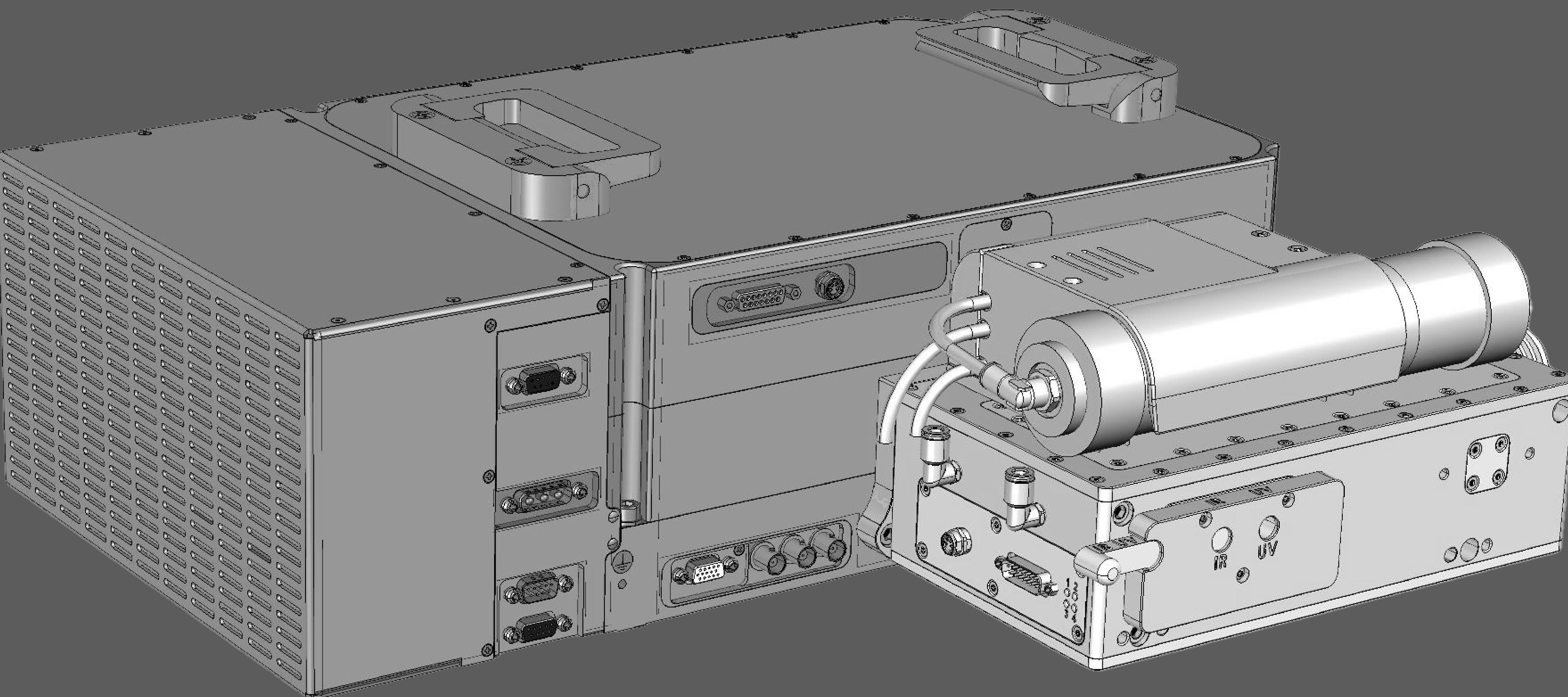


Origami 03XP-2P

Dual wavelength IR and UV femtosecond laser



Femtosecond IR and UV

Dual wavelength flexibility

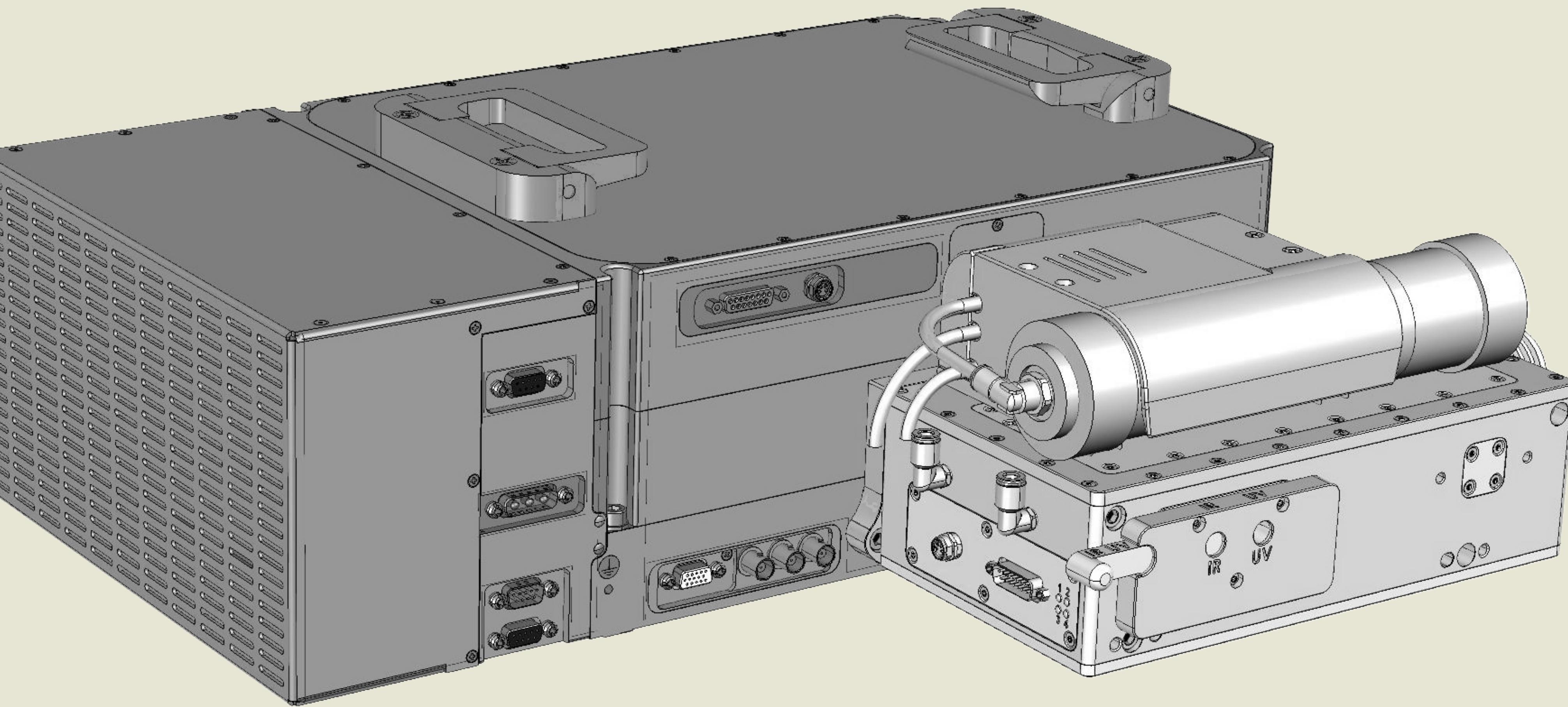
The ORIGAMI 03XP-2P and higher power 03XP-S-2P is a dual wavelength femtosecond laser, allowing computer-controlled, flexible switching between IR and UV wavelengths in one laser system.

