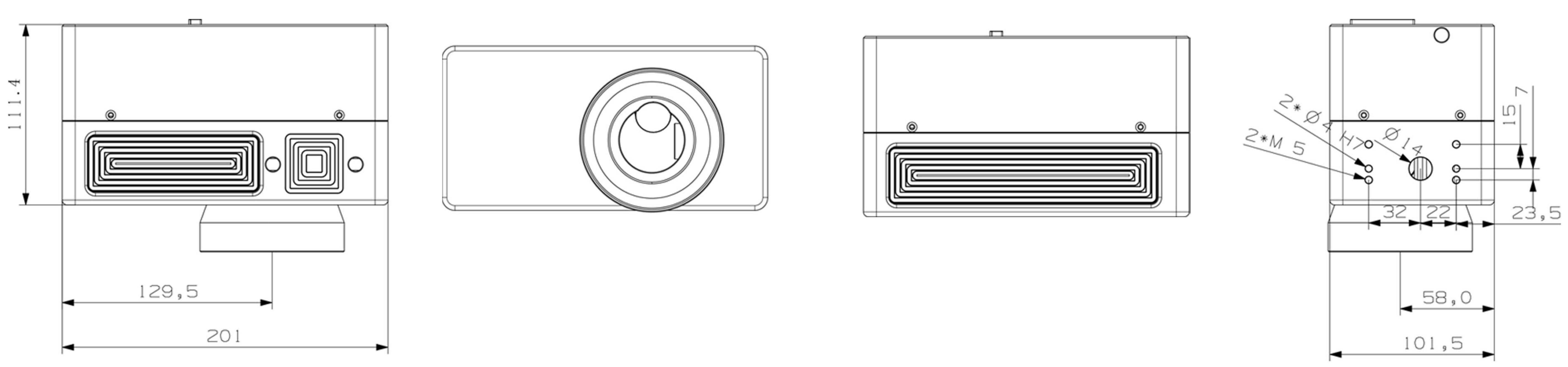
Structure diagram of UV 3D galvanometer



Green focus after GR-P10

High-low position marking, Laser spot control,
deep engraving/relief

Specifications of Galvanometer	Aperture size	10mm
	Input spot	7mm
	Speed of XY axis	≤7000mm/s
	Speed of dynamic Z-axis	≤3000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

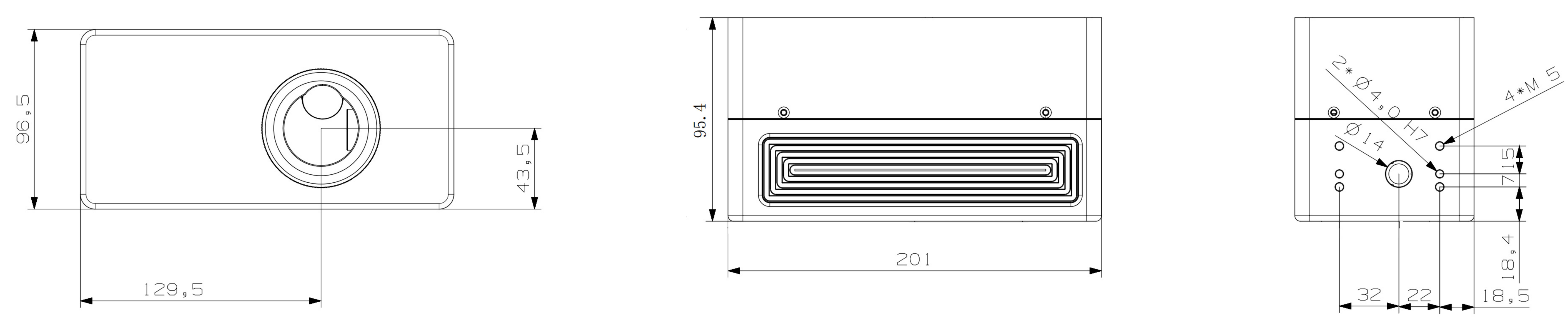
Specifications	Input voltage	±15V 5A
	Size	201*95.4*96.5mm
	Weight	3kg
	Protocol	XY2-100

User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	GREEN	
	Max. and Min. focal lengths	Range of variable focal length
100*100 [F160]	162～186	24
150*150 [F210]	203～246	43

Structure diagram of Green 3D galvanometer



Green focus after GR-P10 (water cooling)

Forced water cooling, suitable for cutting

Specifications of Galvanometer	Aperture size	10mm
	Input spot	7mm
	Speed of XY axis	≤7000mm/s
	Speed of dynamic Z-axis	≤3000mm/s
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Specifications	Input voltage	±15V 5A
	Size	201*111.4*101.5mm
	Weight	3.16kg
	Protocol	XY2-100

