

## UMF Equipment – Splicing System for Optical Fibers

### Fujikura LZM-100

The Fujikura LZM-100 is a highly-precise splicing system that uses a CO<sub>2</sub> laser heat source to perform splicing, adiabatic tapering or other glass shaping operations.

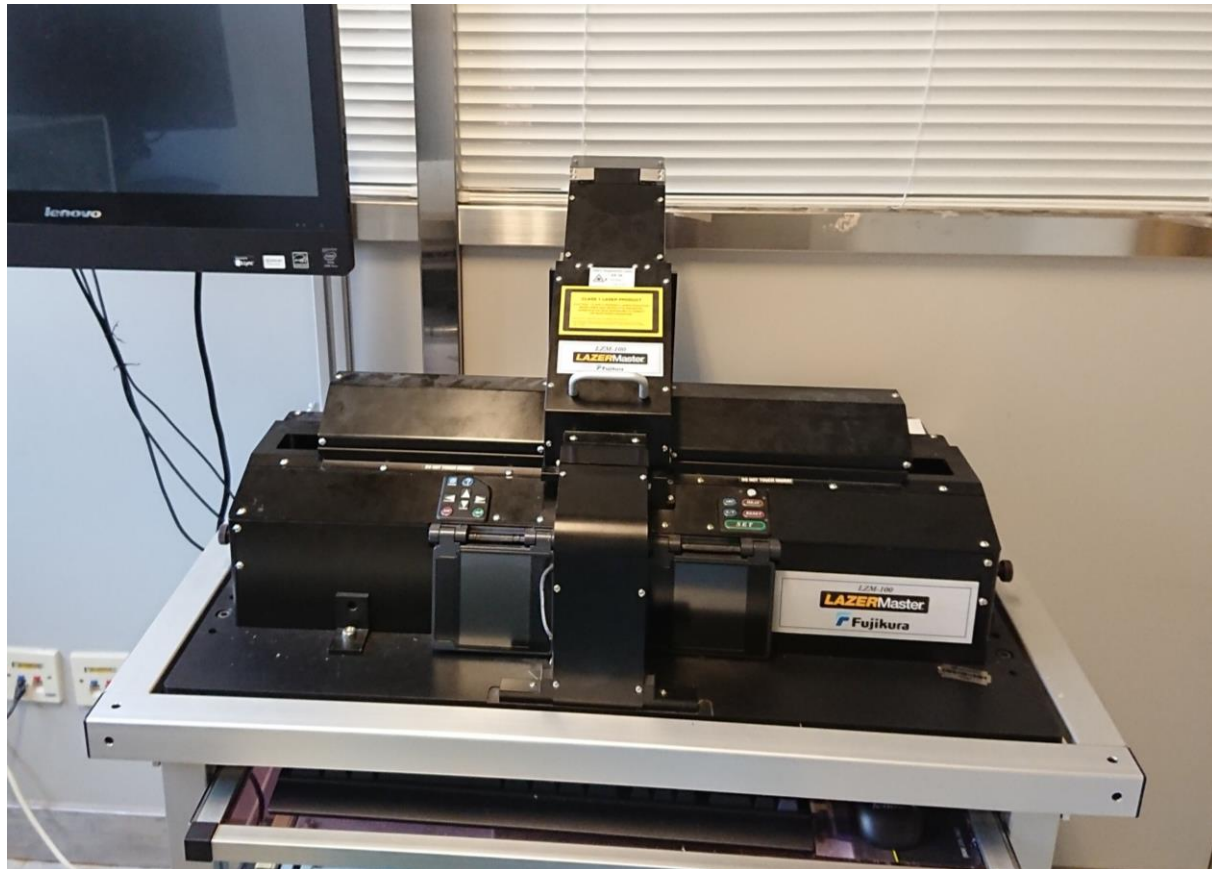
High precision glass processing is enabled by an intuitive and user-friendly on-board firmware. Operations may be performed manually or by PC control. An FPS PC control GUI, which is pre-installed in the all-in-one computer, is supplied with the LZM-100 to provide additional features, greater flexibility and finer control.

- Features:
- CO<sub>2</sub> laser heat source eliminates electrode or filament maintenance, provides very stable operation and greatly reduces the need for periodic calibration.
  - High-strength splicing.
  - Excellent performance for fiber splicing with dissimilar diameters.
  - Intuitive FPS PC GUI: Easy to understand, navigate and operate.
  - Automated laser safety features.
  - Applicable fiber diameter for automatic alignment: 80 μm to 2300 μm.
  - Maximum Z Travel Length: 150 mm (left plus right Z units).

Please refer to supplier information page: <http://www.fujikura.com> for further details of the system.

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# Fujikura LZM-100 Splicing System



## Interface of Adiabatic Tapering

**Taper Software for Fujikura FSM-100 and LZM-100**  
 AFL Splicing Engineering 12/9/2013 Software v8.3 Splicer Firmware: 1.019 or higher Machine type: FSM-100P+ s/n 345  
 FSM100+ (max 26 mm taper & 1.2 mm fiber diameter)

**Left Fiber**      **Right Fiber**

Left motor position: 0.00mm      Right motor position: 0.00mm

Sweep motor position: 0.00mm      SWP      Get motor position

Relative Arc Power: -.60 bit      Align Fiber

Absolute Arc Power: 276 bit      Monitor load cell

**Initiate**      **Taper**      **Measure**      **Stop**

**RESET**      Current process: 100%

Tapering time left: 95.7 sec

Rotator speed: 80 deg/sec

Left rotator position: 0.0deg      Right rotator position: 0.0deg

V1 speed= 0 Auto pulling      V2 speed= 0.1 um/min

Waist Diam 80 micron

Fiber diam 120 micron

Taper Lengths: 10.00mm      13.0mm      4.00mm      SWP: 27.00mm      Loadcell: 0.0

Taper Angle: Left= 0.216deg      Right= 0.537deg      ZR: 17.43mm      Pre-heat: 3.00 sec

Taper shape: Sine      Linear

Diameter (mm) vs Z-Position (mm)

Real time Warm Taper Image (WTI) control system

WTI Exposure: 100      Image sampling at: 50%      WTI setting: 80.0

Default      Dark      Bright      Left      Auto      Right      Low      High