

Picosecond Micromachining Laser

precision and flexibility for optimized processes
full-featured, machine-ready system

Features

- Industrial rugged unibody design
- Simplified system integration
- Horizontal or vertical mounting
- Fully detachable umbilical
- Cost-effective, on-site maintenance
- High productivity:
Widest range of repetition rates
Fast A/D modulation capabilities
FlexBurst™ technology



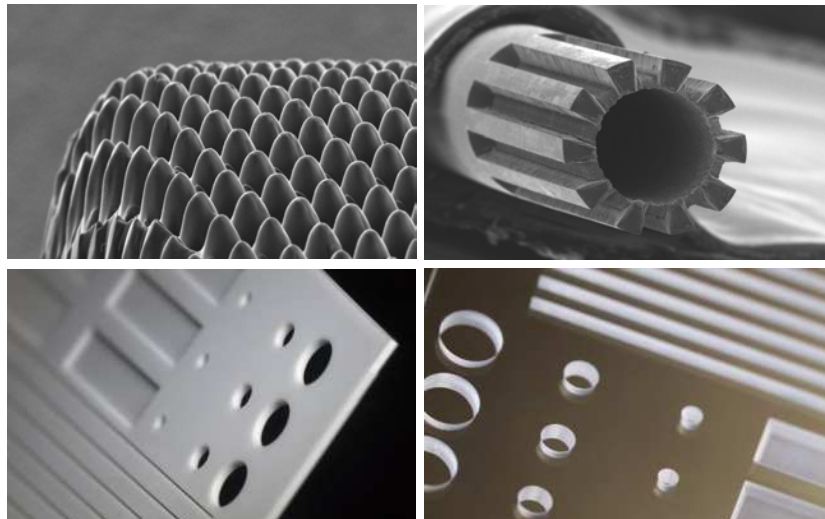
Options

- Green 532 nm, UV 355 nm, auto-switching or fixed
- Lower power, lower cost configurations
- High pulse energy
- Super-sync for high speed linescanners
- Safety shutter
- Customized umbilical length

up to 50 W **output power**
single shot to 8 MHz **repetition rate**
up to 200 µJ **pulse energy**
10 ps **pulse width**
20 MW **peak power**
1064 nm **wavelength**
< 1.3 **M² (TEM₀₀)**

Applications

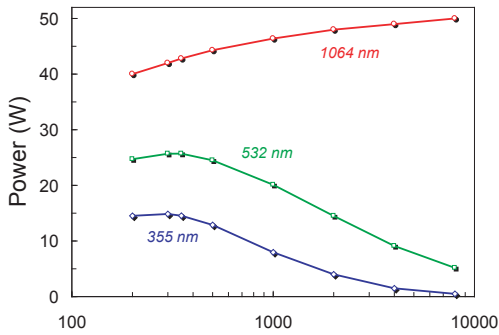
- High speed precision micromachining
- Glass cutting, welding, scribing
- Hard material processing
diamond, sapphire, carbide, CVD
- Semiconductor processing
- Drilling
- Selective thin film ablation
- And much more - please inquire



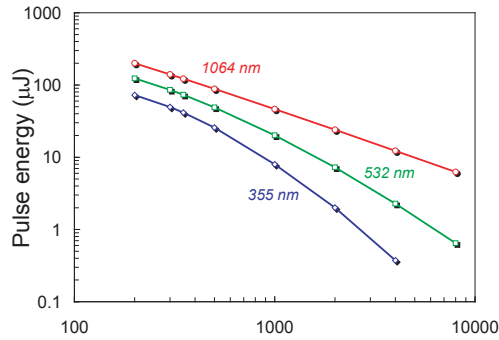
Industrial Ultrafast Lasers

Designed for maximum process speed, the PicoBlade provides a versatile tool to process virtually any material with highest precision and reliability. Most other picosecond lasers have fixed pulse energies that are too high for most applications and are only adjustable by reducing the average power. This results in poor production throughput, even for high power laser systems.

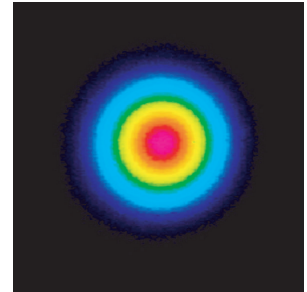
In contrast, the PicoBlade allows adjusting the pulse energy to the value required by *your* specific application, at full average power and therefore maximum process speed. Don't let the laser limit your process - use the most flexible picosecond laser available today!



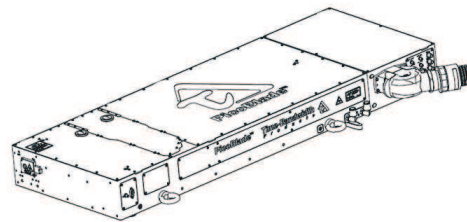
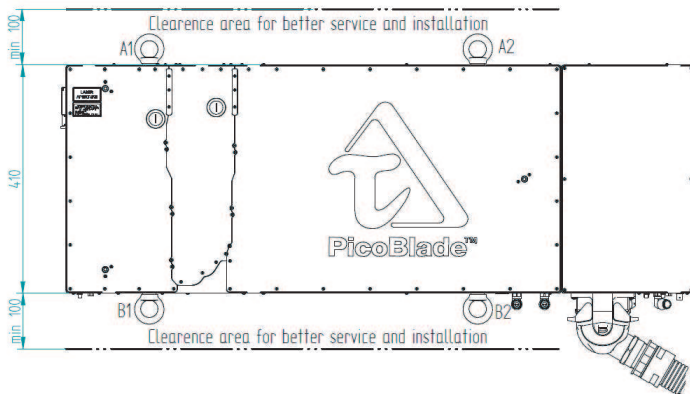
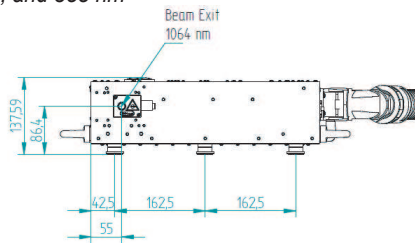
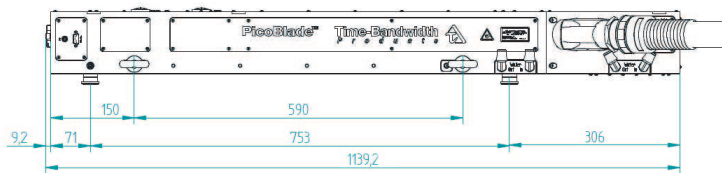
Typical power versus repetition rate for 1064 nm, 532 nm, and 355 nm



Typical pulse energy versus repetition rate for 1064 nm, 532 nm, and 355 nm



Output beam profile



Additional data	PicoBlade
turn-on time	< 15 min
pulse energy stability (>1kHz)	< 0.5% rms
voltage	100VAC – 240VAC, single phase
frequency	50 Hz – 60Hz
input power (single phase)	2100 VA
laser head (size, weight)	1139 mm x 138 mm x 410mm, 80 kg
power supply (size, weight)	435 mm x 139 mm (3 HU) x 483 mm (19"), 13 kg
chiller (size, weight)	640 mm x 267 mm (6 HU) x 483 mm (19"), 42 kg



The PicoBlade platform and our strong product team enables us to also offer custom performance specifications. Please discuss your application requirements and we will work with you to provide an optimized solution.

All specifications are subject to change without notice. All numbers given in this datasheet are typical values and may depend on the specific laser configuration. This product is protected by one or several of the following patents: US7,386,019, US6,466,604, EP1,905,140

Application pictures courtesy of Lightmotif (www.lightmotif.nl)