X-LASE SERIES

INDUSTRIAL PICOSECOND FIBER LASERS
X-LASE 24-6
PRECISE ABLATION WITH SPEED

COLD ABLATION
The X-LASE 24-6’s picosecond pulses with high peak power enable cold ablation process where workpieces are processed with minimal thermal load.

ALL-FIBER DESIGN
Corelase’s all-fiber technology enables following features: rugged industrial design, delivery fiber and compact size. Easy integration makes X-LASE 24-6 a perfect tool for high precision micromachining.

INCREASED PRODUCTIVITY
X-LASE 24-6’s high repetition rates (up to 4MHz), high average power and outstanding beam quality offer market leading combination of high process speeds, productivity and yield for high value-added processing for solar cells, semiconductors, electronics and displays.

SPECIFICATIONS
CONTROL, LASER AND COOLING UNIT:
- Average power (measured at collimated beam): 24 W (max)
- Pulse energy (measured at collimated beam): 6 μJ (max)
- Average pulse energy stability: < 5% (measured over 12 hours)
- Pulse width: 20-30 ps, 50% level
- Repetition rates: 1,2,3 and 4 MHz
- Center wavelength: 1060 ± 20 nm
- Polarization: Random
- Beam quality M² (collimated beam): < 1.4 (Typically 1.2)
- Operating voltage and frequency: 196–240 VAC, 50/60Hz
- Physical dimensions of control and laser unit: 19”/5HU/463 mm
- Weight of control and laser unit: ~ 22 kg
- Physical dimensions of processing head: 189 mm x 500 mm x 155 mm (wlh)
- Weight of processing head: ~ 16 kg
- Delivery cable (control unit to processing head) length: 2 m
- Computer interface: Ethernet, RS232
- Cooling of pump lasers: Water

OPTIONS
- Microspot optics
- Autofocusing
- Burst mode

APPLICATIONS
- LOW-K GROOVING
- AI ON PET ABLATION
- PLATINUM CUTTING
- SiN ABLATION

X-LASE CoreScriber
PROCESSING EXCELLENCE FOR TRANSPARENT MATERIALS

PATENED PROCESSES
X-LASE CoreScriber is a picosecond pulsed fiber laser designed specifically for Corelase’s two revolutionary process innovations: CoreScribe™ and CoreBond™. Corelase is actively developing laser processes, like CoreScribe™ for scribing transparent materials and CoreBond™ for welding transparent materials.

SPECIFICATIONS
CONTROL, LASER AND COOLING UNIT:
- Average power (measured at collimated beam): 24 W (max)
- Pulse energy (measured at collimated beam): 6 μJ (max)
- Average pulse energy stability: < 5% (measured over 12 hours)
- Pulse width: 20–30 ps, 50% level
- Repetition rates: 4, 6, 8 and 10 MHz
- Center wavelength: 1060 ± 20 mm
- Polarization: Random
- Beam quality M² (collimated beam): < 1.4 (Typically 1.2)
- Operating voltage and frequency: 196–240 VAC, 50/60Hz
- Physical dimensions of control and laser unit: 19”/5HU/463 mm
- Weight of control and laser unit: ~ 22 kg
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OPTIONS
- Microspot optics
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- Burst mode

APPLICATIONS
- GLASS SCRIBING
- GLASS-METAL-GLASS WELDING
- SAPPHIRE SCRIBING
- GLASS-WELDING

SUPERIOR THROUGHPUT
CoreScriber’s high repetition rates (up to 10MHz) enable market leading processing speeds. For example X-LASE CoreScriber with Core-Scribe™ process enables to increase your sapphire scribing throughput at least by 50% compared to any other method.

EXCELLENT QUALITY
Picosecond pulses combined with patented CoreScribe™ and CoreBond™ processes enable high quality processing, which increases your yields. Valuable benefit when trying to decrease the manufacturing costs of for example MEMS or LED devices.
X-LASE SERIES

APPLICATIONS
• Transparent material scribing
• Transparent material welding
• Thin film patterning/ablation
• Cutting
• Drilling
• Optical, hard and decorative coatings

BENEFITS
• Patented processes
• Excellent quality
• Superior throughput
• Cold ablation
• Robust for industrial use
• Increased productivity

FEATURES
• All-fiber design
• Scalable output power up to 24 W
• Wide range of repetition rates up to 10 MHz
• Ultra short pulse length, 20–30ps
• Single mode (typical $M^2 = 1.2$)
• Fiber delivery