Based on the highly successful ORIGAMI XP platform, the same advantages of clean, femtosecond pulse output, excellent beam quality together with unprecedented beam stability are obtained by virtue of the Optocage™ laser design.

Origami 03XP-2P

Applications

- Foil cutting**
- LCD patterning**
- OLED display repair**
- Flex PCB processing**
- Medical device manufacturing**



Reliable

Origami 03XP-2P

High reliability for industrial and medical applications

The ORIGAMI 03XP(-S)-2P has been designed with a focus on high reliability and unprecedented UV lifetime.

Easy availability of IR and UV wavelengths ensure the user can process a variety of materials with the Origami 03XP(-S)-2P.

The combination of multiple wavelengths together with clean femtosecond pulse output allows efficient processing of materials where low HAZ is essential.

Features

IR and UV selectable output

> 10,000 hours reliability

< 400 fs UV pulse duration

Single-shot or Pulse-on-demand

Excellent pointing stability

Superior beam quality

In-field replaceable purge system

Air or water cooled

Performance monitoring

On-board diagnostics

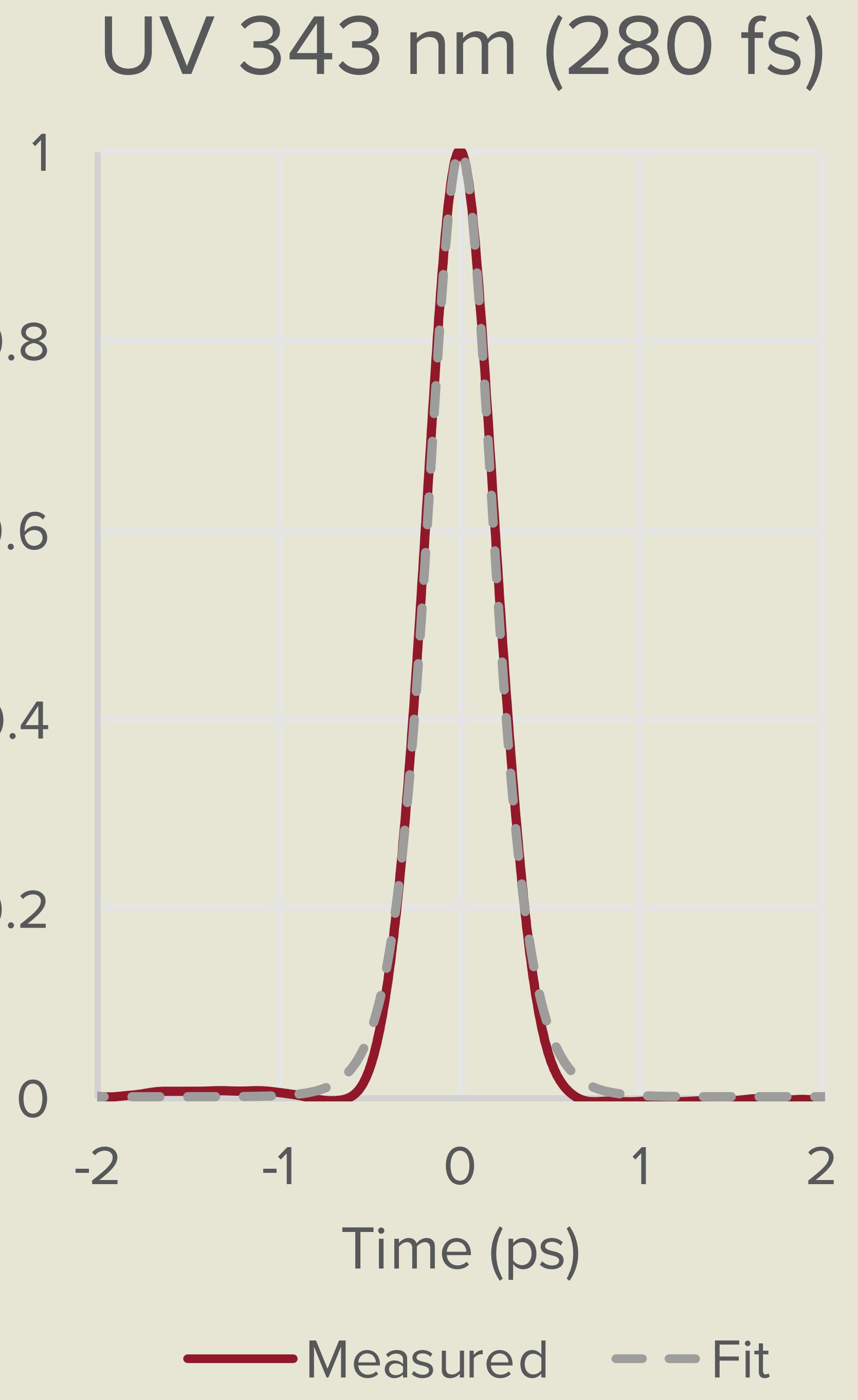
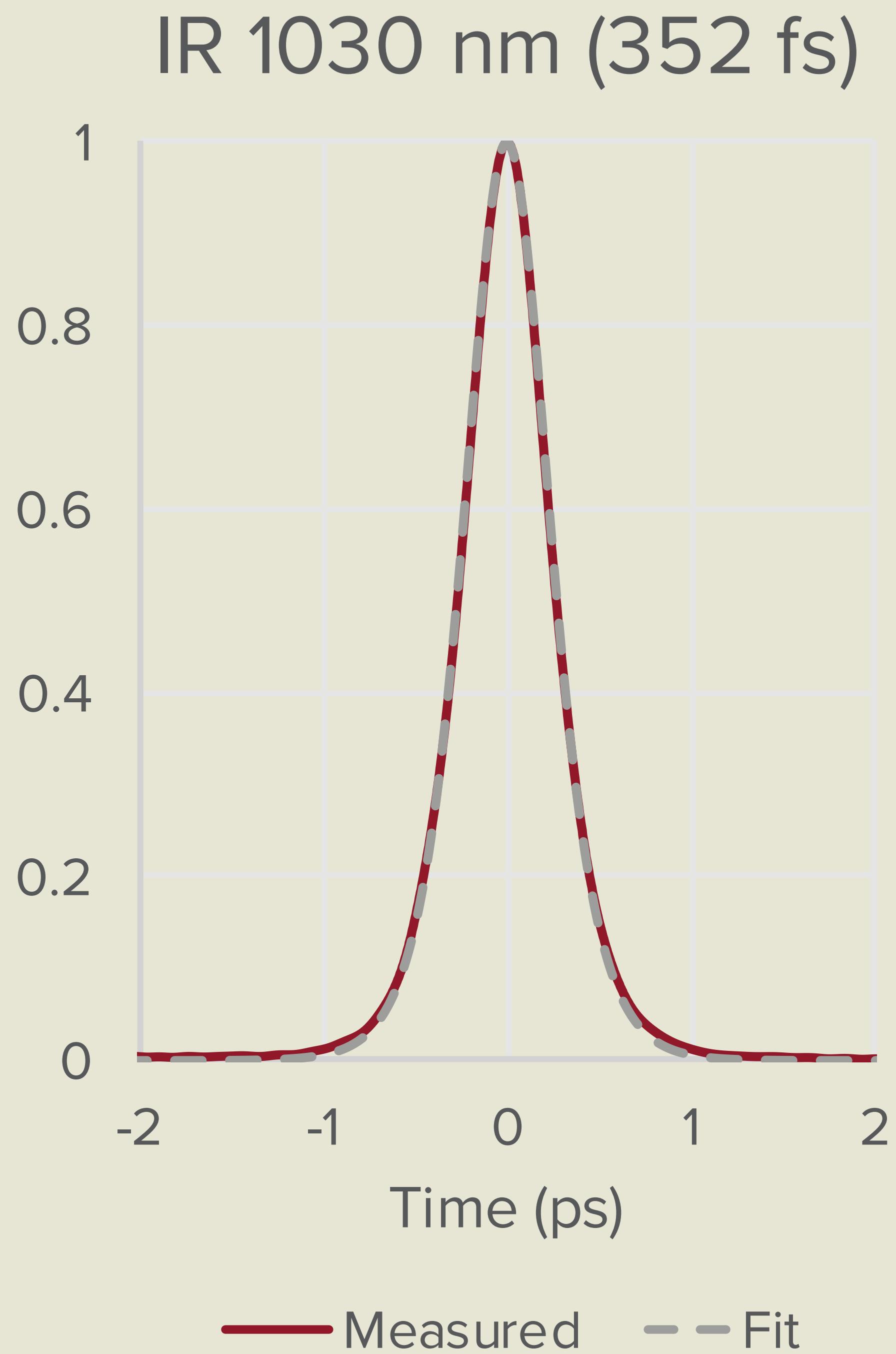
Ethernet communications

