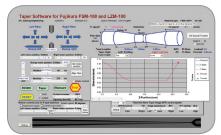






2 mm to 125 µm Splice



Advanced Adiabatic Tapering



Ball Lens 320 µm with 125 Splice to 80 µm Fiber

LAZERMaster

The LZM-100 LAZERMaster is a glass processing and splicing system that uses a CO_2 laser heat source to perform splicing, adiabatic tapering (to create MFAs or pump combiners), lensing, or other glass shaping operations with glass diameters of 2.3 mm or more. The high resolution optical analysis system works in conjunction with on-board firmware for fully automatic splicing, tapering and other glass shaping processes.

High precision glass processing is enabled by the intuitive and user-friendly on-board firmware (virtually identical to that of the Fujikura FSM-100 ARCMaster splicers). Operations may also be performed manually and by PC control. A SpliceLab PC control GUI is supplied with the LZM-100 to provide additional features, greater flexibility and finer control. The SpliceLab GUI is pre-installed on the All-in-one computer. Customers can also create proprietary PC control algorithms using a complete set of PC control commands.

Features

- CO₂ laser heat source eliminates electrode or filament maintenance, provides extremely stable operation and greatly reduces the need for periodic calibration
- Automated laser beam diameter control to fine tune the size of the heating area
- An advanced configurable system capable of producing tapers, ball lenses, combiners, MFAs, glass shaping and splicing
- Excellent performance for dissimilar diameter fiber splicing
- Ultra high strength splicing
- Redundant automated laser safety features
- 2.3 mm maximum fiber diameter (larger fibers may be spliced manually)
- Long travel / high resolution Z motion for long adiabatic tapers
- Automatic operation by on-board LZM-100 splicer firmware, manual operation or operation by PC (PC and SpliceLab GUI included with the LZM-100 system)
- Intuitive SpliceLab PC GUI: Easy to understand, navigate and operate
- Complete set of PC command codes enables users to develop proprietary processes

Ordering Information

DESCRIPTION	ITEM NO.
LAZERMaster LZM-100 Glass Processing & Splicing System (Standard baseline LZM-100 system. Includes AC adapters & cords and SpliceLab PC software)	
LAZERMaster LZM-100 (with dual theta motors)	S015872
All-in-one Computer (includes keyboard and mouse, monitor stand for mounting all-in-one computer. SpliceLab software pre-installed.) (required)	
End-View Observation & Alignment Option	
Side Table Work Surface Option (Work surface to provide additional area for accessories such as fiber preparation equipment. May be attached to the left or right side of the LZM-100 or both. Folds down against the side of the LZM-100 chassis when not needed or to allow easy movement through narrow doorways.)	
Cylindrical Lens & Lens Holder (optional)	
LZM-100 Training (USA)	
LZM-100 Training (International)	
Splicer V-Groove Cleaning Kit	



