IX-6168-C
Laser Wafer Scribing and Dicing System

Applications

- Ceramic Cutting
- Glass Cutting / Drilling
- Metal Microcutting
- Ceramic Drilling
- LED Wafer Processing

Features

- Versatile Equipment Configuration
  - Fixed or Galvo Scanning Configuration
- Easy to Use: Simple GUI Interface for all Process Features and Complex Shape Import from DXF or DWG Files
- Fully Equipped: Configurable as a Manual Load System or Combine with Integrated Automation Platform
- Materials Flexibility: Ceramics, Sapphire, Fused Silica, Borosilicate Glass, Silicon, Silicon Carbide, Metals and Diamond

IPG Microsystems' IX-6168-C provides picosecond pulse width laser processing enabling high quality machining of ceramics, glass, metals and alloys and other hard to process materials. The IX-6168-C is designed to accept multiple types of ultrafast lasers with a range of power and pulse rate options. To maximize tool flexibility, the IX-6168-C offers a fixed-beam configuration for highest precision machining and high-accuracy galvanometer configuration incorporating a step-and-scan function for processing complex shapes.

IPG PHOTONICS®

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Characteristics

Frame and Enclosure	**All Granite Beam Delivery Support Structure** Fully enclosed Class I laser system, heavy duty weldment frame integrates laser, beam delivery system and control electronics into a single 1 M x 1.9 M footprint; includes casters and leveling feet with vibration isolation pads
Laser	Ultrafast laser selection based on application requirements
Fixed Beam Delivery System	Vibration Damped Advanced Design System Vibration isolating mounting platform for wafer stages and beam delivery optics; Stiffness and large thermal mass of granite structure prevent changes in beam delivery system alignment over time
Galvanometer for High Speed Scanning	Selection of analog and digital 2D high performance scanner; F-Theta Objective 100 mm focal length standard; alt. FOV available upon request; Fully integrated control software

System Specifications

Motion Control Electronics	8-axes of Servo or Step Motor Control, integrated into single interface for all motorized components
Air-bearing X-Y Part Positioning Stage	Linear Glass Scale Encoders; Linear Motor Servo Drive System
X-Y Stage Specifications	Travel: Up to 200 mm diameter processing area Optional Stages: Compatible up to 300 mm wafer processing Resolution: 0.1 µm Accuracy: <±3 µm over 150 mm x 150 mm area Repeatability: <1 µm (bidirectional) Stage Speed: 300 mm/ sec (maximum) High Precision Z-theta Wafer Alignment Stage: Motorized Z-theta System
Video Microscope System	Microtech Camera Assembly OXC Camera for On-target Process Viewing High Magnification Inspection Camera
Optional Equipment**	Automated Cassette Load/ Unload System Wafer Pre-aligner Features Vision System with Automatic Part Alignment Database Connectivity Software On-target Power Meter; Laser Calibration Power Meter/ Beam Stop Debris Management System ** Please discuss with your sales representative for more details

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