

3

2025

**1**

-

±0.015 mm

±0.05 mm

0.5%

350 cc-10000 cc

±1%

±0.1mm

3400 bar

50~100 μm

1000 MPa/s

580 cm<sup>3</sup>/s

2000

5

3

500

20%

2

8-10

2-3

1.4 m/s

$\pm 8$  mm

1

2

2000

5

3

500

20%

**3**

— —

PWM

	/	3	
1500~1800 rpm		13 Nm/kg	
4	10 s;	0~1500 rpm	10 g 16 kHz
		2 kHz	45°
			1000
mm/s		2000	
	5		2
		300	
	20%		
<b>4</b>		<b>XY</b>	
		- -	
	PWM		
	XY		-

XY

1500 N

30 A

X 70 mm Y 90 mm

1  $\mu\text{m}$

25 g (250 m/s<sup>2</sup>)

5

$\mu\text{m}$

20

3000

5

3

300

20%

5

150 kg

25 mm

600 mm×600 mm×1600 mm

50 mm

3

2000

5

2

300

20%

**6**

$\pm 1500$  mm

$\pm 0.04(\text{rad})$

$\pm 0.04(\text{rad})$

100 mm

$\pm 0.01(\text{rad})$

2000

5

2

500

20%

7

/

30 W

532 nm

2000

5

3

300

20%

**8**

VSLAM

30 cm/s

5 cm

150 m<sup>2</sup>/h

90 min

2000

5

3

300

20%



AC

X/Y/Z	3000/2200/1250 mm	
100/100/100 m/min		0.015 mm AC
10		X/Y/Z
1500/975/660 mm		100/100/100 m/min
0.012 mm AC		10
3000		
5	3	
	300	
20%		

CF/PPS

CF/PC

1.6 m×1.3 m×1 m

30 mm/s

1 mm

CF/PC

CF/PPS

20wt%

9%

Ra 0.8 μm

2000

4

3

300

20%

11

MIG

MIG

MIG

MIG

100 kHz

80%

3%

95%

3

0.2mm

2.0 m/min

2500

5

3

300

20%

12

mm	0.005/100 mm	0.01/100
	0.01 mm	0.15 mm
80%		600 / 120 /
	3000	
5		3
		500
	20%	

13

			300 MPa	8%
		4000 kN		±0.5
mm		0.15 mm	30 ms	
	±2 ms		10	
	±0.02 m/s		±1 bar	
	3000			5
	3		2	
		500		
	20%			

1200-1600 mm

1200

SDR11

8 mm

4.2 kg/kw

2.0 /

5%

10%

5%

2500

5

2

500

20%

m  
 $\pm 180^\circ$   
0-0.5 m  
 $\pm 90^\circ$   
5  
16 (8 )  
3  
5  
20%

2  
0-1.8  
0-1 m  
 $-45^\circ - 15^\circ$   
30 /  
15 km/h  
2500  
3  
500

0.1×0.3 mm<sup>2</sup>  
m/min  
2000  
3  
500  
20%

60 s  
3×10<sup>-8</sup>  
98%;  
10 μm  
500

1  
5 m/min  
1  
5  
8  
5



0.5 mm

20 mm

2

3

1

3

5

100

30%

**18**

/

2  
150 mm 5  
 $\mu\text{m}$  300 kHz CCD 100 mm  
10 m/s  
Ra 0.5  $\mu\text{m}$  500 mm  
1  
3 5  
100  
30%

10 mm

9 Zernike

95%

5

632 nm

0.8

3

5

100

30%