Specifications

aser Safety Features Media cover with interlock, class 1 enclosure Automatic Activation of safety Switter Automatic Activation of Safety Switter Automatic Charton of Safety Switter Automatic Activation of Safety Switter aser Beam Control Poptiestary feedback system assures laser beam agree stability arear beam Control Safety Same Switter spical Splice Loss 0.02 dB for SMF (110-1 G 652) using appropriate fiber preparation equipment arranes field of View 2.7 mm arranes field of View 0.02 dB for SMF (110-1 G 652) using appropriate fiber preparation equipment arranes field of View 2.7 mm arranes field of View 0.02 dB for SMF (110-1 G 652) applicable Fiber Diameter 80 unto 12300 un Clamping System Tinkinely variable form 80 un up 2300 un Clamping System Fulkiney System, automatic alignment by camera observation) Marual Oper more freeback via G FIB (0ptional) End-view (Optional) For Oriel Alignment System, automatic alignment by	Fiber Heating and Splicing Method	CO ₂ Laser
Automatic actuation of safety shutter Automatic actuation of safety shutter <td></td> <td>2</td>		2
Automatic laser power cutoff Tiple endpointany aser Beam Control Proprietary feedback system assures laser beam power stability Laser back of the SME (TULT G.652) System Splice Strength >400 kpsi for SME (TULT G.652) System Splice Strength >400 kpsi for SME (TULT G.652) System Splice Asses PAS (Profile Alignment System) via transverse fiber observation. "Biber Observation Methods PAS (Profile Alignment System) via transverse fiber observation. "Biber Observation Methods PAS (Profile Alignment System) via transverse fiber observation. "Biber Observation Methods PAS (Profile Alignment System) via transverse fiber observation. "Biber Observation Methods PAS (Profile Alignment System) via transverse fiber observation. "Automatic Laser frame ray be aligned manually or by power meter feedback. Larger diameter fibers may be aligned manually or by power meter feedback. Camping System Clamping System (Signment System) automatic alignment by the coding "Biber Handling Equivalent Shull (Signment System) automatic alignment by camera observation) Manual Other methods by PC control Power meter feebback via GPIB (Optional) End view (Optional) Waiamun Zirave Length 130 rm VA Lapment Resolution 0.12 µm Valamment Resolution 0.13 µm Valamment Resolution 0.13		
ser Beam Control Inportant products of produ		
aser Ream Control Proprietary feedback system assures laser beam power stability Laser beam 2 are and Shape may be customized to meet specific user requirements typical Splice Loss 0.02 dB for SMF (TU-T G 652) amera Field of View 2.7 mm applicable Filter Diameter Bog on to 2000 µm for automatic alignment by PAS Larger diameter / Bees may be aligned manually or by power meter feedback. Action to 2300 µm AcGroove Clamping System Infinitely variable from 80 µm to 2300 µm Clamping base liber or fiber coating Patiented * split V-groove* system View Jannen PAS (Profile Alignment System variable is alignment by earner a observation) Marual Other methods by PC control Power meter feedback via GPIB (Optional) End view (Optional) View Alignment Resolution 0.1 µm Vaamma Taper Length 130 mm Vaamma Taper Length 130 mm		
Laser beam size and shape may be extensized to meet specific user requirements Nigrical Splice Strength >400 kpsi for SMF (TU-T G.652) using appropriate fiber preparation equipment zamera Field of View 2.7 mm bibr Observation Methods >PKR (Profile Alignment System) via transverse fiber observation. wisk Observation Methods >PKR (Profile Alignment System) via transverse fiber observation (Optional) Applicable Fiber Diameter 80 µm to 2300 µm for automatic alignment by PAS Larger diameter fibers may be digned manually or by power meter feedback. Larger diameter fibers may be interesting on the store meter feedback. AfGroove Clamping System Infinitely variable from 80 µm up to 2300 µm Clamping bate fiber or fiber coating Paratemet ⁴ split V-groove ⁴ System Classing fiber fiber holders Classing fiber Alignment System, automatic alignment by camera observation) Marian Pare tend ⁴ split V-groove ⁴ system Outomatic alignment by camera observation) Marian Power meter feedback via GPIB (Optional) Power meter feedback via GPIB (Optional) Prover weter feedback via GPIB (Optional) End-view (Optional) Power meter feedback via GPIB (Optional) Prover weter feedback via GPIB (Optional) Dual methods by PC control Dual methods by PC control V/V	Laser Beam Control	
Spical Spice Loss 0.02 dB for SMF (TU-T G. 652) Spical Spice Strength >400 kps for SMF (TU-T G. 652) using appropriate fiber preparation equipment amera Field of View 2.7 mm iber Observation Methods *PAS (Profile Alignment System) via transverse fiber observation. opticable Fiber Diameter 80 pm to 2300 pm for automatic alignment by PAS Larger diameter fibers may be aligned manually or by power meter feedback. A Groove Clamping System Infinitely variable from 80 pm up to 2300 pm Clamping bare fiber or office coating Patented "spilt V-groove" system Fiber Handling Fujikura SPAM. SMS. Manual SMS. 40 spilcer fiber holders Custom futures to meet specific customer requirements Narual Nigment Methods PAS (Profile Alignment System, automatic alignment by camera observation) Marual Other methods Iby PC control Power meter feedback via GPB (Optional) Power meter feedback via GPB (Optional) Power meter feedback via GPB (Optional) Power meter feedback via GPB (Optional) Power meter feedback via GPB (Optional) Power meter feedback via GPB (Optional) Prover weeter feedback via GPB (Optional) Power meter feedback via GPB (Optional) Power meter feedback via GPB (Optional)		