Performance

Origami
03XP-2P

Typical output pulse width

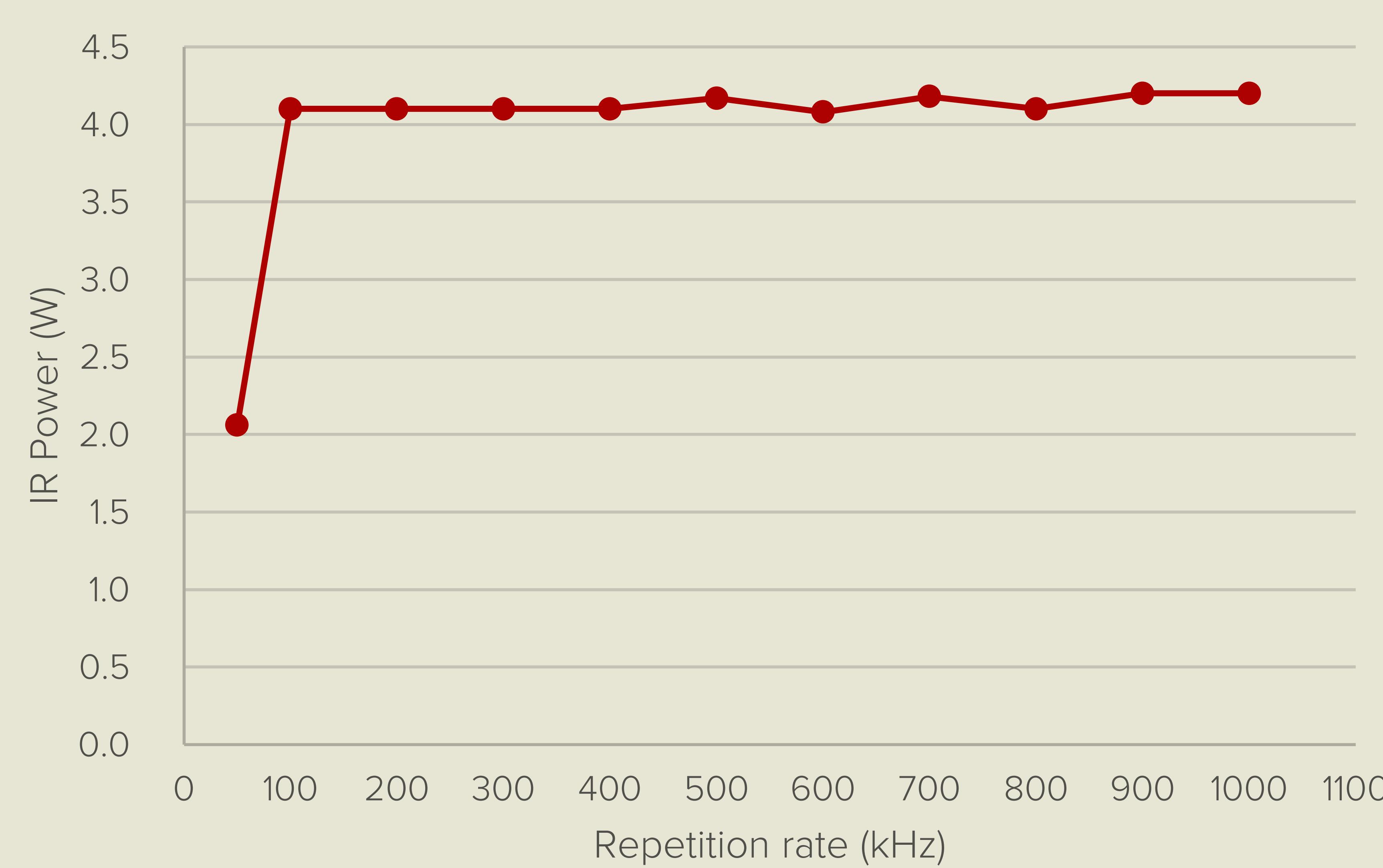
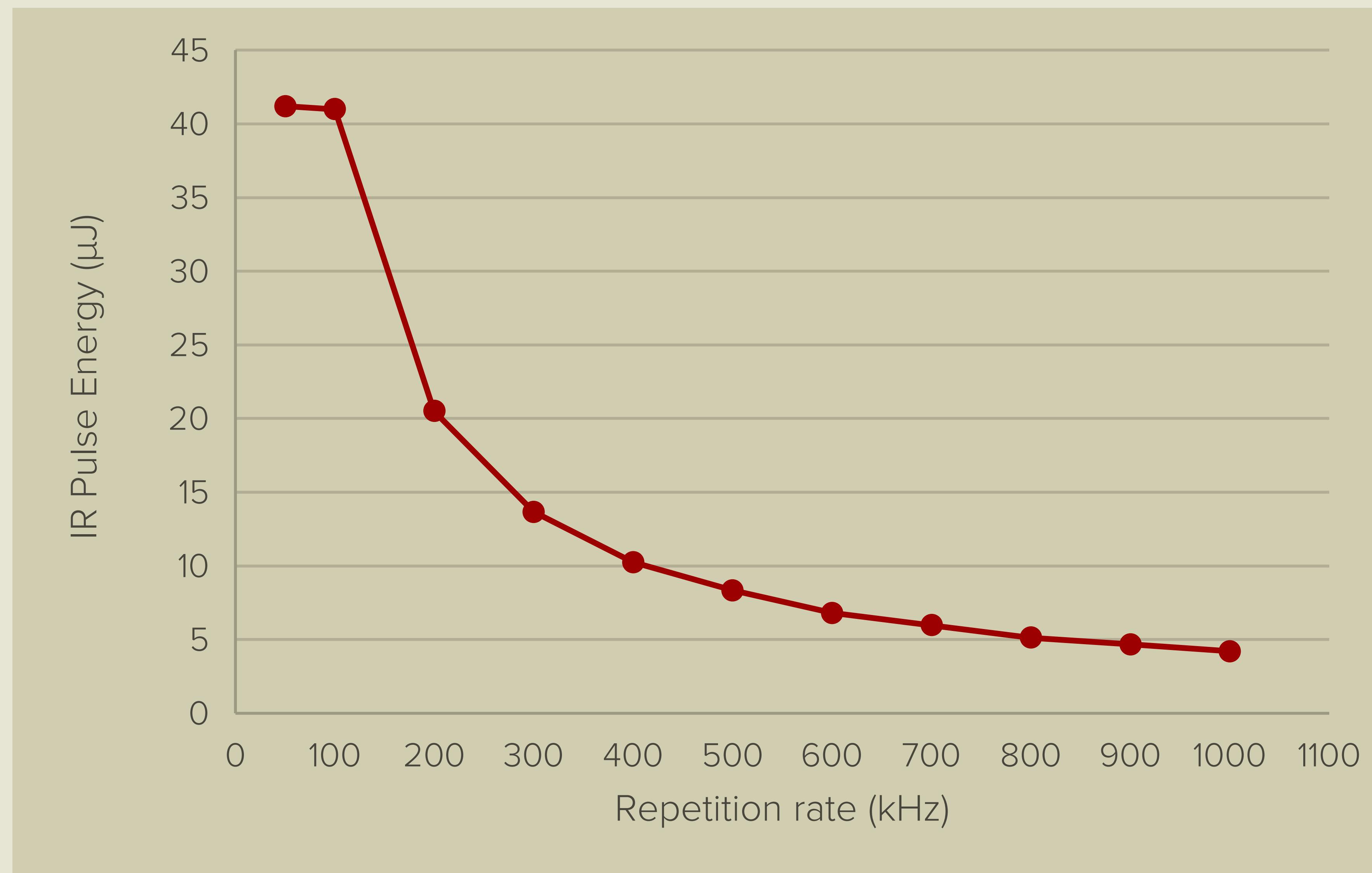
Typical clean output pulse traces from the 03XP-2P showing a close fit to ideal (Sech^2).



