



IDOL Series

Diode laser pumped
Q-switched solid-state laser
Wavelengths 1342 nm, 671 nm and 447 nm

General description

The IDOL Series are high repetition rate solid-state diode pumped Q-switched lasers with the unique fundamental wavelength of 1342 nm. This allows the frequency conversion to powerful red and blue TEM₀₀ - mode laser radiation.

All lasers deliver < 13 ns short pulses with a superior beam quality. Due to their high pulse-to-pulse stability of and their sealed housing they are well suited for continuous 24/7 industrial use. The high repetition rate of up to 50 kHz provides a high throughput.

The IDOL 671-447 is a top selling product for Flat panel display (FPD) repair.

With a wavelength of 1342 nm, the IDOL 1342 is a perfect choice as a laser tool for silicon processing like stealth dicing or trimming of integrated circuits.

Applications

- Display repair
- Stealth dicing
- Wavelength sensitive processes
- Silicon processing
- Micro-machining

Optional

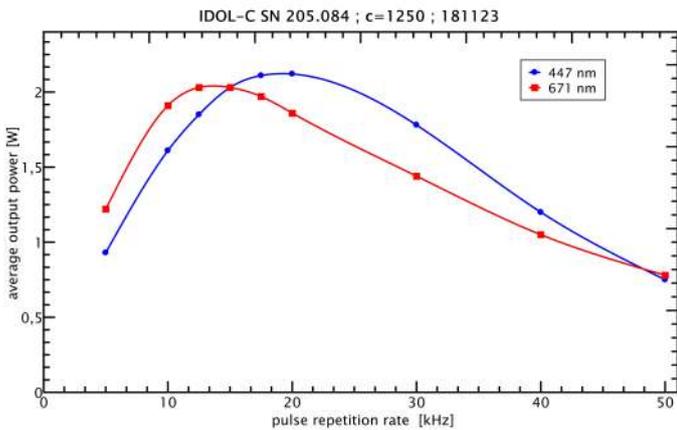
- Graphical user interface
- LabVIEW libraries
- Dual wavelength output
- Air-cooled version

Product specifications

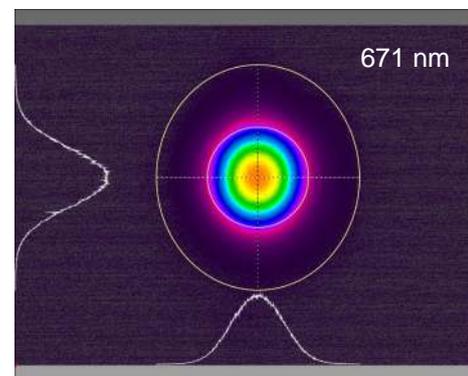
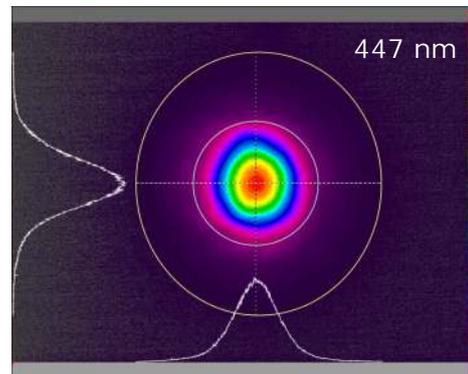
| Model | IDOL 1342 | IDOL 671 | IDOL 447 |
|------------------|-----------|----------|----------|
| Wavelength | 1342 nm | 671 nm | 447 nm |
| Average power | 4.5 W | 2 W | 1.5 W |
| Pulse duration | 12-16 ns | 10-12 ns | 11-13 ns |
| Energy per pulse | 300 µJ | 130 µJ | 100 µJ |
| Repetition rate | 1-50 kHz | 1-30 kHz | 1-30 kHz |
| M ² | < 1.2 | < 1.2 | < 1.3 |

* Data at 15 kHz pulse repetition rate. Specifications are subject to change without notice due to product improvement.

Typical performance

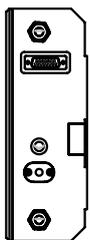


Typical beam profile

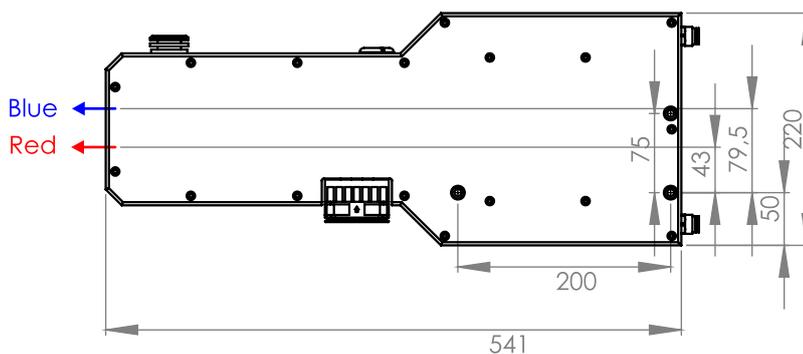


Dimensions laser head

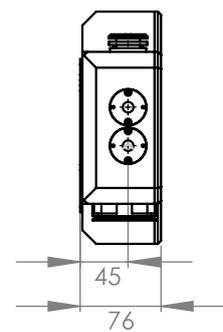
back view



top view



front view



System dimensions (L x W x H), weight

| | | |
|--------------|---------------------------------|---------|
| Laser head | 541 x 220 x 76 mm ³ | 12.2 kg |
| Power supply | 447 x 440 x 134 mm ³ | 18.0 kg |
| Chiller | 447 x 440 x 134 mm ³ | 12.0 kg |

Electrical characteristics

| | |
|-------------------|------------|
| Operating voltage | 85-264 VAC |
| Frequency | 47-63 Hz |
| Power consumption | 350 W typ |

Visible and/or invisible laser radiation. Avoid eye or skin exposure to direct or scattered radiation.
Class 4 laser (IEC 60825-1)



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