Spical Spice Strength >400 kps for SMF (ITU-T G.652) using appropriate fiber preparation equipment Jamea Field of View 2.7 mm Der Observation Mehods •PAS (Frofile Alignment System) via transverse fiber observation. •WSI (Warm Spice Image) and WTI (Warm Taper Image) •End-View observation (Optional) Applicable Fiber Diameter 80 µm to 2300 µm for automatic alignment by PAS Larger diameter fibers may be aligned manually or by power meter feedback. Acfroove Clamping System Infinitely variable from 80 µm up to 2300 µm Clamping bare fiber or fiber coating Pattenter System Biber Handling Fulfivar FSM-100, FSM-45 and FSM-40 spicer fiber holders Custom fibruices to meet specific customer requirements PAS (Profile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPB (Optional) Prover Travel Resolution 0.1 µm Maximum Taper Length 150 nm (both left and right Z units) Travel Resolution 0.12 µm theretical Maximum Taper Length 150 nm Maximum Taper Length 130 nm Maximum Taper Ratio 10.1 Immeer transder (Optional) for exast taper ratios, as does tapering with more than one tapering pass. Veadifficing Control	Typical Splice Loss	
Cames Field of View 2.7 mm Fiber Observation Methods PAS (Pofile Alignment System) via transverse fiber observation. WSI (Warn Splice Image) and WTI (Warm Taper Image) End-view doservation (Dptional) BO ym to 2300 µm for automatic alignment by PAS Larger diameter fibers may be aligned manually or by power meter feedback Acforose Clamping System Infinitely virable from 80 µm up to 2300 µm Patented "split V-groove" system Faitkura FSM-100, FSM-45 and FSM-40 splicer fiber holders Custom fixtures to meet specific customer requirements Nanual Other methods by PC control Power meter feedback via GPIB (Optional) Other methods by PC control Power meter feedback via GPIB (Optional) Custom fixtures to minor first greater of patential split customs Custom fixtures to meet specific customer requirements Vial and the ethods of PC control Power meter feedback via GPIB (Optional) Custom fixtures to meet specific customer requirements Vial and (for uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Control Splicing Control Internal firmware or operation by PC Control Splicing Control Internal firmware or operation by PC Control Splicita Shoftware unifice pass. Dual direction taperin		
iber Observation Methods PAS (Profile Alignment System) via transvese fiber observation. WSI (Wam Splice Image) and WTI (Warm Taper Image) End-view observation (Optional) Applicable Fiber Diameter B0 µm to 3200 µm for automatic alignment by PAS Larger diameter fibers may be aligned manually or by power meter feedback Ar Groove Clamping System Infinitely variable from 80 µm up to 2300 µm Clamping bare fiber on fiber coating Patented " Split V-groove" system Clauson fiber social generation of the coating Patented " Split V-groove" system Vignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPB (Optional) End-view (Optional) End-view (Optional) End-view (Optional) Unit Maximum Z Tarvel Length 130 mm VA Ignment desolution O.1 µm Waximum T Tarvel Standard (for uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. 11 mm/sec standard (for uniform direction, sone-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Vignet Speed 11 mm/sec standard (optional 5 mm/sec) Splictalo Software with per voided Complete command set for PC control Split Campo Software with per voided Complete command set for PC control Complete command set for PC control Comp		
Applicable Fiber Diameter 80 µm to 2300 µm for automatic alignment by PAS Larger diameter fibers may be aligned manually or by power meter feedback. Acroove Clamping System Infinitely variable from 80 µm up to 2300 µm Restnet # Split V-groove "system Restnet# Split V-groove "system iiber Handling Fujikura FSM-100, FSM-45 and FSM-40 splicer fiber holders Custom fixtures to meet specific customer requirements Nanual Ulignment Methods PAS (Frofile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPIB (Optional) End-view (Optional) End-view (Optional) End-view (Optional) VY Alignment Resolution 0.12 µm Waximum Taper Length 150 mm (both left and right Z units) Variable from directicin al preving offers grastly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Ratio 10.1 standard (for uniform direction, one-pass tapering) Dual direction tapering offers grastly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Control Complete command set for PC control Control Splicetab software with be provided <td></td> <td></td>		