Performance

Origami
03XP-2P

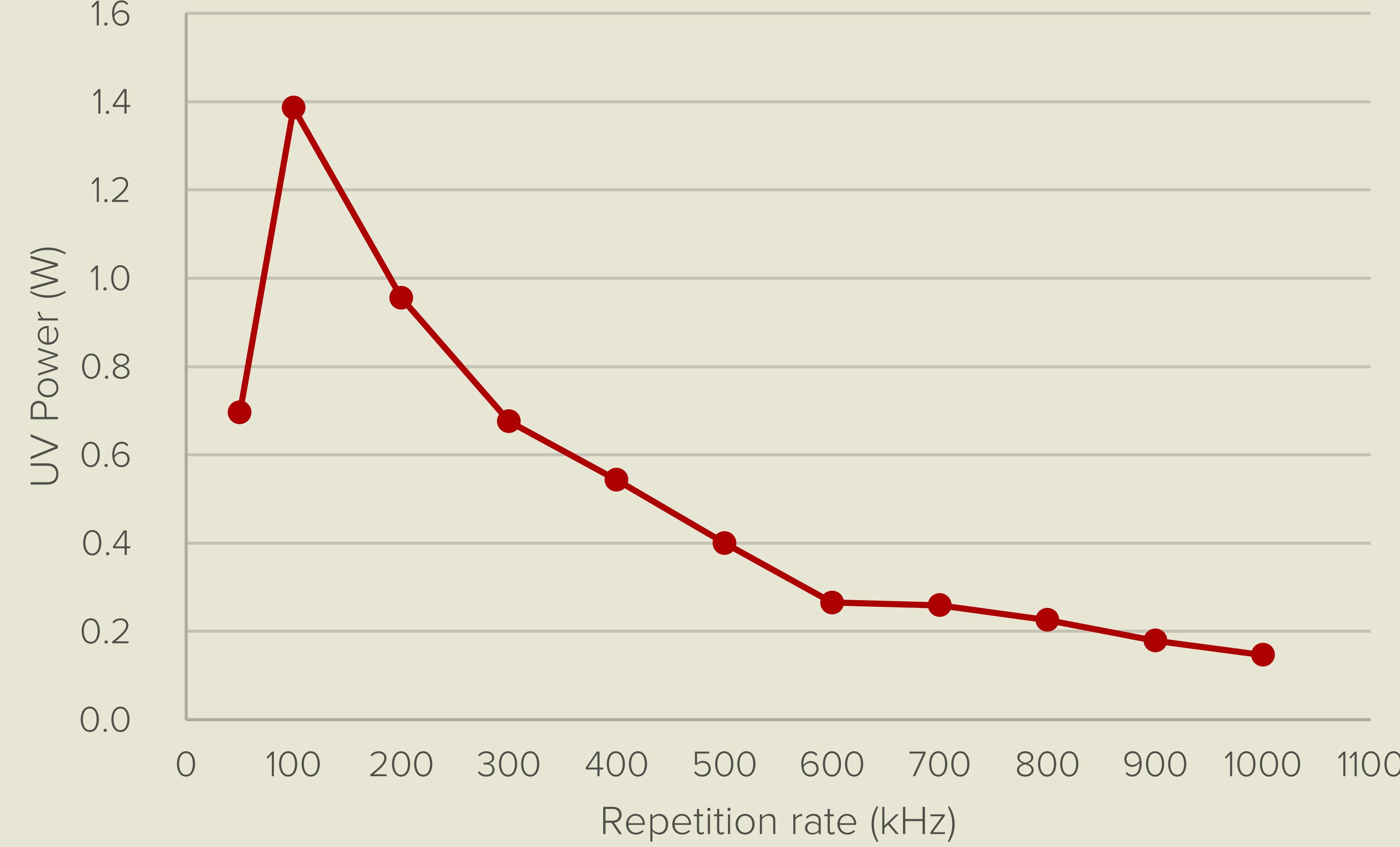
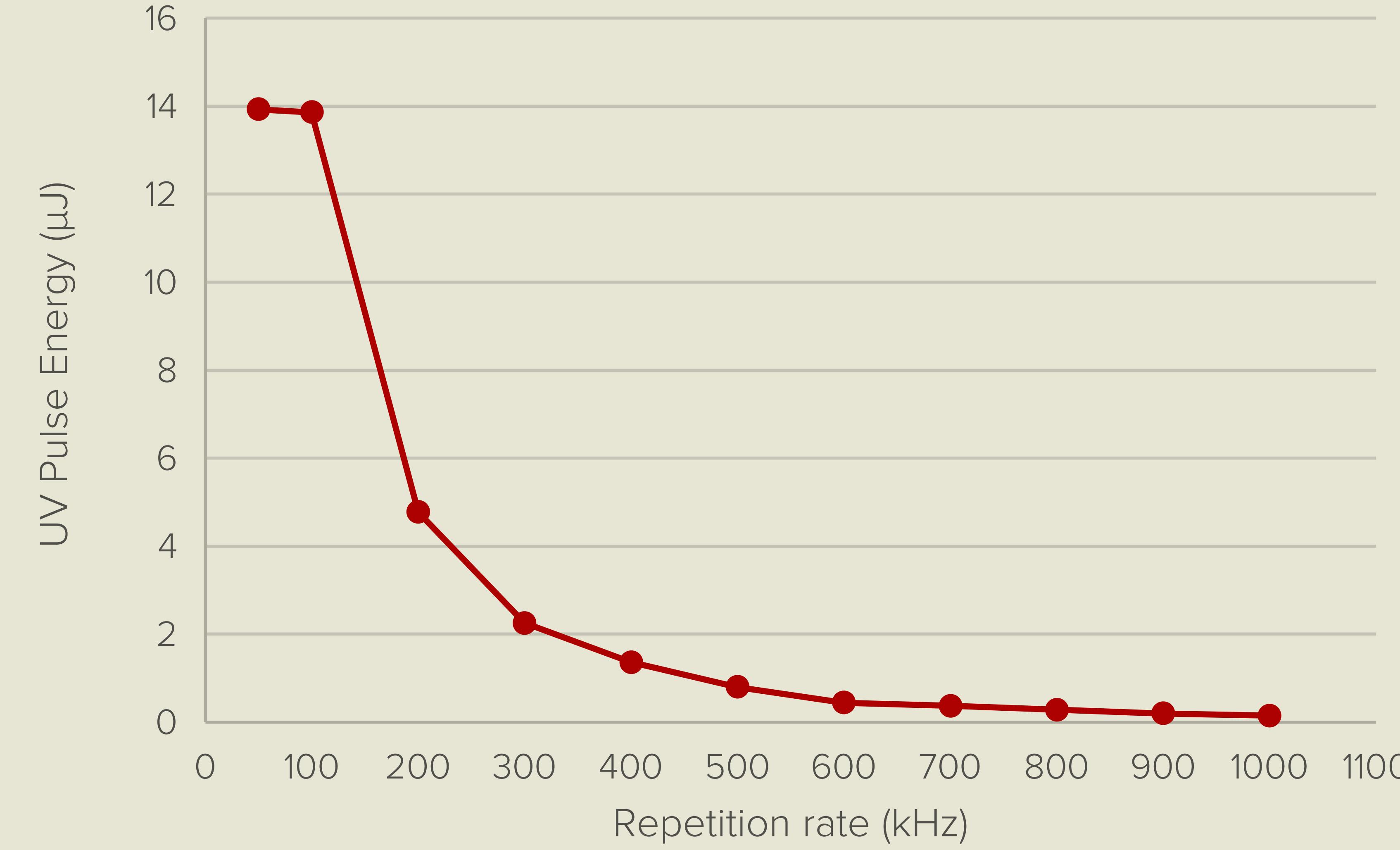
Typical 03XP-2P IR performance