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	Control card	MC3++
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Range of field lens	GREEN	
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100*100 [F160]	162～186	24
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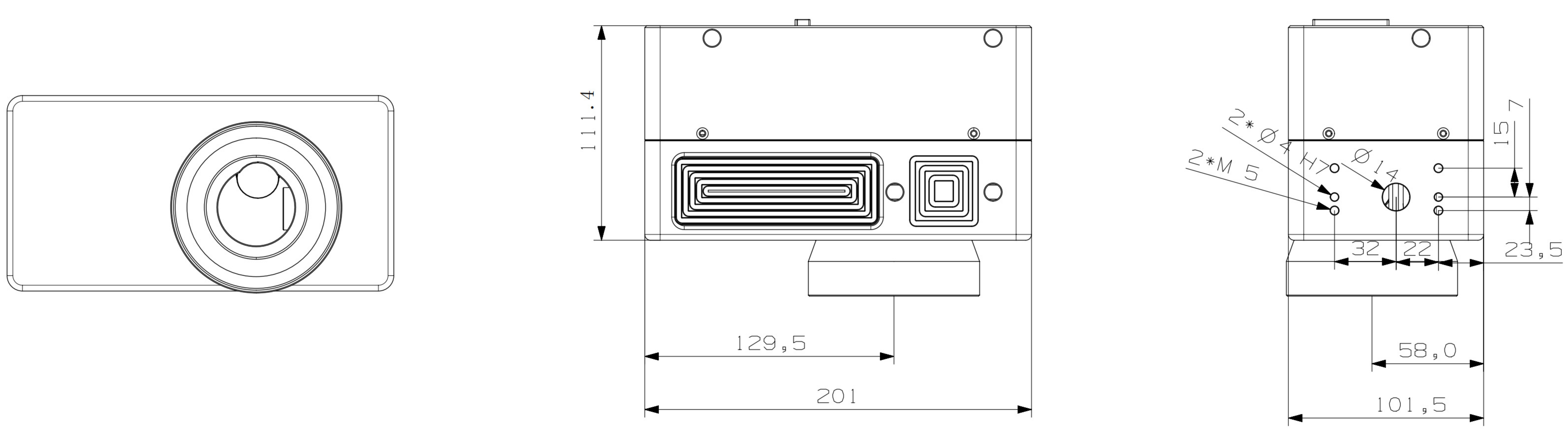
Structure diagram of Green 3D galvanometer



Green focus after GR-P14

The spots are delicate, stronger, and more
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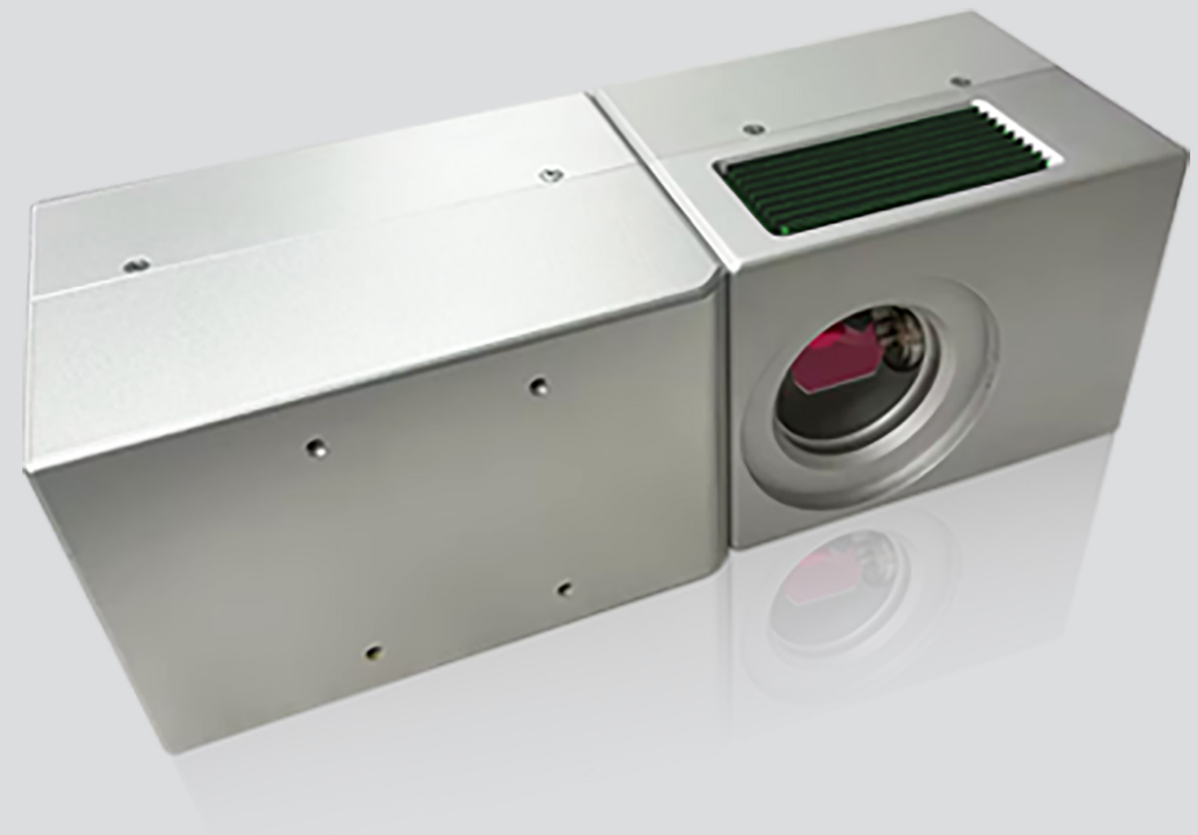


