

CARBIDE | CB3-UV

High-Power UV Femtosecond Lasers

Maximum output of 50 W

500 fs pulse duration

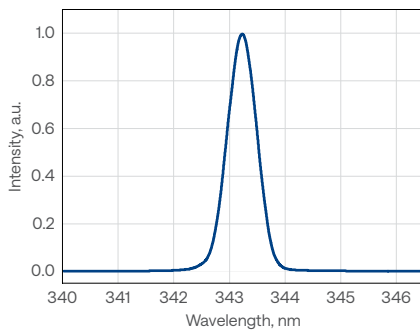
Up to MHz repetition rate

High beam quality and stability

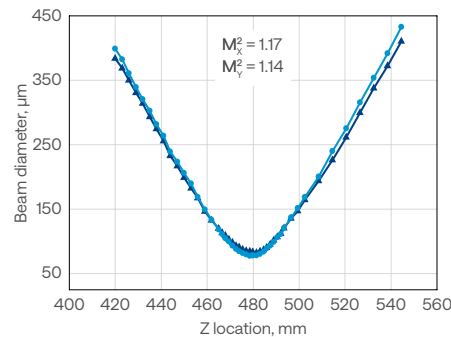
Compact industrial-grade design



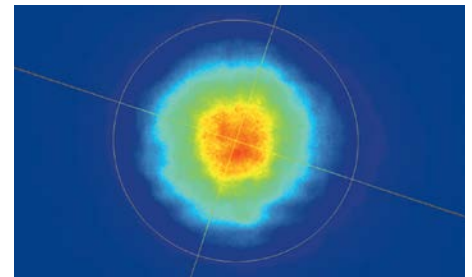
CARBIDE-CB3-UV
Typical spectrum



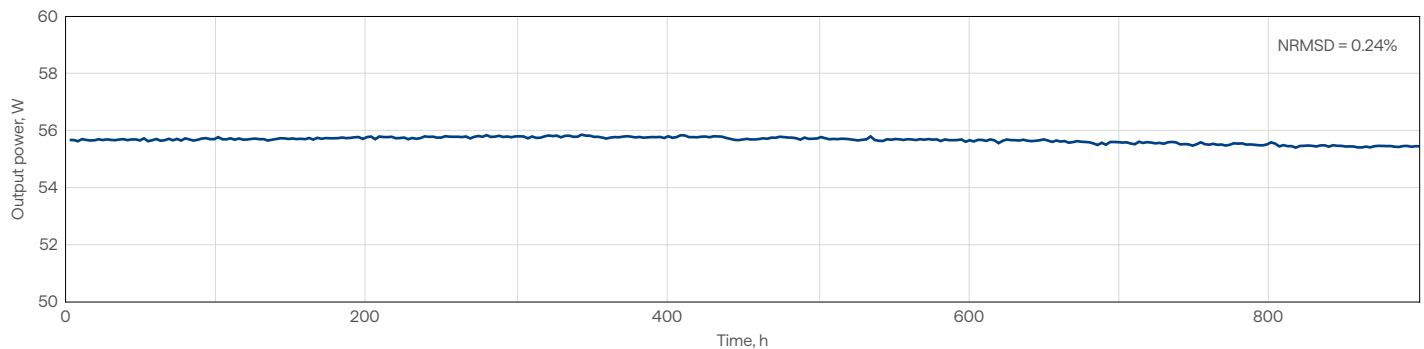
CARBIDE-CB3-UV
Typical M² measurement data



CARBIDE-CB3-UV
Beam profile



CARBIDE-CB3-UV-50W
Long-term power stability



Specifications

Model	CB3-UV-30W	CB3-UV-50W
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OUTPUT CHARACTERISTICS

Cooling method	Water-cooled	
Center wavelength	343 ± 3 nm	
Output power	> 30 W	> 50 W
Pulse duration ¹⁾	≈ 500 fs	
Maximum output pulse energy ²⁾	150 μJ	
Repetition rate	200 – 1000 kHz ³⁾	300 – 2000 kHz
Polarization	Linear, vertical; 1 : 200	
Beam quality, M ²	< 1.3	
Beam diameter ⁴⁾	2 – 5 mm	
Long-term power stability, 12 h ⁵⁾	< 0.5%	
Lifetime	10 000 h	

MAIN OPTIONS

Optional amplifier outputs	1030 nm, 515 nm
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DIMENSIONS

Laser head (L × W × H)	801 × 350 × 174 mm	
Chiller (L × W × H)	680 × 484 × 307 mm	
24 V DC power supply (L × W × H)	352 × 195 × 75 mm	376 × 449 × 88 mm

ENVIRONMENTAL & UTILITY REQUIREMENTS

Operating temperature	15 – 30 °C		
Relative humidity	< 80% (non-condensing)		
Electrical requirements	Laser	100 V AC, 12 A – 240 V AC, 5 A; 50 – 60 Hz	100 V AC, 15 A – 240 V AC, 7 A; 50 – 60 Hz
	Chiller	200 – 230 V AC; 50 – 60 Hz	
Rated power	Laser	1000 W	2000 W
	Chiller	2000 W	
Power consumption	Laser	900 W	1500 W
	Chiller	1300 W	1800 W

¹⁾ Assuming a Gaussian pulse shape.

²⁾ Depends on the pump energy.

³⁾ Repetition rate available up to 2 MHz at lower power.

⁴⁾ FW 1/e²; depends on the pump energy.

⁵⁾ Under stable environmental conditions. Expressed as normalized root mean squared deviation (NRMSD).



DANGER: VISIBLE AND/OR INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT, REFLECTED OR SCATTERED RADIATION

CLASS 4 LASER PRODUCT

Drawings

CARBIDE-CB3-UV