Performance

Origami
03XP-2P

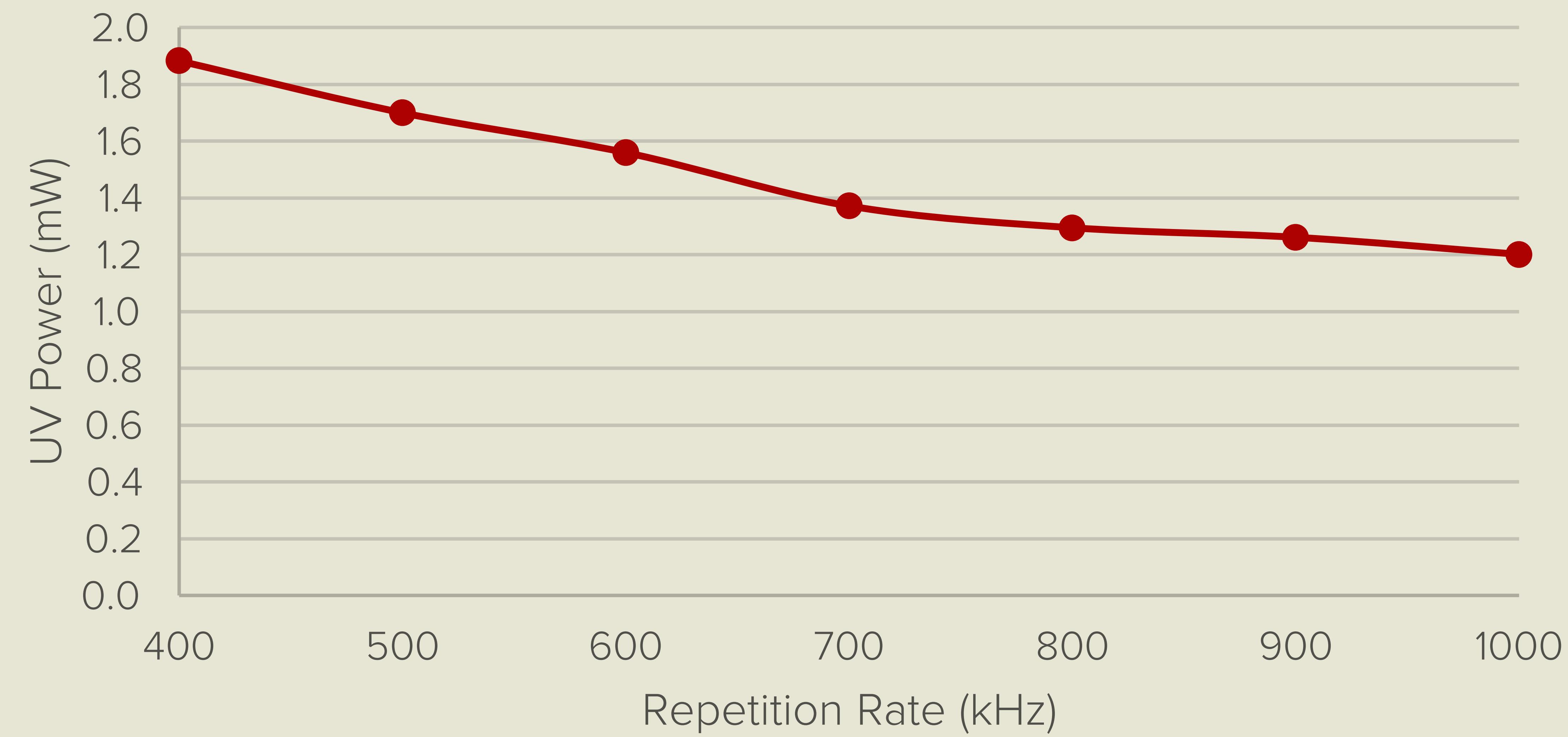
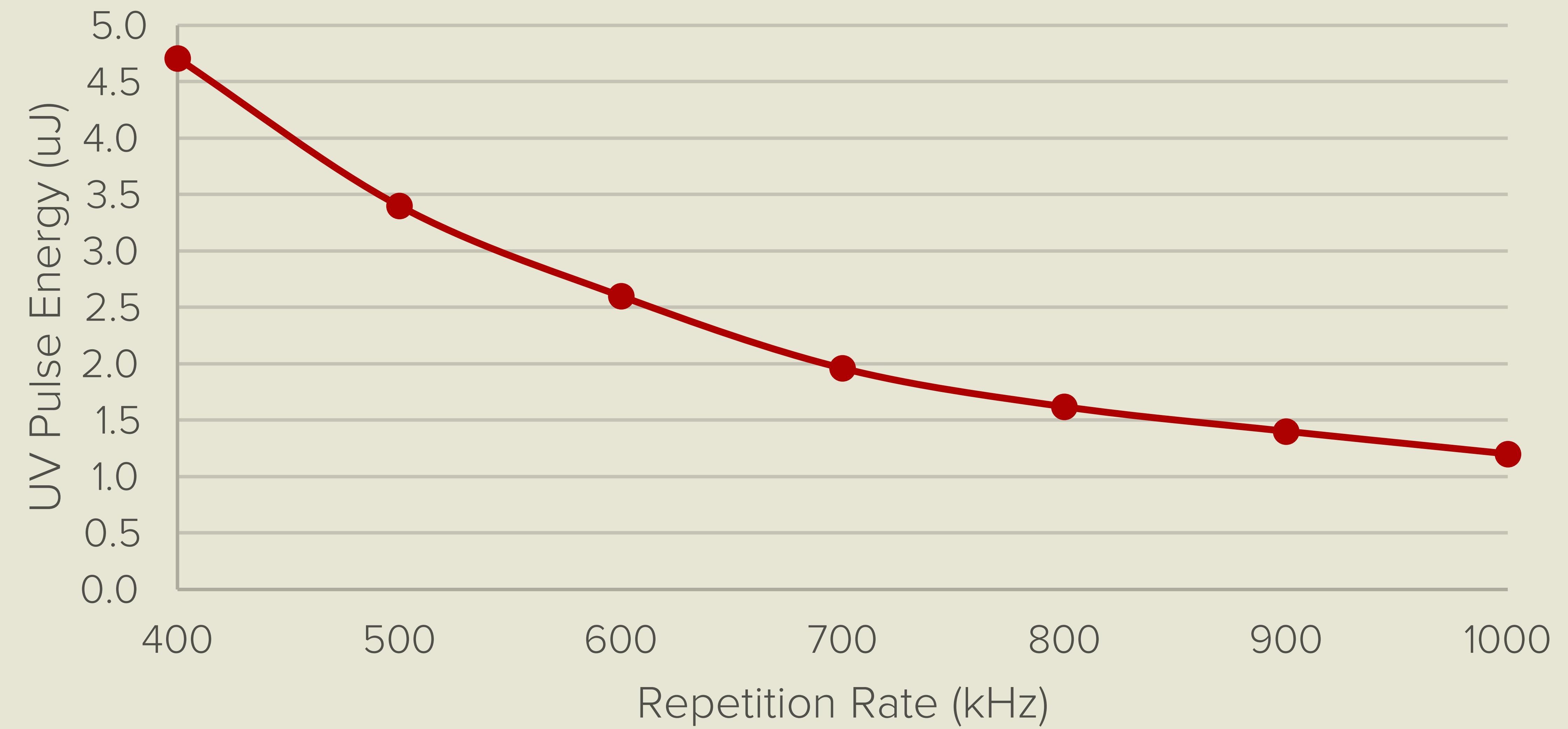
Typical 03XP-2P UV performance optimized for 100 kHz



