Specifications

System dimension and space requirements

- **Power**: 110~220 VAC, single phase
- **Power consumption**: 1000 VA max
- **Pneumatic**
  - Input pneumatic pressure: 0.7~1 MPa (equivalent to 100~150 psi)

**Mechanical**
- **System dimensions (W x D x H)**: 1,010 x 800 x 1,550 mm (measurement instrument and display excluded)
  - 1,300 x 1,100 x 1,700 mm
- **Weight**: <500kg

**Optical table**
- Pneumatic vibration isolation table

**Alignment mechanism**
- **Alignment stage resolution**
  - X, Y, Z: 0.05um @ 1/20 microstep drive
  - In/Output stage assembly
  - Rotational stage (θX, θY, θZ): 0.0016 degree @ 1/20 microstep drive
- **Supporting chip angle**: 0° ± 8° ± 5° (quick adjustment of angle bracket)
- **Tool positioning**: 0.05um or better @ 1/20 micronizing drive
- **Center jig**: Grounded center jig

**Process performance**
- **Gap control repeatability**: ± 1um
- **Accuracy**: ± 0.25um (plan to make variation for three brackets)
- **Alignment repeatability**: ± 0.15um or better (± 0.25um maximum (projection less variation))

1) Position control of cameras, UV LED head, epoxy syringe
2) For 11 times of alignment with typical optical splitters

For more information, please visit our website: [www.fiberpro.com](http://www.fiberpro.com) or contact our sales department: sales@fiberpro.com
Auto Alignment System IFA-600 Series

**Key Features**
- Automatic alignment with excellent repeatability based on optimized alignment algorithm and precision stage control
- Automatic gap control and angle alignment using precision displacement sensor
- Quick input port alignment with multimode fiber
- Fast initial alignment based on vision processing and 2D scanning algorithm
- Convenient graphic user interface and versatile function for data management
- Remote controllable via user software
- Compact mechanical design

**Option**
- **UV curing system**
  - Automatic step/skip control by system software
  - Automatic positioning of UV guide head in up/down direction for UV curing process
  - Installed on the tool positioner
- **Epoxy dispenser**
  - Automatic positioning of dispenser needle in 2-direction (Y,Z), based on pneumatic cylinder
  - Installed on the tool positioner
- **Temperature controller**
  - Heating/cooling type: thermoelectric cooler
  - Temperature control range: 5 ~ 75 deg. celsius
  - Environment temperature: 25 ± 3 deg. celsius
  - Details can be changed for better engineering

**Principal Mechanical for Alignment**

**Vision Processing**
- Automatic angle alignment
- Pattern recognition for probe positioning
- Edge detection and barcode reading

**Graphic User Interface**
- Capable of alignment/epoxy bonding of optic device based on vision processing and optic feedback
- User programmable sequence
- Support remote control of client’s software via TCP/IP communication

**Data Monitoring**

**System Control Engine**

**Command Interface**

**Remote controllable via user software**

**Multichannel Optical Power Meter**

**Multimode Driving Unit**

**Tool positioner assy.**
- Position control of cameras, UV LED head

**Center stage assy.**
- Highly customizable center jig (detachable)
- Optional temperature control

**Alignment stage assy. (Left/Right stage)**
- Supporting various chip angles
  - 0, 15, 45
- Quick adjustment of angle bracket (customizable)
- Detachable FAB jig (customizable)
- Sensor for automatic gap control
- Various types of jigs/stands
  - (e.g. gripper, electrical probes) supported

**Temperature controller**
- Heating/Cooling type: thermoelectric cooler
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