

ACTIVE **BLADE** MANAGEMENT  
technology

# Clad Alignment Fusion Splicer

## 41S

*Smart Management*



**Fujikura**

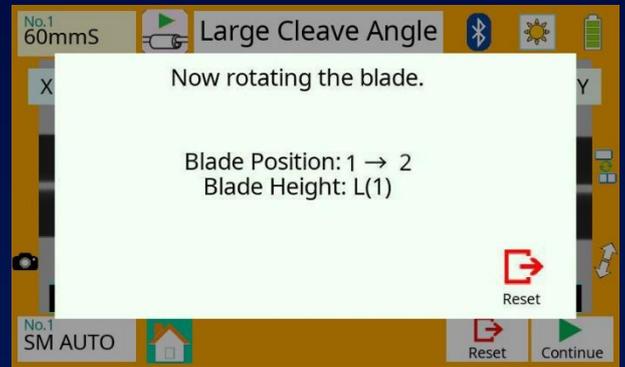
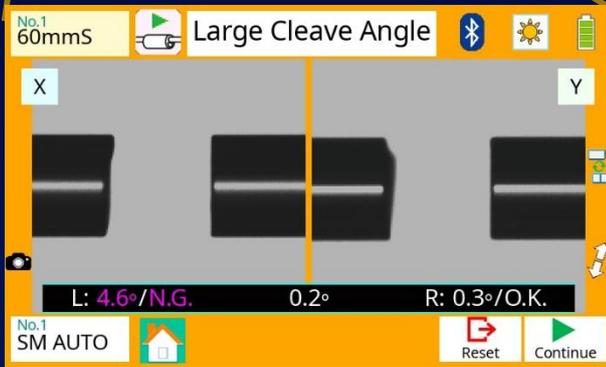
# Active Blade Management Technology

## 1. Automatic Blade Rotation

The 41S fusion splicer and CT50 fiber cleaver have wireless data connectivity. This capability allows automatic cleaver blade rotation when the splicer judges the blade is worn.



Motorized blade



## 2. Blade Life Management

The 41S fusion splicer indicates the remaining blade life and also informs the user when a blade height change is required.

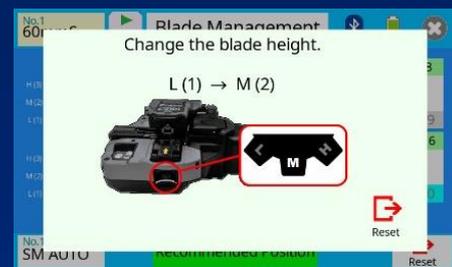
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
H(8)	0	0	0	0	0	0	0	0
M(2)	0	0	0	0	0	0	0	0
L(1)	1060	0	0	0	0	0	0	0
	No.9	No.10	No.11	No.12	No.13	No.14	No.15	No.16
H(8)	0	0	0	0	0	0	0	0
M(2)	0	0	0	0	0	0	0	0
L(1)	0	0	0	0	0	0	0	0

Blade Height : L(1)



	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
H(8)	0	0	0	0	0	0	0	0
M(2)	0	0	0	0	0	0	0	0
L(1)	1014	0	0	1167	1522	1134	1530	1439
	No.9	No.10	No.11	No.12	No.13	No.14	No.15	No.16
H(8)	0	0	0	0	0	0	0	0
M(2)	0	0	0	0	0	0	0	0
L(1)	1185	1218	1025	1407	1338	1484	1259	1060

Blade Height : L(1)



	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
H(8)	1041	1175	1167	1522	1134	1530	1439	1439
M(2)	1185	1218	1025	1407	1338	1484	1259	1439
L(1)	1185	1218	1025	1407	1338	1484	1259	1536
	No.9	No.10	No.11	No.12	No.13	No.14	No.15	No.16
H(8)	1041	1175	1167	1522	1134	1530	1439	1258
M(2)	1185	1218	1025	1407	1338	1484	1259	1536
L(1)	1185	1218	1025	1407	1338	1484	1259	1484

Blade Height : L(3)