Larger diameter fibers may be aligned manually or by power meter feedback. A-Groove Clamping System Infinitely variable from 80 µm up to 2300 µm Clamping Dare fiber on fiber coating Patented "split Vagroove" system iiber Handling Eujkure SA 5 and FSM-40 splicer fiber holders Custom fixtures to meet specific customer requirements Namual Other methods by PC control PAS (Profile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPIB (Optional) End-view (Optional) Travel Resolution 0.1 µm Waximum Taper Length 150 nm (both left and right 2 units) Travel Resolution 0.12 g/m theoretical Waximum Taper Length 130 nm Maximum Taper Ratio 10.1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Vaximum Taper Speed 1 ntm/sec standard (Optional) for Moreas Tapel Asolution Internal firmware or operation by PC Control Splicetab software will be provided Corpolete command set for PC control Complete command set for PC control PC Option Splicetab software on a PC pro	Applicable Fiber Diameter	
A-Groove Clamping System Infinitely variable from 80 µm up to 2300 µm Clamping Dare fiber on fiber coating Patented "split Vgroove" system Patented "split Vgroove" system Custom fixtures to meet specific customer requirements Alignment Methods PAS (Profile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPIB (Optional) End-view (Optional) End-view (Optional) 0.1 µm VY Alignment Resolution 0.1 µm Maximum Tareve Length 150 mm (both left and right z units) Tavel Resolution 0.12 pm theoretical Maximum Taper Length 130 mm Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Dual direction tapening offers greatly increased taper ratios, as does tapening with more than one tapening pass. VAimmur Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Near Control SpliceLab software will be provided Control SpliceLab software will be provided Control SpliceLab software will be provided Control An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features Coption An all-in-one computer is requitr	Applicable liber blameter	
Clamping bare fiber or fiber coating Patented "split V-groove" system "iber Handling Fujkwa FSM-100, FSM-45 and FSM-40 splicer fiber holders Custom fixtures to meet specific customer requirements Alignment Methods PAS (Profile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPIB (Optional) End-view (Optional) End-view (Optional) End-view (Optional) VY Alignment Resolution 0.1 µm Waximum Z Tarvel Length 150 mm (both left and right Z units) Z ravel Resolution 0.125 µm theoretical Waximum Tarvel Length 130 mm Waximum Taper Ratio 101: standard (Pr uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Ratio 11 mm/sec standard (Optional 5 mm/sec) Bjlicing Control Internal firmware or operation by PC Control Splicetab software will be provided Complete command set for PC control Complete command set for PC control PC Option An all-in-one computer is required. Use of the Splicetab software on aPC provides finer control and additional features compared to the LZM-100 internal fimware or	V Groove Clamping System	
Paterited "split V-groove" system iBer Handling Fujkura FSM-100, FSM-45 and FSM-40 splicer fiber holders Custom fixtures to meet specific customer requirements Alignment Methods PAS (Profile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPIB (Optional) End-view (Optional) End-view (Optional) 0.1 µm VA Alignment Resolution 0.1 µm Vaximum Taper Length 150 mm (both left and right Z units) Z Travel Length 130 mm Vaximum Taper Ratio 10:1 standard (for uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Vaximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Splicing Control Internal firmware or operation by PC CP Control Splicetab software will be provided Complete command set for PC control An ali-in-one computer is required. Use of the Splicetab software on a PC provides finer control and additional features PC Option An ali-in-one computer is required. Use of the Splicetab software application, the PC interface also allows for advanced maintenance functions. such as the ability to confirm laser beam alignment, and align if required. VP	v-Groove clamping system	
Fiber Handling Fujikura FSM-100, FSM-45 and FSM-40 splicer fiber holders Alignment Methods PAS (Profile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPI8 (Optional) End-view (Optional) End-view (Optional) End-view (Optional) VY Alignment Resolution 0.1 µm Maximum 2 Travel Length 150 mm (both left and right Z units) Vaximum Taper Length 130 mm Maximum Taper Ratio 10: 1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Ratio 10: 1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mr/sec standard (Motional 5 mm/sec) Splicing Control Internal firmware or operation by PC Cottrol Copretable software will be provided Complete command set for PC control Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software and alignment, and align if required. VPD forional 5 moty conting 15.40°C <td></td> <td></td>		
Cuistom fixtures to meet specific customer requirements Alignment Methods PAS (Profile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPIB (Optional) Power meter feedback via GPIB (Optional) VY Alignment Resolution 0.1 µm VY Alignment Resolution 0.12 µm theoretical Maximum Z Travel Length 150 mm (both left and right Z units) Travel Resolution 0.12 µm theoretical Waximum Taper Length 130 mm Ual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Vaximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Diplicing Control Internal firmware or operation by PC VeC Control SpliceLab software will be provided Complete command set for PC control PC Option An ali-more computer is required. Use of the SpliceLab software on a PC provides finer control and additional features: compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option GPIB (Optional, for power meter feedback) GPI	Eiber Handling	
