DFS30 3D Scan System

Focusing on high-end industrial laser applications

DFS30 System Key Advantages:

- Extremely low temperature drift - scanner (over 8 hours long-term offset drift [3] ≤ 80 µrad)
- Dynamic focusing module with extremely high resolution ≤ 0.3 µm
- Extremely high speed - scanner (tracking error ≤ 0.45 ms)

Typical Applications:

The DFS30 products incorporate dynamic focusing techniques, offering the smallest focal spot in accordance with a larger processing field and processing ability on 3D applications. DFS30 products are highly suitable for textiles, paper, leather, plastic web, automotive, metalworking and packaging industries, where larger processing area, smallest spot diameters, and 3D applications are crucial.

The DFS30 exhibits extremely high dynamic-axis resolution, exceptional focal spot uniformity and great dynamic performance, high precision, low temperature drift and excellent long-term stability.

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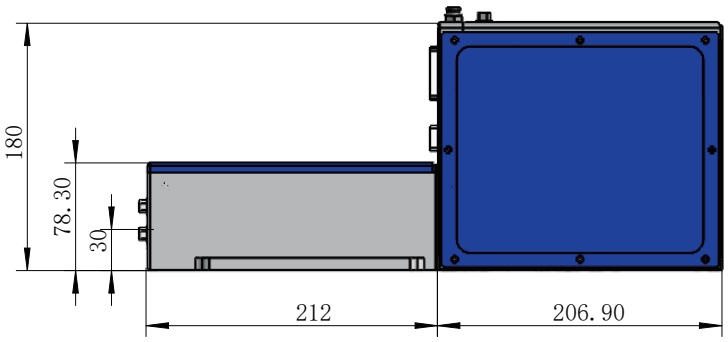
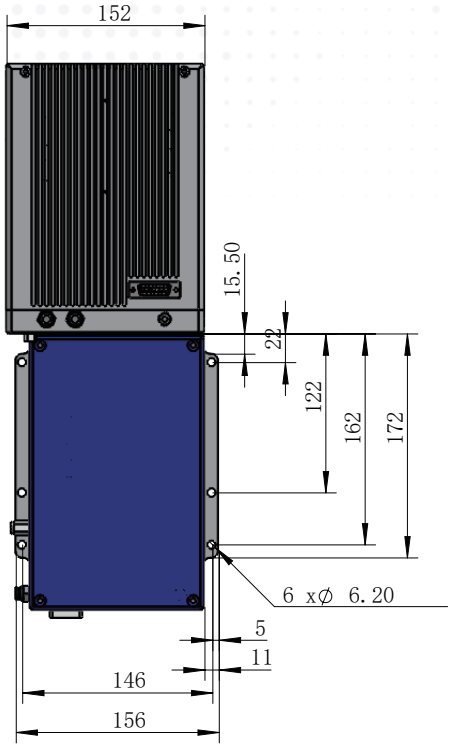
Mechanical Drawings (Dimensions in mm)





Specifications DFS30-1.064-WA

Scan filed (mm x mm)	400 x 400	500 x 500	600 x 600
Wavelength (nm)	1064		
Entrance Aperture (mm)	15	15	15
Working distance (mm)	590	690	820
Average spot size 1/e² (μm)	37.2	44.7	56.1
Max. laser power CW (W) for 50% duty cycle (W)	2000 4000	2000 4000	2000 4000
Focus range in z direction (mm)	±50 mm	±60 mm	±90 mm

Specifications DFS30-10.6-W

Scan filed (mm x mm)	500 x 500	700 x 700	1000 x 1000
Wavelength (nm)	10600		
Entrance Aperture (mm)	12	12	12
Working distance (mm)	661	916	1400
Average spot size 1/e² (μm)	46	71	110
Max. laser power CW (W) for 50% duty cycle (W)	1000 2000	1000 2000	1000 2000

Note:

(1) Working distance: distance from the lower end of the beam exit side of the scan head to the surface of the work plane.

(2) $M^2 = 1$

(3) Long-term temperature drift is given under an ambient temperature environment of 25°C. and a working load under 500W. Temperature drift testing with high laser power is strictly prohibited. High laser power could induce thermal deformations in both the optical and mechanical systems, making it impossible to differentiate whether the drift is originating from galvanometer scanner itself or due to deformations in the optical and mechanical systems.