

## Automated Harmonic Generators



CARBIDE-CB3 with 2H-3H

- 515 nm, 343 nm, 257 nm, or 206 nm output
- Automated harmonic selection
- Mounted directly on the laser head
- Industrial-grade design
- 50 W UV model

### Specifications

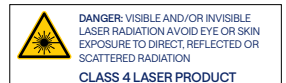
Model	2H	2H-3H	2H-4H	2H-5H	30W UV <sup>1)</sup>	50W UV <sup>1)</sup>
Output wavelength <sup>2)</sup> (automated selection)	1030 nm 515 nm	1030 nm 515 nm 343 nm	1030 nm 515 nm 257 nm	1030 nm 515 nm 206 nm	1030 nm 515 nm 343 nm	1030 nm 515 nm 343 nm
Pump pulse energy	20 – 2000 $\mu$ J	50 – 2000 $\mu$ J	20 – 2000 $\mu$ J	100 -1500 $\mu$ J	80 – 400 $\mu$ J	120 – 400 $\mu$ J
Pump pulse duration	< 300 fs				$\approx$ 500 fs	
Conversion efficiency / Output power	> 50% (2H)	> 50% (2H) > 25% (3H)	> 50% (2H) > 10% (4H) <sup>3)</sup>	> 50% (2H) > 5% (5H) <sup>4)</sup>	30 W (3H)	50 W (3H)
Beam quality, $M^2$ , typical values	$\leq$ 400 $\mu$ J pump	< 1.15 (2H) < 1.2 (3H)	< 1.15 (2H) n/a (4H)	n/a	< 1.3 (3H)	< 1.3 (3H)
	> 400 $\mu$ J pump	< 1.2 (2H) < 1.3 (3H)	< 1.2 (2H) n/a (4H)	n/a		

<sup>1)</sup> Refer to CARBIDE-CB3-UV for more details.

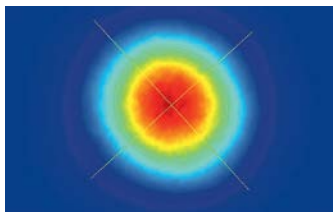
<sup>2)</sup> Depends on pump laser model. Up to 5th harmonic available; contact sales@lightcon.com for more details.

<sup>3)</sup> Maximum output power of 5 W. More than 4 W is available at 50 – 400  $\mu$ J pump energies and  $\approx$  500 fs pump pulse duration.

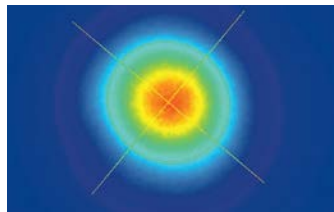
<sup>4)</sup> Maximum output power of 0.2 W.



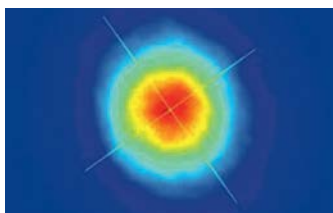
CARBIDE-CB5 (100 kHz, 6 W)  
Typical 1H beam profile



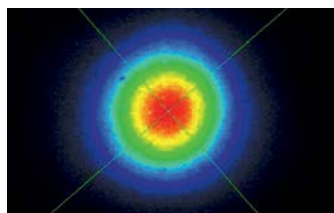
CARBIDE-CB5 (100 kHz, 3.4 W)  
Typical 2H beam profile



CARBIDE-CB5 (100 kHz, 2.2 W)  
Typical 3H beam profile



CARBIDE-CB5 (100 kHz, 100 mW)  
Typical 4H beam profile



CARBIDE-CB3-80W with HG  
Pulse energy vs repetition rate

