

U.S. Laser Corporation

825 Windham Court North

Wyckoff, NJ 07481

T: 201-848-9200

F: 201-848-9006

W: www.uslasercorp.com

U.S. LASER
CORPORATION

U.S. Laser Corporation

- History
- Employees & Suppliers
- Customers
- Products & Services
- Design Philosophies



U.S. Laser Corporation

At Forefront of Lasers Materials Processing

- Founded in 1979 over 35+ years under Constant Ownership
- Principles: Robert Regna and Carl Miller
 - Previously with Holobeam Laser
 - Engineering and Applications Oriented
 - Engaged in Daily Engineering and Management of the Company

U.S. LASER
CORPORATION

U.S. Laser Corporation

Evolution

- Started as a Laser Systems Company
 - Industrial material processing
 - Production and R&D systems
 - Integrated solid state lasers
 - Nd:YAG
 - Nd:YVO4
 - Integrated Gas Lasers
 - Argon
 - Carbon Dioxide



U.S. Laser Corporation

- Has become More Vertically Integrated
 - Design and manufacture Nd:YAG lasers since 1986
 - CW, Pulsed, Q-switched, TEM₀₀, High Power Multimode, Diode pumped Solid State
 - 2nd, 3rd, and 4th Harmonics
 - Design optics, opto-mechanical accessories, structures, laser and specialty electronics

U.S. LASER
CORPORATION

U.S. Laser Corporation

- Employees
 - 18 employees
 - 75% with USL for >5 Years (50% for >10 Years)
 - 75% involved with Engineering or Manufacturing
- Suppliers
 - Network of Local Machine Shops and Optical Fabrication Houses
 - Motion Control Specialists



U.S. Laser Corporation

Customers

- Leading Manufacturers in Key Industries
 - Semiconductor
 - IBM, Hughes, Northrup Grumman, Powerex, Watkins Johnson
 - Electronics
 - AMP, Allied Signal, AT&T, GE, Lockheed Martin, COTO, Nanosys
 - Automotive/Aerospace
 - CTS, Kelsey Hayes, United Technologies, Honeywell, Boeing, Emerson
 - Specialty Materials
 - 3m, AK Steel, BP Solar, Morgan Electronics, APEX Solar, DOW, ISET, Solexant, Leach, Aerius



U.S. Laser Corporation

Customers

- Governmental and University Labs
 - Argonne, CalTech, JPL, Johns Hopkins, NASA, NIST, NREL, Sandia, University of Texas, Lawrence Berkeley, Ohio State, University of Kansas, Brookhaven, University of Delaware, ARL, Kirtland AFB, Phase I & II SBIR projects.
- Laser Job Shops and Development Companies
 - Innovative Fusion, Metal Components, Midwest Cutting Tool, Philips, Meier Tool, Ferry machine



U.S. Laser Corporation

Products & Services

- Configurations
 - Free Standing Fully Integrated
 - Bench top
 - Custom
- Environment
 - Production
 - R&D
 - Mobile
 - Clean Room

U.S. LASER
CORPORATION

U.S. Laser Corporation

Products & Services

- Applications
 - Micromachining
 - Welding
 - Cutting
 - Soldering
 - Resistor Trimming
 - Marking
 - Scribing
 - Solar Cell Processing
 - Other Custom Specials