Specifications of Galvanometer	Aperture size	14mm
	Input spot	7mm
	Speed of XY axis	≤2000mm/s
	Speed of dynamic Z-axis	≤2000mm/s
	Lens	100*100 （can be optional according to needs)
	Repeat scale accuracy	5urad

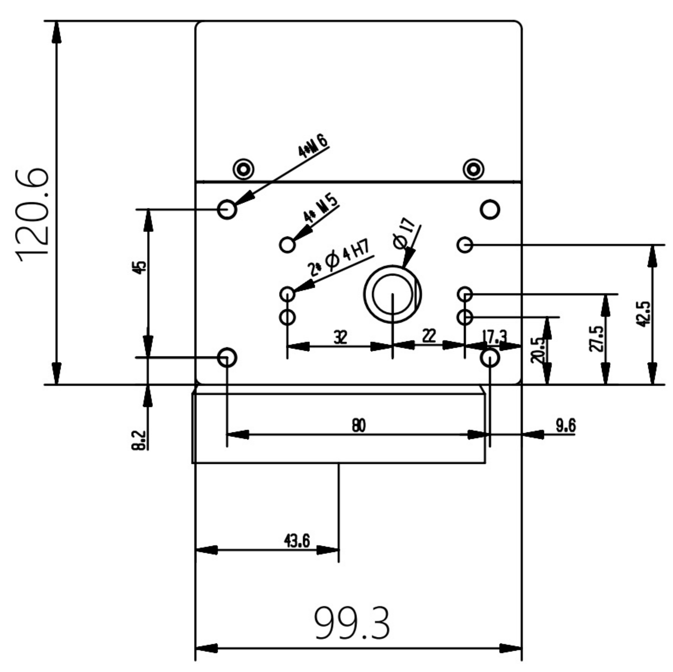
Specifications	Input voltage	±15V 5A
	Size	288.3*120.6*9.3mm
	Weight	4.66kg
	Protocol	XY2-100

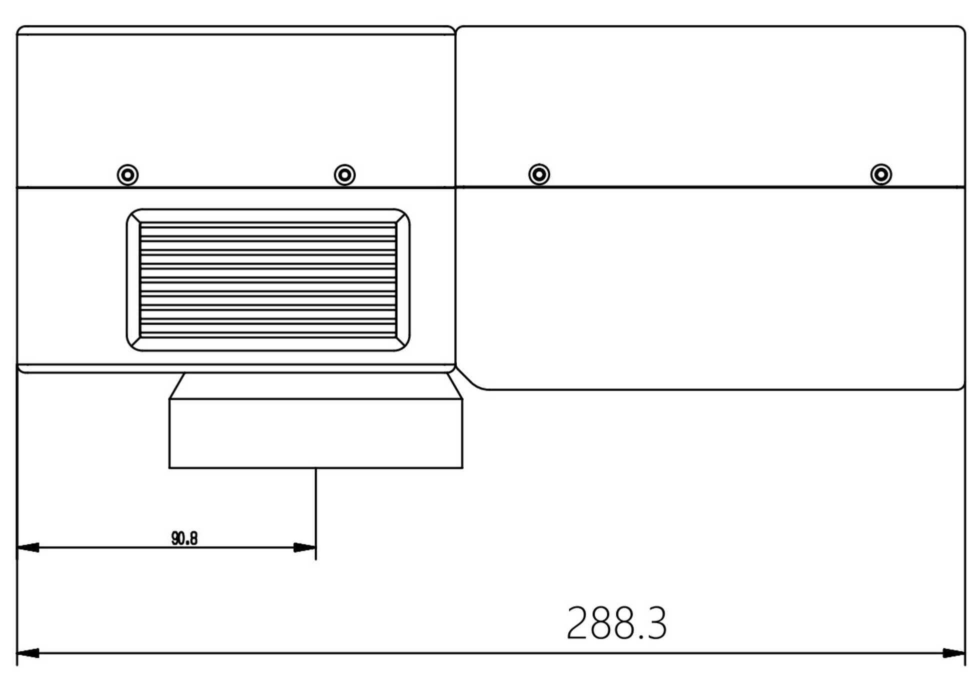
User operation	Software	N3D controller
	Control card	MC3++
	language	International version
	System	LINUX

The f-theta lens selected table for different focal range

Range of field lens	GREEN	
	Max. and Min. focal lengths	Range of variable focal length
100*100 [F160]	178～192.5	14.5
150*150 [F210]	224～250	26

Structure diagram of Green 3D galvanometer





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focus on laser marking