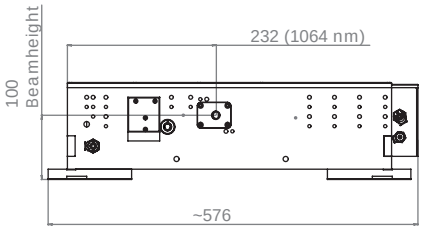
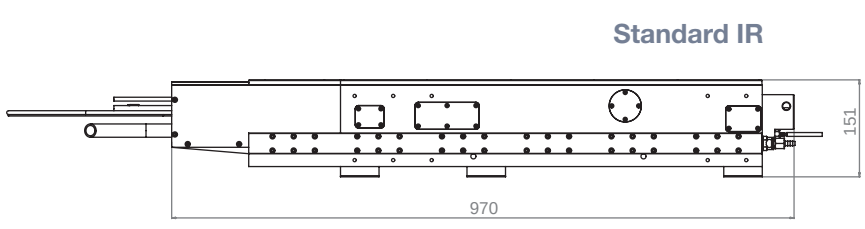
LUMERA LASER

HYPER RAPID 50

High Power Industrial Picosecond Laser

- 50 W @ 1064 nm and 2000 kHz
- Pulse on demand
- High beam quality M^2<1.5
- Burst mode
- Superior beam parameter and pointing stability across the complete PRF range
- Industry approved
- Low maintenance





光技術をサポートする
株式会社オプトサイエンス
http://www.optoscience.com

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Designed for industrial microprocessing the RAPID series of picosecond lasers offers a new level of precision and versatility.
Lasers of the RAPID series ablate any material with minimum thermal side effects, highest precision and with high reliability. With lateral resolution in the µm-range and a depth-control of roughly 10 nm these lasers are the perfect tools for your sophisticated applications.

Repetition rates up to 2 MHz allow for high throughput and cost efficiency in various industries like biomed, photovoltaics, semicon and automotive.
Long lifetime and low maintenance cycles in combination with service hotspots in Germany, USA and Hong Kong allow for 24/7 operation all over the world.

HYPER RAPID 50

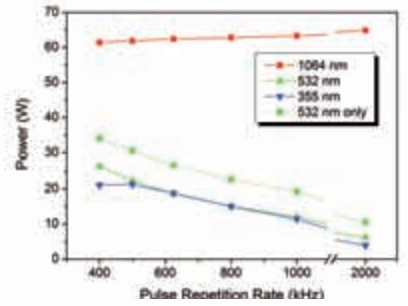
Specification

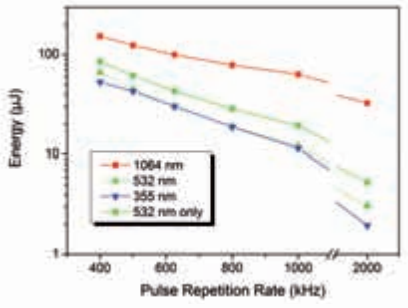
Repetition rate	Average power [W]			
[kHz]	1064 nm	532 nm only	355 nm	532 nm
400	50	25	16	20
500	50	23	16	16
800	50	17	11	11
1000	50	14	8	9
2000	50	8	3	5

Repetition rate	Pulse energy [µJ]			
[kHz]	1064 nm	532 nm only	355 nm	532 nm
400	125	63	40	50
500	100	46	32	32
800	63	21	14	14
1000	50	14	8	9
2000	25	4	2	3

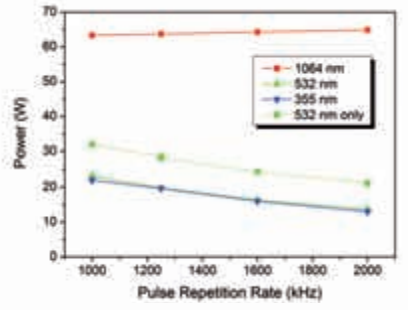
Wavelength	1064 nm (532 nm and 355 nm optional)
Pulse Repetition rate	400-1000 kHz (optional up to 2000 kHz)
Spatial mode	TEM00 (M^2 < 1.5)
Pulse duration	< 15 ps
Pulse-to-pulse energy stability	< 1% RMS at 1000kHz
Average power stability over 8 h	< 1% RMS at 1000kHz
Polarization ratio	>> 100 : 1
Beam divergence, full angle	< 1 mrad
Beam circularity	> 85%
Beam-pointing stability in full PRF range	< 50 µrad/°C
Electric supply	100-230 VAC/50-60Hz/2.5 kW
Beam diameter	~ 3000 µm at 1064 nm
Bore-sight accuracy	± 0.5 mm and < 5 mrad
Warm-up time	< 20 min from cold start

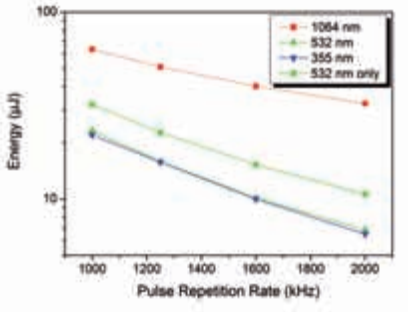
Typical Data





Standard





High RepRate Optimization

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