Alignment Methods PAS (Profile Alignment System, automatic alignment by camera observation) Manual Other methods by PC control Power meter feedback via GPIB (Optional) End-view (Optional) End-view (Optional) 0.1 µm VXY Alignment Resolution 0.1 µm Maximum Z Travel Length 150 mm (both left and right Z units) 12 Travel Resolution 0.125 µm theoretical Maximum Taper Length 130 mm Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Dicical 5 software will be provided Complete command set for PC control Control Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. VDS 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) Optional, Frowides theta rotational motion for PM alignment for both left and right sides • NAS (Fr P		
Manual Other methods by PC control Power meter feedback via GPIB (Optional) End-view (Optional) V(Y Alignment Resolution 0.1 µm Maximum Z Travel Length 150 mm (both left and right Z units) Z Travel Resolution 0.125 µm theoretical Maximum Taper Length 130 mm Maximum Taper Ratio 10:1 standard (for uniform direction, one-pass tapering). Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Their Tapering & Glass Shaping Control Internal firmware or operation by PC Their Tapering & Glass Shaping Control Internal firmware or operation by PC Their Tapering & Glass Shaping Control Splicetab software will be provided Complete command set for PC control An all-in-one computer is required. Use of the SpliceLab software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. Preface Ports USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) PAS (For PANDA and other PM fibers) PM Fiber Alignment Methods PAS (For PANDA and other PM fibers) PM Fiber Alignment	Alignment Methods	
Other methods by PC control Power meter feedback via GPIB (Optional) End-view (Optional) V1 Alignment Resolution 0.1 µm Vaximum Z Travel Length 150 mm (both left and right Z units) Z Travel Resolution 0.125 µm theoretical Waximum Taper Length 130 mm Maximum Taper Ratio 10:1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Tiber Tapering & Glass Shaping Control Internal firmware or operation by PC Control Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using anothers of tware application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option An	Alignment Methods	
Power meter feedback via GPIB (Optional) End-view (Optional) KY Alignment Resolution 0.1 µm Maximum Z Travel Length 150 mm (both left and right Z units) Z Travel Resolution 0.125 µm theoretical Maximum Taper Length 130 mm Uaiximum Taper Ratio 10:1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Tiber Tapering & Glass Shaping Control Internal firmware or operation by PC Toch Control SpliceLab software will be provided Comparet to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option An all-in-one computer is required. Use of the SpliceLab software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) PHB (Optional) Placetrical Power 100-240 VAC Optional: Provides theta rotational motion for PM alignment for both left and right sides		
End-view (Optional) V(Y Alignment Resolution 0.1 µm Maximum Z Travel Length 150 mm (both left and right Z units) Travel Resolution 0.125 µm theoretical Maximum Taper Length 130 mm Uaid interction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Maximum Taper Speed 1 merral firmware or operation by PC "iber Tapering & Glass Shaping Control Internal firmware or operation by PC Control SpliceLab software will be provided Complete command set for PC control Complete command set for PC control Copile compared to the LZM-100 internal firmware. Using another software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. VS 2.0 (For PC communications, data and image download, etc.) GPIB (Optional). Frovides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods PAS (for PANDA and other PM fibers). IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) PM Fiber Alignment Methods <td></td> <td></td>		
KY Alignment Resolution 0.1 µm Vaximum Z Travel Length 150 mm (both left and right Z units) Z Travel Resolution 0.125 µm theoretical Vaximum Taper Length 130 mm Vaximum Taper Ratio 10:1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Splicing Control Internal firmware or operation by PC Control SpliceLab software will be provided Complete command set for PC control Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) Electrical Power PO-240 VAC Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods PAS (For PANDA and other PM fibers) PIA (Interrelation Profile Alignment, applicable to almost all PM fib		
