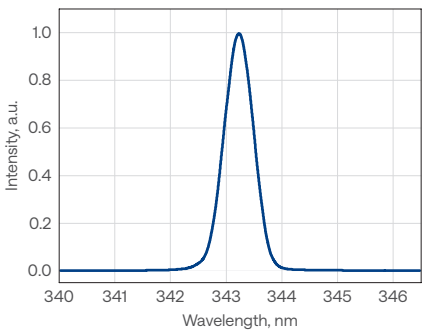
# CARBIDE | CB3-UV

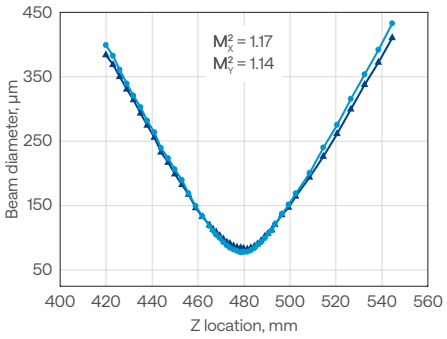
## High-Power UV Femtosecond Lasers

- NEW Maximum output of 50 W
- 500 fs pulse duration
- Up to MHz repetition rate
- High beam quality and stability
- Compact industrial-grade design

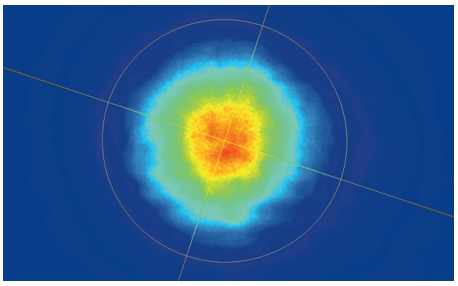

**CARBIDE-CB3-UV**
Typical spectrum



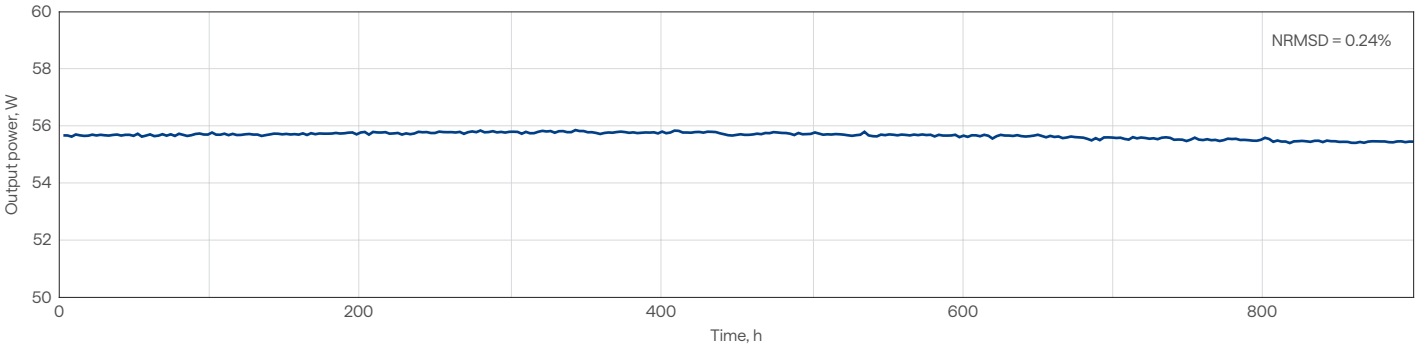

**CARBIDE-CB3-UV**
Typical $M^2$ measurement data




**CARBIDE-CB3-UV**
Beam profile



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



# Specifications

| Model | | CB3-UV-30W | CB3-UV-50W |
|---|---|---|---|
| **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 [3] | | 200 – 1000 kHz | 300 – 1000 kHz |
| Polarization | | Linear, vertical; 1 : 200 | |
| Beam quality, $M^2$, typical values | | < 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 | |
| **PHYSICAL 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).*


# Drawings

CARBIDE-CB3-UV

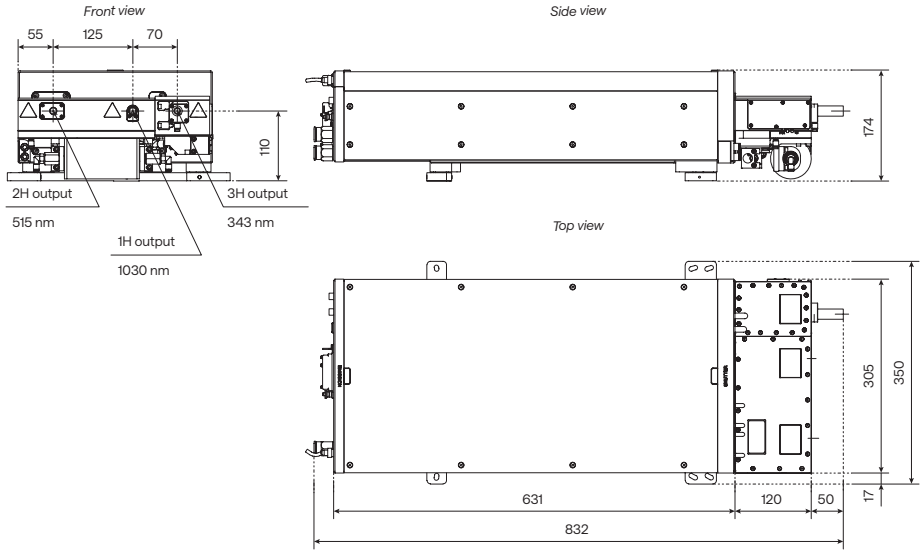







PHOTO TECHNICA www.phototechnica.co.jp フォトテクニカ株式会社
〒336-0017 埼玉県さいたま市南区南浦和 2-18-2
TEL:048-871-0067 FAX:048-871-0068
e-mail:voc@phototechnica.co.jp