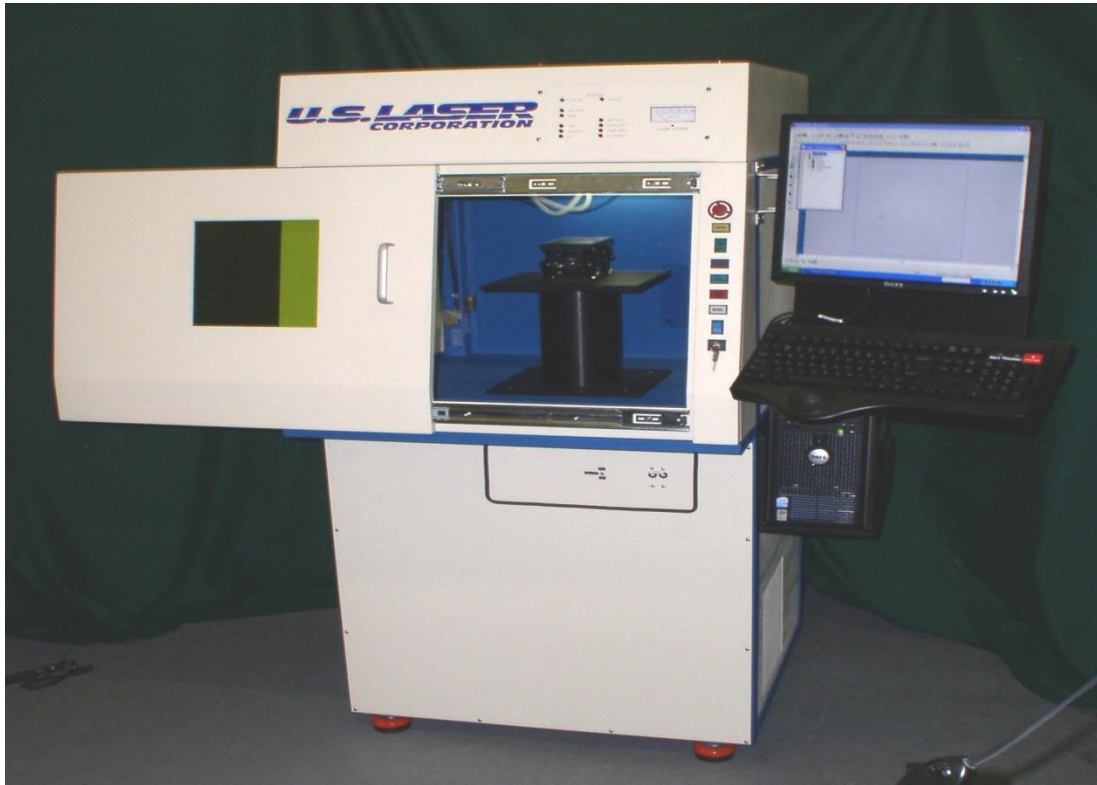
U.S. LASER
CORPORATION

U.S. Laser Corporation



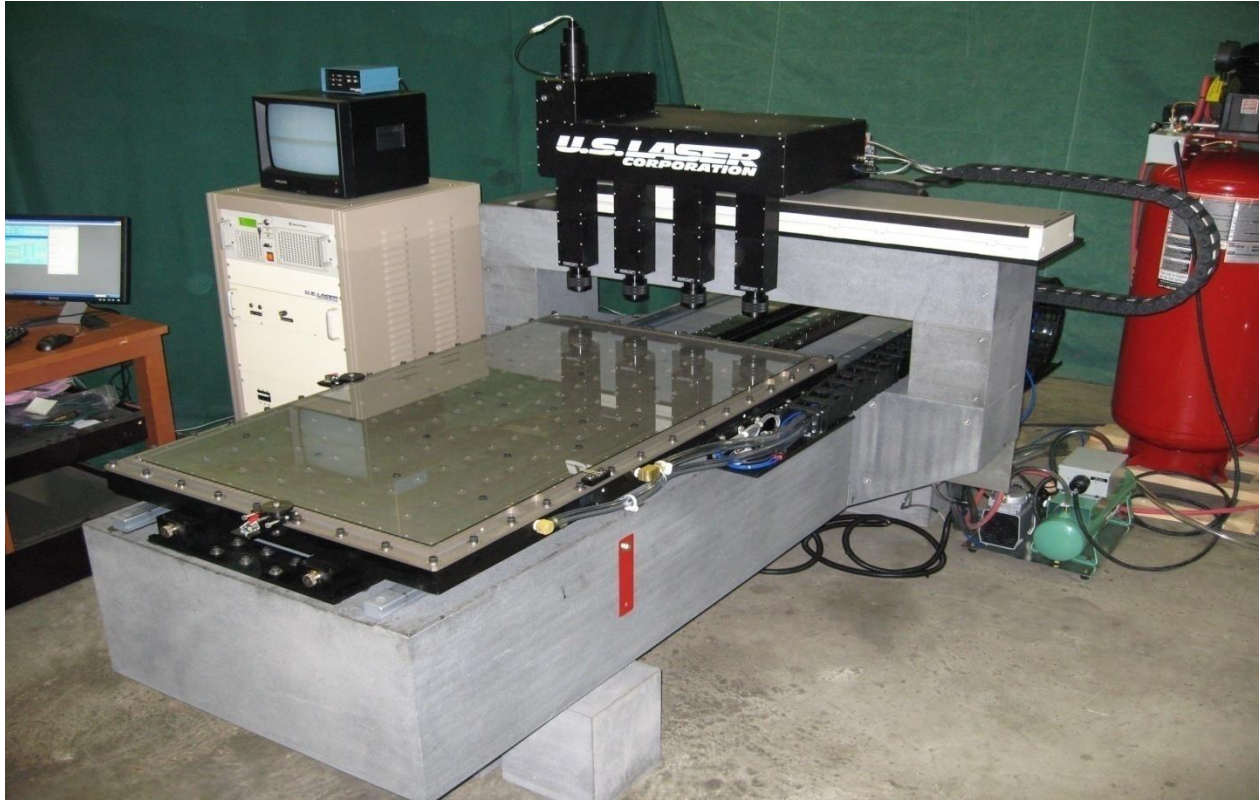
U.S. LASER
CORPORATION

U.S. Laser Corporation



U.S. LASER
CORPORATION

U.S. Laser Corporation



U.S. LASER
CORPORATION

U.S. Laser Corporation

Products & Services

- ND:YAG lasers
 - CW
 - TEM₀₀ to >20 Watts
 - Lamp and Diode pumped
 - Multimode up to 2400 Watts
 - Low Divergence High Brightness Configurations
 - Q-Switched
 - Up to 60 mj/pulse, 500 watts
 - Pulsed
 - Up to 400 Watts Average Power
 - Up to 80 j/pulse
 - Electronic pulse width and rate control

U.S. LASER
CORPORATION

U.S. Laser Corporation

Products & Services

- Beam Delivery Systems
 - Conventional
 - Integrated Coaxial CCTV Viewing
 - Achromatic, Diffraction Limited Lenses for Optimum Resolution
 - Working Distances from 25 mm to 200 mm
 - Independent Control of Spot Size and Viewing Magnification
 - Custom Multibeam Configurations

U.S. LASER
CORPORATION

U.S. Laser Corporation

Products & Services

– Fiber Optic

- Low Loss (>98% Transmission)
- High Power Capability (>2000 Watts)
- Available for CW, Q-Switched, and Pulsed Lasers
- Beam Shaping Capability
- Flexibility in Spot Size and working Distance
- Coaxial CCTV Viewing Available



U.S. Laser Corporation

Products & Services

Galvanometer

- Computer controlled marking/engraving
- Marking Software for alpha-numeric characters and logos
- Several marking/engraving fields available
 - 4" x 4" / 6" x 6" / 12" x 12"



U.S. Laser Corporation

Products & Services

- Applications laboratory
 - Staffed with Experienced Personnel
 - Equipped with Full Line of USL Lasers