Performance

Origami
03XP-2P

Typical 03XP-2P UV performance optimized for operation above 500 kHz



Specifications

Origami
03XP-2P

Optical

Model	10XP	03XP
Center wavelength [nm]	1030	343
Average Power [W]	> 4	> 1.2
Pulse duration [fs]	< 370	< 400
Pulse energy [μ J]	40	12
Peak power [MW]	> 80	> 30
Spectral bandwidth [nm]	< 7.5	< 1
Pulse selection options	Single-shot to 1 MHz, Pulse-on-demand	Single-shot to 1 MHz, Pulse-on-demand
Beam quality (TEM_{∞})	$M^2 \leq 1.2$	$M^2 \leq 1.3$
Polarization / PER (vertical) [dB]	> 22	> 20
Beam diameter [mm]	-	2
Power stability (RMS, 12h, constant temp) [%]	< 1	< 2
Ellipticity	< 1.1	< 1.2
Pulse-to-pulse stability (RMS) [%]	< 1	< 2
Pointing stability	< 30 μ rad rms (12h), constant temperature < 15 μ rad / °C 18 – 28 °C	< 30 μ rad rms (12h), constant temperature < 15 μ rad / °C 18 – 28 °C

Specifications

Origami
03XP-2P

Optical

Model	10XP-S	03XP-S
Center wavelength [nm]	1030	343
Average Power [W]	> 5	> 1.5
Pulse duration [fs]	< 370	< 400
Pulse energy [μ J]	70	20
Peak power [MW]	> 150	> 50
Spectral bandwidth [nm]	< 7.5	< 1
Pulse selection options	Single-shot to 1 MHz	Single-shot to 1 MHz
Beam quality (TEM_{∞})	$M^2 \leq 1.2$	$M^2 \leq 1.3$
Polarization / PER (vertical) [dB]	> 22	> 20
Beam diameter [mm]	-	2
Power stability (RMS, 12h, constant temp) [%]	< 1	< 2
Ellipticity	< 1.1	< 1.2
Pulse-to-pulse stability (RMS) [%]	< 1	< 2
Pointing stability	< 30 μ rad rms (12h), constant temperature < 15 μ rad / °C 18 – 28 °C	< 30 μ rad rms (12h), constant temperature < 15 μ rad / °C 18 – 28 °C

Specifications

Electrical/Mechanical

Laser output	Collimated free-space
Warm-up time [min.]	< 10 (warm start)
	< 30 (cold start)
Operation temperature [°C]	18 – 28
Storage temperature [°C]	-20 – 55
Power supply requirements	24 VDC/20A or 90-264 VAC, 47-63 Hz
Power consumption [W]	< 500
Laser head dimensions (WxHxD) [mm]	585.6 x 176 x 438.5
Power supply dimensions (WxHxD) [mm]	165 x 85 x 314
Laser head weight [kg]	33 kg (water-cooled)
	33 kg (air-cooled)
Cooling	Water or Air

