IPG Microsystems’ IX-6100 solid state laser machining system delivers high-speed wafer singulation integrated with a state-of-the-art wafer loading system. Compatible with bare or film frame mounted wafers, the optional cassette load system permits uninterrupted high volume manufacturing capability. With low operation costs, combined with ultra narrow kerf widths, the IX-6100 sets a new benchmark in process speed, die yield and return on investment. Available with wavelengths from 266-1064 nm, the IX-6100 is ready for processing a variety of materials from Si to Sapphire; when equipped with IPG’s patent-pending Wafer Debris nozzle, materials such as GaAs and InP are handled with ease. The IX-6100 is compatible with wafers up to 300 mm; the Integrated Automation Platform (IAP) is available in two-port or four-port configurations for unattended operation.
**IX-6100**  
Automated UV Laser Scribing and Dicing System

<table>
<thead>
<tr>
<th>System Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frame and Enclosure</strong></td>
</tr>
<tr>
<td><strong>Available Wavelengths, nm</strong></td>
</tr>
</tbody>
</table>
| **Beam Delivery System for Wafer Dicing** | All Granite Beam Delivery Support Structure  
Patented optical beam delivery configuration for ultra narrow scribing kerf; 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; Pneumatic, 2 position Laser Beam Stop; Precision optic mounts for stability and ease of adjustment; select grade UV optics |

<table>
<thead>
<tr>
<th>System Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motion Control Electronics</strong></td>
</tr>
<tr>
<td><strong>Air-bearing X-Y Part Positioning Stage</strong></td>
</tr>
</tbody>
</table>
| **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 travel  
Repeatability: <1 μm (bidirectional) |
| **Z-theta Wafer Alignment Stage**      | Motorized Z-theta system |
| **Z-axis Specifications**              | Travel: 10.0 mm; Resolution: 0.25 μm  
Accuracy: 5.0 μm; Repeatability: 1.5 μm (bidirectional) |
| **Theta-axis Specifications**          | Travel: ±175°  
Resolution: 3.6 μrad  
Accuracy: 300 μrad overall. 25 μrad/*  
Repeatability: ±5.0 μrad |
| **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; Dual Beam Profilometry  
On-target Power Meter; Laser Calibration Power Meter/ Beam Stop  
Debris Management System; Pulse Energy Monitor for Missing Pulse Detection  
** Please discuss with your sales representative for more details |

+1 (603) 518-3200  
sales.ipgm@ipgphotronics.com  
www.ipgphotronics.com/microsystems

Legal notices: All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind IPG Microsystems LLC only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with use of a product or its application. IPG, IPG Photonics, The Power to Transform and IPG Photonics’ logo are trademarks of IPG Photonics Corporation. © 2013 IPG Photonics Corporation. All rights reserved.