 - Available for Sample Evaluation and Process Development

U.S. LASER
CORPORATION

U.S. Laser Corporation

Products & Services

- Comprehensive Support for US Laser Systems
 - Field Service
 - Customer Training
 - Spares Parts and Accessories
 - Upgrades

U.S. LASER
CORPORATION

U.S. Laser Corporation

Products & Services

- Spare Parts and Repairs for Solid State Lasers
 - Lamps, Flow Tubes, Mirrors, Shutters
 - Power Supply and Electronic Repair
 - Retrofits and Upgrades

U.S. LASER
CORPORATION

U.S. Laser Corporation

Design Philosophies

- Design Best Solution to meet Requirements
- Select Best Building Blocks for the Specific Application
 - Laser
 - CW, Q-Switched, pulsed
 - Nd:YAG, YVO4, Fiber
 - Beam Delivery Optics
 - Conventional
 - Fiber
 - Galvanometer

U.S. LASER
CORPORATION

U.S. Laser Corporation

Design Philosophies

- Motion
 - XY Table
 - Z motion
 - Spindle
 - Rotary
 - Other
- Frame Structure
 - Full
 - Table Top
 - Custom



U.S. Laser Corporation

Design Philosophies

- Use Engineering Experience and Know-How in Design
 - Ruggedness and Stability are essential for best laser results
 - Ease of Alignment and Maintenance
 - Capability for future Additions and Modifications
 - Protection from Environment

U.S. LASER
CORPORATION

U.S. Laser Corporation

Design Philosophies

- Simplify for Cost and Maintenance
 - Do not Overcomplicate the Optical Train with Rarely Used Features
 - Do not Overcomplicate the Software with capabilities that do not apply
 - Do Design for Maximum up-Time



U.S. Laser Corporation

Questions

- Contact us at: sales@uslasercorp.com
- T# 201-848-9200 F# 201-848-9006