Origami
03XP-2P

Support and warranty

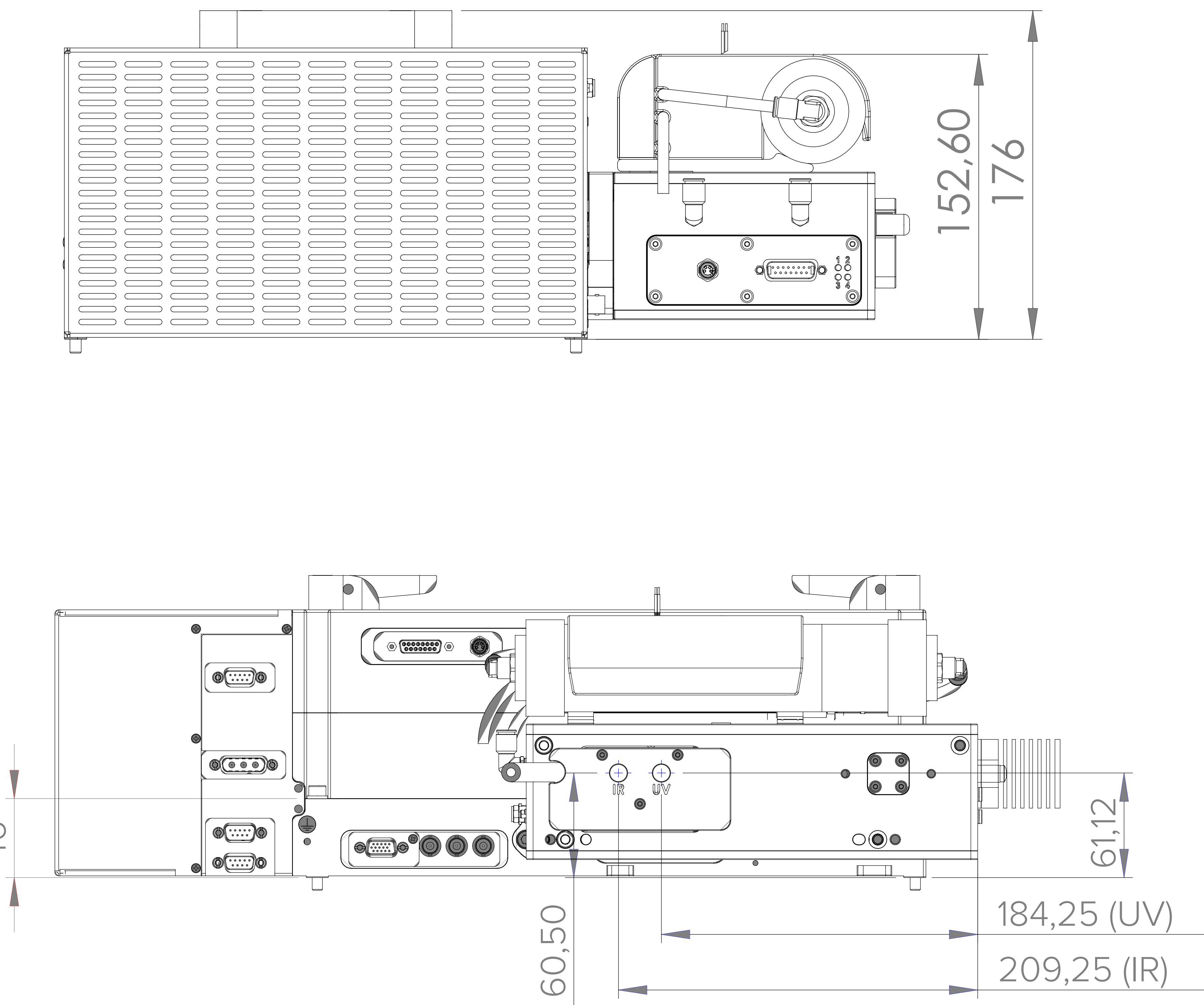
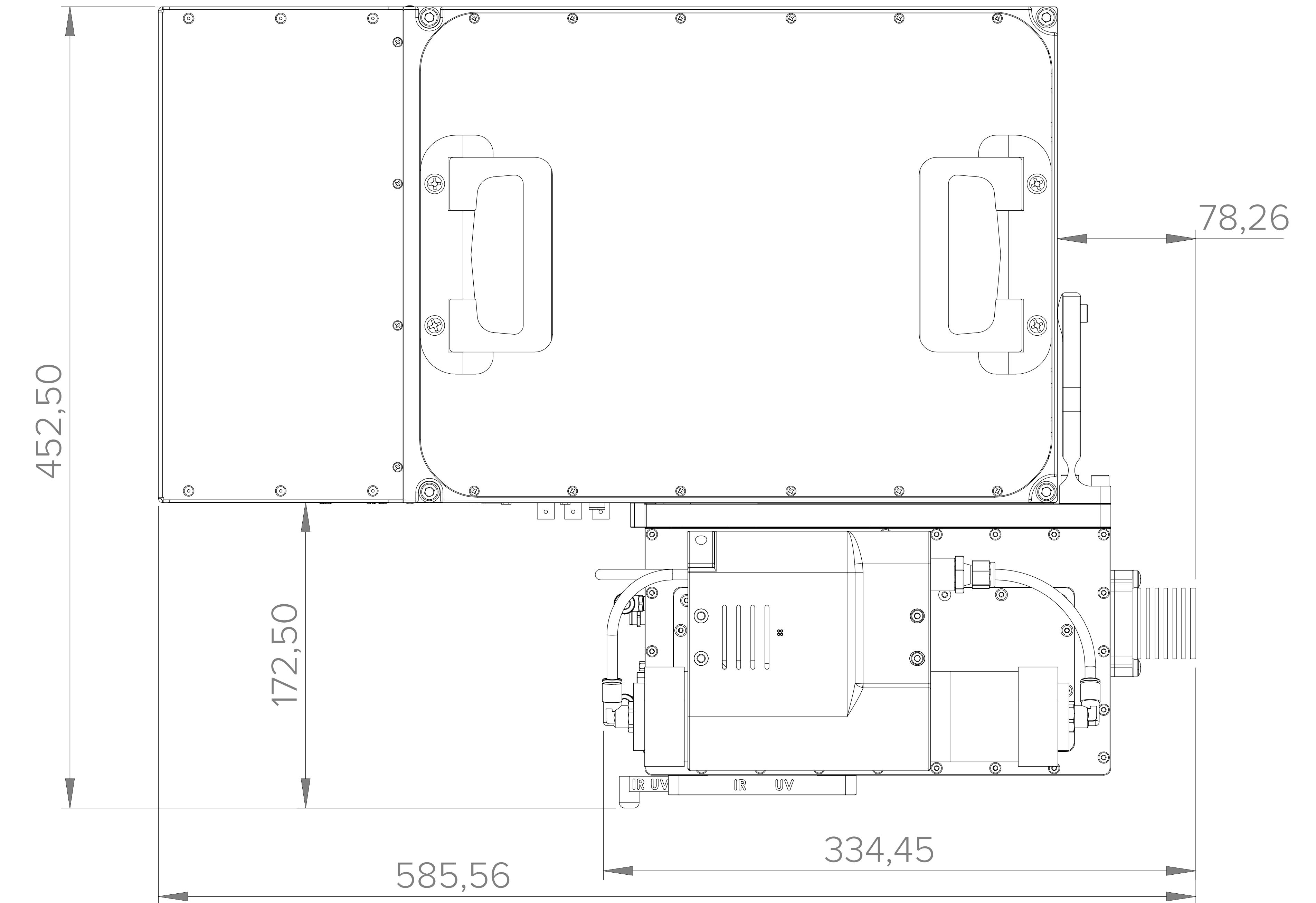
All ORIGAMI product come with an industry-leading reliability.

The product is covered by a comprehensive warranty.

Service options are available. For details, please enquire.

Mechanical Drawings

Origami
03XP-2P



All ORIGAMI products are produced under our quality management system certified in accordance with the ISO 9001:2015 and ISO 13485:2016 standard.



SOLUTIONS FOR INNOVATORS