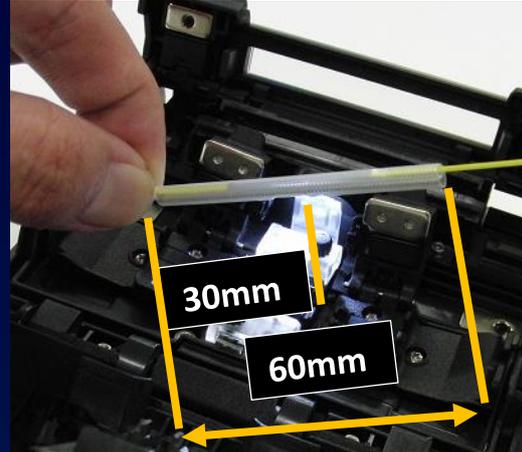
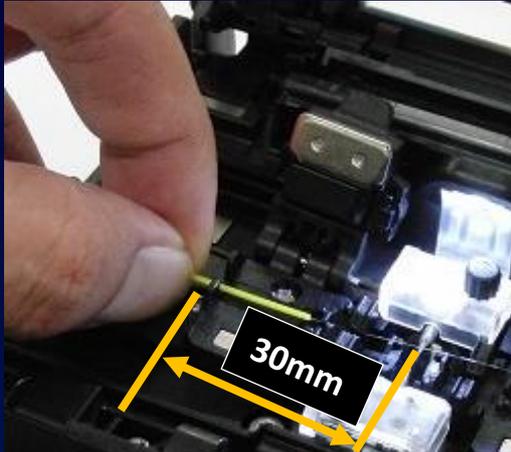


Replace

# User Friendly

## 1. Easy Fiber Protection Sleeve Positioning

The shape of the sheath clamp is optimized for the 60mm length protection sleeve. The length from splice point to the edge of the sheath clamp is 30mm. Therefore, it is easy to center the protection sleeve over the splice by using your finger as the reference splice point.



## 2. New Concept Electrodes

The 41S electrodes comes as an “assy” including the fixing screw. You can also rotate the screw by hand without tools. It enables easy electrode replacement.

Loosen the screw



Tighten the screw



Remove the old electrode



Install the new electrode

## 3. Universal Tube Heater

The 41S fusion splicer can accommodate a max 6.0mm diameter heat sleeve before shrinking. As a result, it supports a wide range of protection sleeve sizes.

Max. 6.0mm diameter before shrinking



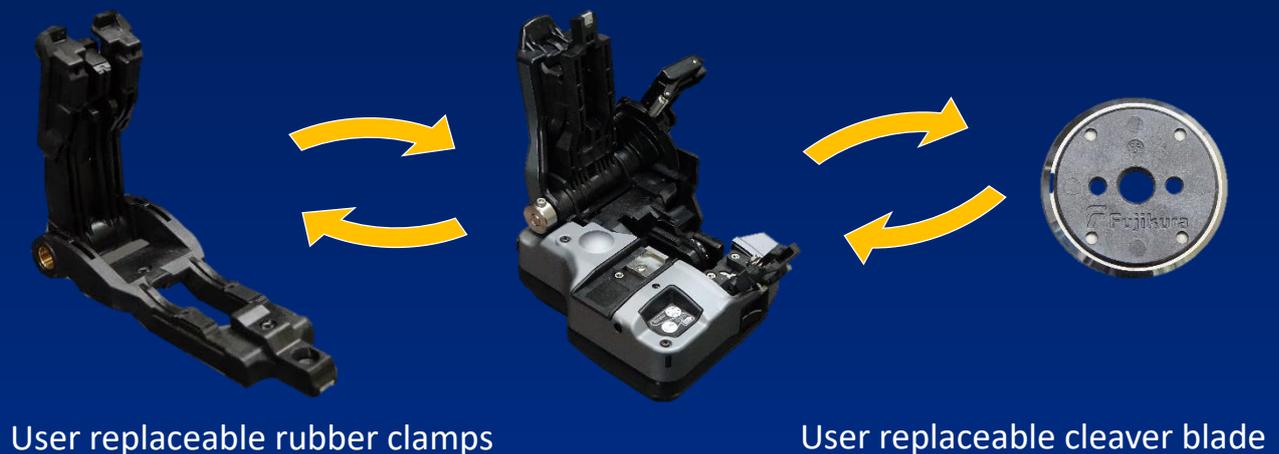
## 4. Work Tray

The work tray can transform into several shapes according to your optical installation style.



## 5. Easy Maintenance

The CT50 fiber cleaver has a user replaceable blade and rubber clamps - there's no need to send the device to a service center for blade or clamp replacement.



# Standard Package

## 41S Standard package

Item	Model	Qty
Clad Alignment Fusion Splicer	41S	1 pc
(1) Battery Pack *	BTR-11A	1 pc
(2) AC Adapter	ADC-19A	1 pc
(3) AC Power Cord	ACC-08, 09, 10, 11 or 12	1 pc
(4) USB Cable	USB-01	1 pc
(5) Electrodes, for spare	ELCT2-16B	1 pair
(6) Fiber Holder Set Plate	SP-01	1 pair
(7) Carrying Case	CC-36	1 pc
(8) Work tray	WT-08	1 pc
(9) Tripod Screw	TS-03	1 pc
(10) Carrying Case Strap	ST-03	1 pc
(11) Alcohol Dispenser	AP-02	1 pc
(12) Quick Reference Guide	QRG-01-E	1 pc
Single Fiber Stripper	SS03	1 pc
Optical Fiber Cleaver	CT50	1 pc
(1) Fiber Scrap Collector	FDB-05	1 pc
(2) Fiber Setting Plate	AD-10-M24	1 pc
(3) Case	CC-37	1 pc
(4) Hexagonal Wrench	HEX-01	1 pc

\* Please follow IATA regulation when shipping the battery by air.



