High power LD Alignment System  

Model: KS 203

Alignment of LD and first lens

High precision alignment by original high rigidity SUS stage.
High speed alignment by original power meter.
High speed alignment by original multithread software.
### Automatic stage details of each unit.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Axis</th>
<th>Working Range</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BTF case and LD stage unit</strong></td>
<td>PX</td>
<td>0.15 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>PY</td>
<td>0.25 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>PZ</td>
<td>0.25 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>Pθx</td>
<td>0.000015 μm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pθy</td>
<td>0.135 μm</td>
<td>0.00005 μm</td>
</tr>
<tr>
<td><strong>Lens and Filter stage unit</strong></td>
<td>LX</td>
<td>0.25 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>LY</td>
<td>0.25 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>LZ</td>
<td>0.25 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>Lθx</td>
<td>0.00005 μm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lθy</td>
<td>0.000012 μm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lθz</td>
<td>0.000015 μm</td>
<td></td>
</tr>
<tr>
<td><strong>Front optical stage unit</strong></td>
<td>FX</td>
<td>0.50 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>FY</td>
<td>0.15 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>FZ</td>
<td>0.25 mm</td>
<td>0.025 μm</td>
</tr>
<tr>
<td></td>
<td>Fθz</td>
<td>0.2535 μm</td>
<td>0.00005 μm</td>
</tr>
</tbody>
</table>

### The main equipment of KS 203

#### The main mechanism portions

- **BTF case and LD stage unit**
  - Automatic stage: PX, PY, PZ, Pθx, Pθy
  - Manual stage: Pθz
- **Lens and Filter stage unit**
  - Automatic stage: LX, LY, LZ, Lθx, Lθy, Lθz
  - Lens holder
- **Front optical stage unit**
  - Automatic stage: FX, FY, FZ, Fθz
  - Observation camera
  - Fiber holder
- **Rear optical stage unit**
  - Automatic stage: RX, RY, RZ, Rθz
  - Fiber holder
- **YAG stage unit**
  - Automatic stage: YLX, YRX, YLY, YRY, YLF, YRF, YZ
  - Observation camera and monitor of a welding portion.

#### The main control unit

- **LD Controller**
- **O/E converter.**
- **Stepper motor driver (26 axis)**
- **Computer**
  - Kuge proprietary Cockpit software
  - Stepping motor controller board
  - A/D board
  - I/O board
  - LCD monitor
  - Computer rack
- **YAG welding machine**
  - Miyachi or Omron
  - (YAG maker can be chosen by a visitor's hope)

**Anti-vibration table and Protection cover.**