

BLAZER-IR Series



High-Power Industrial Infrared PS-Laser



BLAZER-IR series laser is a high-power industrial-grade infrared picosecond laser with the highest average output power of >100W, high peak power and repeatable frequency up to 2000kHz.

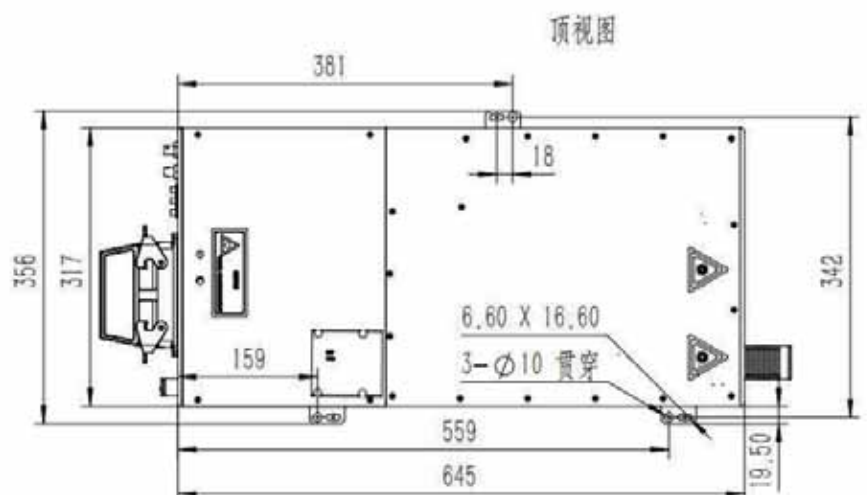
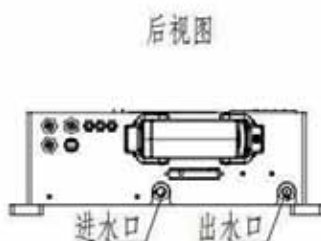
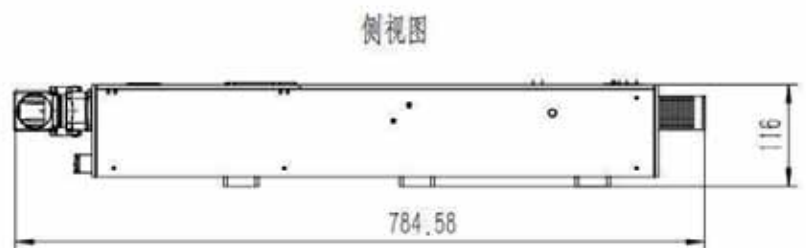
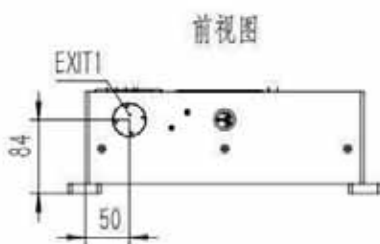
This series of lasers have compact structure, small volume, high stability in long time operation and are suitable for rapid system integration.

FEATURES & BENEFITS:

- 15-100W@1064nm
- 100-2000kHz repetition rate
- < 15ps pulse duration
- High Beam quality $M^2 \leq 1.3$
- Compact, hermetic and robust mechanical design
- Fully detachable umbilical
- Burst mode
- Integrated process shutter
- Position synchronized output

APPLICATIONS:

- Cutting and drilling of brittle materials, transparent material
- Cutting of thick glass
- High-speed marking



SPECIFICATIONS	BLAZER-IR Series			
	IR-20	IR-30	IR-50	IR-100
Single Wavelength Output (nm)	1064 nm			
Pulse Repetition Rate Range (kHz)	100 – 2000 kHz			
Pulse Duration (ps)	< 15			
Power ¹ (W)	20	30	50	100
Maximum Pulse Energy (μJ)	150	300	250	125
Beam Spatial Profile	TEM ₀₀			
Beam Quality Parameter (M ²)	≤1.3			
Beam Diameter (mm)	~2mm (Customizable)			
Pulse-to-Pulse Energy Stability (RMS)	< 2%			
Average Power Stability ² (RMS)	< 2%			
Polarization Ratio	> 100:1			
Beam Circularity (%)	> 85			
Beam-Pointing Stability ³ (μrad/°C)	< 50			
Beam Divergence, full angle ⁴ (mrad)	< 2mrad			
Warm-up Time from Chiller Start (minutes)	< 40			
Electrical Supply	220V AC ±5% / 50-60Hz			
Power Consumption	< 2.5kW (typical 50W at 500kHz)			
Cooling Type	Closed-loop water cooling			
Dimensions				
Laser Head	785 × 356 × 116 mm		862 × 439 × 116 mm	
Power Supply	4U		4U	
BURST MODE OPERATION				
Maximum Number of Pulses in Burst	10			
OPERATING SPECIFICATIONS				
Allowed Temperature Range During Operation	15-35°C			
Humidity	<65%			

NOTES:

1. Please provide operating Rep. rate for optimum output power.
2. Average in 8 hours with room temperature variation ΔT<3°C
3. Maximum deviation from beam mean centroid
4. Full angle for 86.5% of energy


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