

## CW DUV single frequency laser

Best suited for the semiconductor inspection

266 nm

213 nm



Frequad-HP

Frequad-M

Frequad-C

### Product overview

CW 266 nm DUV Laser Frequad Series is composed of deep-ultraviolet (DUV) wavelength (266 nm) continuous wave (CW) single-frequency wavelength conversion lasers which have more than 20 years of history. Stable CW laser operation has been enabled by OXIDE's highly reliable wavelength-conversion crystals and precision voice coil motors (VCMs) achieved by proprietary high-speed servo-locking technology. According to the output desired, three types (Frequad-HP, Frequad-M, and Frequad-C) are available.



Frequad-W

Frequad-W is a newly introduced 213 nm wavelength model that generates stable and long-life CW laser operation enabled by the incorporated wavelength conversion crystals and the servo-locking technology developed with our 266 nm Frequad Series.

### Features

- **High damage threshold BBO wavelength conversion crystal**

The outstanding quality of OXIDE's own BBO crystal provides over 3000 hours single-spot lifetime at 1 W output power, and over 1000 hours at 2 W. Furthermore, the little deterioration of the crystal assures stable motion for a long period of time at high beam quality.



- **Highly sophisticated servo-lock technology**

OXIDE's unique high-speed, high-precision voice coil motor (VCM) servo actuator offers stable CW operation of laser.

- **Low power consumption**

The highly efficient wavelength conversion laser system realized extremely low power consumption – less than 340 W.

# OXIDE

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## Applications

- Semiconductor inspection
- Photoemission spectroscopy
- UV microscope
- UV Raman spectroscopy
- FBG writing



## Specifications

Model	Frequad-HP	Frequad-M	Frequad-C	Frequad-W
Product Image				
Wavelength	266 nm	266 nm	266 nm	213 nm
Output power	1 - 2 W	0.3 - 1 W	20 - 50 mW	10 mW
Linewidth	< 0.005 pm	< 0.005 pm	< 0.005 pm	< 0.005 pm
Extinction ratio	> 100:1	> 100:1	> 100:1	> 100:1
Beam quality	TEM <sub>00</sub> , M <sup>2</sup> < 1.2	TEM <sub>00</sub> , M <sup>2</sup> < 1.2	TEM <sub>00</sub> , M <sup>2</sup> < 1.3	TEM <sub>00</sub>
Polarization	Vertical, Linear	Vertical, Linear	Vertical, Linear	Vertical, Linear
Power supply	AC 100-240V, 50/60Hz	AC 100-240V, 50/60Hz	AC 100-240V, 50/60Hz	AC 100-240V, 50/60Hz
Power consumption	< 300 W	< 340 W	< 70 W	< 300 W
Cooling	Air	Water	Air	Air
Dimensions (Head)	240 x 840 x 160 mm	350 x 590 x 124 mm	153 x 202 x 79 mm	240 x 840 x 160 mm
Features, Options, etc.	<ul style="list-style-type: none"> <li>• Partial maintenance (UV unit, fundamental laser) are available</li> <li>• No water cooling</li> </ul>	<ul style="list-style-type: none"> <li>• Partial maintenance (UV unit, fundamental laser) are available</li> </ul>	<ul style="list-style-type: none"> <li>• No water cooling</li> <li>• No air purge</li> </ul>	<ul style="list-style-type: none"> <li>• Partial maintenance (UV unit, fundamental laser) are available</li> <li>• No water cooling</li> </ul>

We offer more options of CW DUV lasers of various wavelengths to meet your needs. Please feel free to contact us.

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