# Specifications

## 41S Specifications



## 41S Options

Item	Specification	
Fiber alignment method	Active clad alignment	
Fiber count can be spliced	Single fiber	
Applicable fiber	Fiber type	Single mode optical fiber Multi mode optical fiber
	Cladding dia.	Approx. 125µm
Applicable coating	Sheath clamp	Coating dia. : Max. 3000µm Cleave length : 5 to 16mm *1
	Fiber splice performance	Splice loss *2
ITU-T G.651 : Avg. 0.01dB		
ITU-T G.653 : Avg. 0.05dB		
ITU-T G.655 : Avg. 0.05dB		
Applicable protection sleeve	Splice time *3	SM FAST mode : Avg. 6 to 7sec.
	Sleeve type	Heat shrinkable sleeve
	Sleeve length	Max. 66mm
Sleeve heat performance	Sleeve dia.	Max. 6.0mm before shrinking
	Heat time *4	60mm mode : Avg. 25 to 27sec.
Fiber tensile test force	Approx. 2.0N	
Electrode life *5	Approx. 5,000 splices	
Physical description	Dimensions W	Approx. 131mm without projection
	Dimensions D	Approx. 201mm without projection
	Dimensions H	Approx. 79mm without projection
	Weight	Approx. 1.3kg including battery
Environmental condition	Temperature	Operate : -10 to 50 degreeC Storage : -40 to 80 degreeC
	Humidity	Operate : 0 to 95%RH non-condensing Storage : 0 to 95%RH non-condensing
	Altitude	Max. 5000m
AC adaptor	Input	AC100 to 240V, 50/60Hz, Max. 1.5A
Battery pack	Type	Rechargeable Lithium Ion
	Output	Approx. DC14.4V / 3190mAh
	Capacity *6	Approx. 200 splice and heat cycles
	Temperature	Recharge : 0 to 40 degreeC Storage : -20 to 30 degreeC
Display	Battery life *7	Approx. 500 recharge cycles
	LCD monitor	TFT 5 inches with touch screen
Illumination	Magnification	132 to 300x
	V-grooves	LED lamp
Interface	PC	USB2.0 Mini B type
	External LED lamp	USB2.0 A type Approx. DC5V, 500mA
	Wireless *8	Bluetooth 4.1 LE
	Splice mode	100 splice modes
Data storage	Heat mode	30 heat modes
	Splice result	10000 splices
	Splice image	100 images
Screw hole for tripod	1/4-20UNC	
Other features	Automatic functions	Discharge power calibration
	Reference guide	PDF file stored in splicer
	Sheath clamp	Easy sleeve positioning clamp
	Electrode	Replaceable without tool

Item	Model	Remark
Fiber Setting Plate	AD-50	Max. 3mm coating diameter
Fiber holder	FH-70-200	200µm coating diameter
	FH-70-250	250µm coating diameter
	FH-70-900	900µm coating diameter
	FH-FC-20	900µm in 2mm diameter cable
	FH-FC-30	900µm in 3mm diameter cable
Sheath Clamp	CLAMP-S31B	900µm loose buffer cable
Transfer Clamp	CLAMP-DC-12	Transferring drop cable on work tray
Protection sleeve	FP-03	60mm, Max. 900µm coating diameter
	FP-03(L=40)	40mm, Max. 900µm coating diameter
	FP-03M	FP-03 with non-magnetic material

### Notes

- \*1: Cleave length range depending on fiber type  
5 to 16mm : 125µm cladding dia. and 250µm coating dia.  
10 to 16mm : 125µm cladding dia. and 400 or 900µm coating dia.  
5 to 10mm : 80µm cladding dia. and 160µm coating dia.
- \*2: Measured with a cut-back method relevant to ITU-T and IEC standard after splicing Fujikura identical fibers. The average splice loss changes depending on the environmental condition and fiber characteristics.
- \*3: Measured at room temperature. The definition of splice time is from the fiber image appeared in LCD monitor to the estimated loss displayed. The average splice time changes depending on the environmental conditions, fiber type, and fiber characteristics.
- \*4: Measured at room temperature with the AC adapter. The heat time is defined from the start beep sound to the finish beep sound. The average heat time changes depending on the environmental conditions, sleeve type and battery pack condition.
- \*5: The electrode life changes depending on the environmental conditions, fiber type and splice modes.
- \*6: Test condition  
(1) Splice and heat time : 2 minutes cycle  
(2) Using the splicer power save settings  
(3) Using a not degraded battery  
(4) At room temperature  
The battery capacity changes when testing with a different conditions from the above
- \*7: The battery capacity decreases to half after approx. 500 discharge and recharge cycles. The battery life is shortened further when using outside of the storage temperature range, operating temperature range or if completely discharged by storing it for a long time without recharging.
- \*8: Bluetooth® mark and logos are the registered trademarks of Bluetooth SIG, Inc.