Maximum Z Travel Length 150 mm (both left and right Z units) I Travel Resolution 0.125 µm theoretical Maximum Taper Length 130 mm Maximum Taper Ratio 10:1 standard (for uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Internal firmware or operation by PC internal firmware or operation by PC Control SpliceLab software will be provided Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. Nef Face Ports USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) Deretaing Conditions 15-40°C Rotation Motors Optional: Provides theta rotational motion for PM alignment for both left and right sides *M Fiber Alignment Methods PAS (for PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • Ind-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC	V/V Alignment Decolution	
Z Travel Resolution 0.125 µm theoretical Maximum Taper Length 130 mm Vaximum Taper Ratio 10:1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Vaximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Splicing Control Internal firmware or operation by PC PC Control SpliceLab software will be provided Complete command set for PC control Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option An all-in-one computer is required. use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option An all-in-one computer is required. Iterface Ports USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) Optional: Provides theta rotational motion for PM alignment for both l		
Maximum Taper Length 130 mm Maximum Taper Ratio 10:1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Splicing Control Internal firmware or operation by PC Fiber Tapering & Glass Shaping Control Internal firmware or operation by PC PC Control SpliceLab software will be provided Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. PC Option USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) Electrical Power 100-240 VAC Operating Conditions Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods •PAS (For PANDA and other PM fibers) •IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) •End-view (Optional) •Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) •Manual •Other methods by PC control	5	
Maximum Taper Ratio 10:1 standard (For uniform direction, one-pass tapering) Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass. Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Internal firmware or operation by PC "eiber Tapering & Glass Shaping Control Internal firmware or operation by PC "C Control SpliceLab software will be provided Complete command set for PC control SpliceLab software will be provided "PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features "PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features "PC Option Cher PC Communications, data and image download, etc.) GPIB (Optional, for power meter feedback) GPIB (Optional, for power meter feedback) Electrical Power 100-240 VAC Deprating Conditions 15-40°C "M Fiber Alignment Methods PAS (For PANDA and other PM fibers) "IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) "End-view (Optional) Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) "Manual Other meth		
Dual direction tapering offers greatly increased taper ratios, as does tapering with more than one tapering pass.Maximum Taper Speed1 mm/sec standard (Optional 5 mm/sec)Splicing ControlInternal firmware or operation by PC"iber Tapering & Glass Shaping ControlInternal firmware or operation by PCPC ControlSpliceLab software will be provided Complete command set for PC controlPC OptionAn all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required.USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback)Electrical Power100-240 VACOperating Conditions15-40°CNation MotorsOptional: Provides theta rotational motion for PM alignment for both left and right sidesPM Fiber Alignment Methods• PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
Maximum Taper Speed 1 mm/sec standard (Optional 5 mm/sec) Splicing Control Internal firmware or operation by PC Fiber Tapering & Glass Shaping Control Internal firmware or operation by PC PC Control SpliceLab software will be provided Complete command set for PC control SpliceLab software will be provided PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. nterface Ports USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) GPIB (Optional, for power meter feedback) Electrical Power 100-240 VAC Operating Conditions 15-40°C Rotation Motors Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods • PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control <	Maximum laper Ratio	
Splicing Control Internal firmware or operation by PC Fiber Tapering & Glass Shaping Control Internal firmware or operation by PC PC Control SpliceLab software will be provided Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. Interface Ports USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) Electrical Power 100-240 VAC Operating Conditions 15-40°C Rotation Motors Optional: Frovides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods • PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
Fiber Tapering & Glass Shaping Control Internal firmware or operation by PC PC Control SpliceLab software will be provided Complete command set for PC control PC Option An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. Interface Ports USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) Electrical Power 100-240 VAC Operating Conditions 15-40°C Rotation Motors Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
