



海纳光学

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Frequad series

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



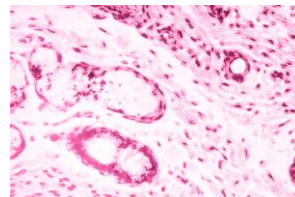
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Applications

- 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 ₀₀ , M ² < 1.2	TEM ₀₀ , M ² < 1.2	TEM ₀₀ , M ² < 1.3	TEM ₀₀
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">• Partial maintenance (UV unit, fundamental laser) are available• No water cooling	<ul style="list-style-type: none">• Partial maintenance (UV unit, fundamental laser) are available	<ul style="list-style-type: none">• No water cooling• No air purge	<ul style="list-style-type: none">• Partial maintenance (UV unit, fundamental laser) are available• No water cooling

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