# Specifications



## CT50 Specifications

Item	Specifications	
Applicable fiber	Fiber type	Single mode optical fiber
		Multi mode optical fiber
	Fiber count	Up to 16 fiber ribbon
	Cladding dia.	Approx. 125µm
Applicable coating	Fiber plate	AD-10-M24 : Max. 900µm coating diameter AD-50 : Max. 3mm coating diameter
	Fiber holder	Coating shape. : Refer to splicer options
Cleave length	Fiber setting plate	AD-10-M24 : 5 to 20mm *1 AD-50 *CD : coating diameter C.D. = 250µm or less : 5 to 20mm *1 250µm < CD < 1000µm : 10 to 20mm 1000µm < CD < 3mm : 14 to 20mm
		Fiber holder
Cleave angle *2	Single fiber	Avg. 0.3 to 0.9 degrees
	Fiber ribbon	Avg. 0.3 to 1.2 degrees
Blade life *3	Approx. 60,000 fiber cleaves	
Physical description	Dimensions W	Approx. 120mm without projection *4
	Dimensions D	Approx. 95mm without projection *4
	Dimensions H	Approx. 58mm without projection *4
	Weight	Approx. 305g including battery and AD-10-M24
Environmental condition	Temperature	Operate : -10 to 50 degreeC Storage : -40 to 80 degreeC
	Humidity	Operate : 0 to 95% non-condensing Storage : 0 to 95% non-condensing
Battery	2 pieces of LR03/AAA dry battery	
Wireless interface *5	Bluetooth 4.1 LE	
Screw hole for tripod	1/4-20UNC	
Other features	Blade rotation	Motorized rotation
		Manual rotation dial
	Replaceable parts	Blade Clamp arm

## CT50 Options

Item	Model Name	Remark
Fiber Setting Plate	AD-50	Optional fiber setting plate
Blade	CB-08	Blade for replacement
Clamp Arm	ARM-CT50-01	Clamp arm with anvil for replacement
Fiber Scrap Collector	FDB-05	Spare scrap collector
Side cover	SC-CT50-01	Side cover instead of scrap collector
Spacer	SPA-CT08-10	Cleave length 10mm
	SPA-CT08-09	Cleave length 9mm
	SPA-CT08-08	Cleave length 8mm

### Notes

- \*1: When the cleave length is less than 10mm, the coating diameter should be 250µm or less. Also, a blade height adjustment is required before cleaving. The average cleave angle is worse than the specification when the cleave length is less than 10mm.
- \*2: Measured with an interferometer at room temperature, not with a splicer. A new blade was used to cleave both the single fibers and 12 fiber ribbons. The cleave length is set from 10 to 16mm. The average cleave angle changes depending on the environmental conditions, blade condition, operating method, and cleanliness.
- \*3: The blade life changes depending on the environmental conditions, operating method, and the fiber type cleaved.
- \*4: Measured in a condition when closing the lever.
- \*5: Bluetooth® mark and logos are the registered trademarks of Bluetooth SIG, Inc.



Please visit our web site!

<https://www.fusionsplicer.fujikura.com>

### Fujikura Ltd.

1-5-1, Kiba, Koto-ku, Tokyo 135-8512, Japan  
General inquiries : +81-3-5606-1164  
Service & support : +81-43-484-3962 <https://www.fujikura.com>

### Fujikura Asia Ltd.

438A Alexandra Road, Block A Alexandra Technopark #08-03 Singapore 119967  
General inquiries, Service & support : +65-6-278-8955  
<https://www.fujikura.com.sg>

### Fujikura Europe Ltd.

C51 Barwell Business Park, Leatherhead Road, Chessington, Surrey KT9 2NY,  
General inquiries : +44-20-8240-2000  
Service & support : +44-20-8240-2020 <https://www.fujikura.co.uk>

### AFL

260, Parkway East, Duncan, SC29334, USA  
General inquiries : +1-800-235-3423  
Service & support : +1-800-866-3602 <https://www.aflglobal.com>

### Fujikura (China) Co., Ltd.

7th Floor, Shanghai Hang Seng Bank Tower, 1000 Lujiazui Ring Road, Pudong New Area, Shanghai 200120, CHINA  
General inquiries, service & support : +86-21-6841-3636 <http://www.fujikura.com.cn>