PC Control SpliceLab software will be provided Complete command set for PC control An all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features COption An all-in-one computer is required. Use of the SpliceLab software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required. Interface Ports USB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback) GPIB (Optional, for power meter feedback) Electrical Power 100-240 VAC Operating Conditions 15-40°C Rotation Motors Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods • PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
Complete command set for PC controlPC OptionAn all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required.Interface PortsUSB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback)Electrical Power100-240 VACOperating Conditions15-40°CRotation MotorsOptional: Provides theta rotational motion for PM alignment for both left and right sidesPM Fiber Alignment Methods• PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
PC OptionAn all-in-one computer is required. Use of the SpliceLab software on a PC provides finer control and additional features compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required.Interface PortsUSB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback)Electrical Power100-240 VACOperating Conditions15-40°CRotation MotorsOptional: Provides theta rotational motion for PM alignment for both left and right sidesPM Fiber Alignment Methods• PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control	PC Control	
compared to the LZM-100 internal firmware. Using another software application, the PC interface also allows for advanced maintenance functions such as the ability to confirm laser beam alignment, and align if required.Interface PortsUSB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback)Electrical Power100-240 VACOperating Conditions15-40°CRotation MotorsOptional: Provides theta rotational motion for PM alignment for both left and right sidesPM Fiber Alignment Methods• PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
maintenance functions such as the ability to confirm laser beam alignment, and align if required.nterface PortsUSB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback)Electrical Power100-240 VACOperating Conditions15-40°CRotation MotorsOptional: Provides theta rotational motion for PM alignment for both left and right sidesPM Fiber Alignment Methods• PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control	PC Option	
Interface PortsUSB 2.0 (For PC communications, data and image download, etc.) GPIB (Optional, for power meter feedback)Electrical Power100-240 VACOperating Conditions15-40°CRotation MotorsOptional: Provides theta rotational motion for PM alignment for both left and right sidesPM Fiber Alignment Methods• PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
GPIB (Optional, for power meter feedback) Electrical Power 100-240 VAC Operating Conditions 15-40°C Rotation Motors Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods • PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
Electrical Power 100-240 VAC Operating Conditions 15-40°C Rotation Motors Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods • PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control	Interface Ports	
Derating Conditions 15-40°C Rotation Motors Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods • PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control		
Rotation Motors Optional: Provides theta rotational motion for PM alignment for both left and right sides PM Fiber Alignment Methods • PAS (For PANDA and other PM fibers) • IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) • End-view (Optional) • Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) • Manual • Other methods by PC control	Electrical Power	100-240 VAC
 PAS (For PANDA and other PM fibers) IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) End-view (Optional) Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) Manual Other methods by PC control 	Operating Conditions	15-40°C
 IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.) End-view (Optional) Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) Manual Other methods by PC control 	Rotation Motors	Optional: Provides theta rotational motion for PM alignment for both left and right sides
 End-view (Optional) Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) Manual Other methods by PC control 	PM Fiber Alignment Methods	• PAS (For PANDA and other PM fibers)
 Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface) Manual Other methods by PC control 		• IPA (Interrelation Profile Alignment, applicable to almost all PM fibers. Three distinct IPA methods available.)
Manual Other methods by PC control		
Manual Other methods by PC control		• Power meter feedback (Requires polarizer and analyzer, as well as optional GPIB interface)
		• Other methods by PC control
	End-View Observation & Alignment	

Preliminary Specifications, subject to revision and refinement

