

ACTIVE **BLADE** MANAGEMENT  
technology

# Clad Alignment Fusion Splicer

## 41S

*Smart Management*



**Fujikura**

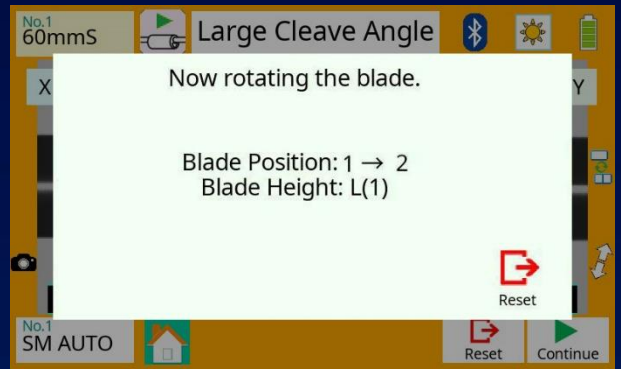
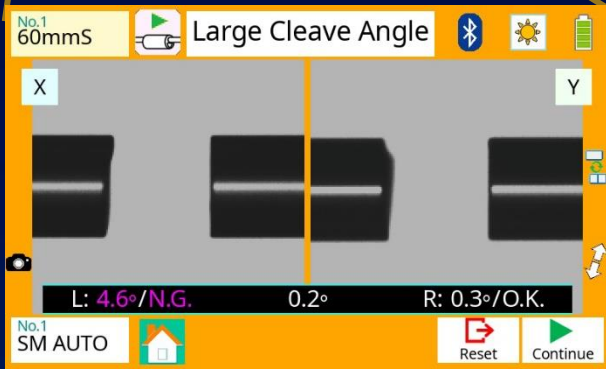
# Active Blade Management Technology

## 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
H18		0	0	0	0	0	0	0	0
M12		0	0	0	0	0	0	0	0
L10		1060	0	0	0	0	0	0	0
		No.9	No.10	No.11	No.12	No.13	No.14	No.15	No.16
H18		0	0	0	0	0	0	0	0
M12		0	0	0	0	0	0	0	0
L10		0	0	0	0	0	0	0	0

Blade Height : L(1)



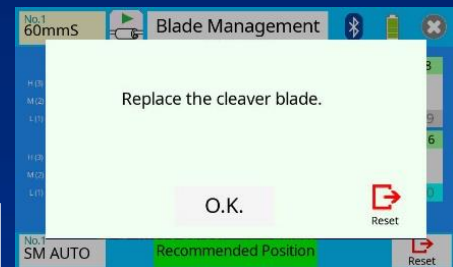
		No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
H18		0	0	0	0	0	0	0	0
M12		0	0	0	0	0	0	0	0
L10		1060	1167	1522	1134	1530	1439		
		No.9	No.10	No.11	No.12	No.13	No.14	No.15	No.16
H18		0	0	0	0	0	0	0	0
M12		0	0	0	0	0	0	0	0
L10		1185	1218	1025	1407	1338	1484	1259	1060

Blade Height : L(1)



		No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
H18		1439	1530	1259	1185	1134	1575	1422	1439
M12		1484	1185	1218	1025	1407	1338	1484	1060
L10		1060	1041	1175	1167	1522	1134	1530	1439
		No.9	No.10	No.11	No.12	No.13	No.14	No.15	No.16
H18		1041	1175	1167	1522	1439	1530	1218	1258
M12		1422	1530	1439	1218	1375	1025	1407	1530
L10		1185	1218	1025	1407	1338	1484	1259	1060

Blade Height : L(3)

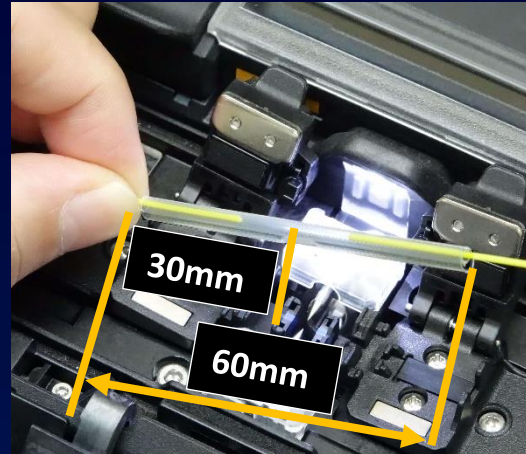
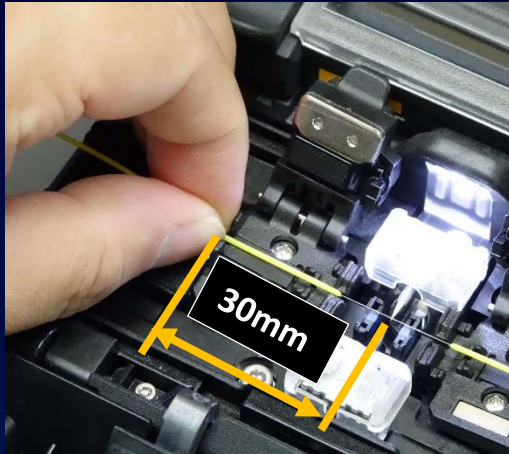


Replace

# 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. Tool-less Electrodes and illumination

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



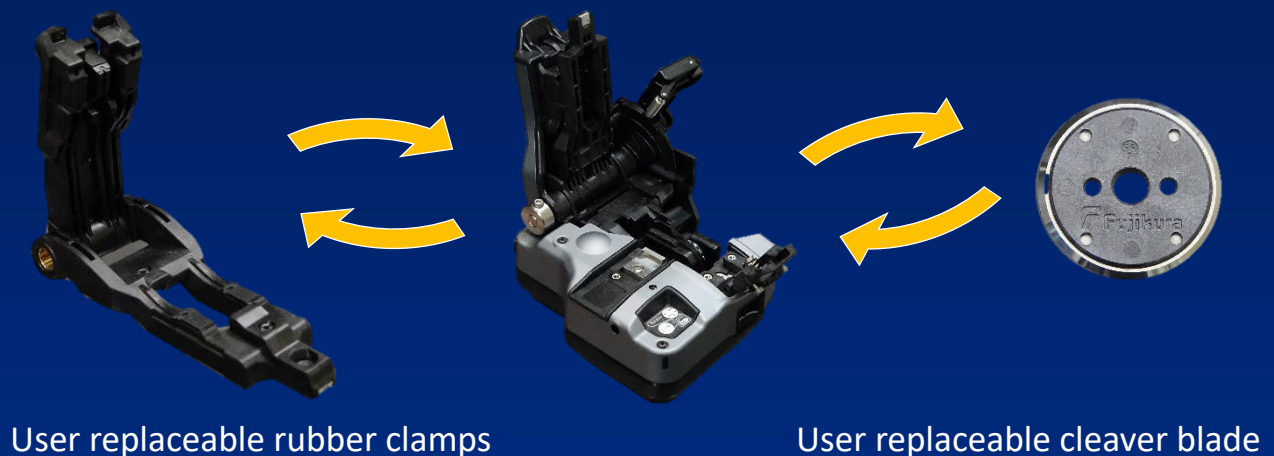
## 4. Work Tray

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		
ITU-T G.657 : Avg. 0.03dB		
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. 5000 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
	Battery life *7	Approx. 500 recharge cycles
Display	LCD monitor	TFT 4.9 inches with touch screen
	Magnification	132 to 300x
Illumination	V-grooves	LED lamp
	PC	USB2.0 Mini B type
Interface	External LED lamp	USB2.0 A type Approx. DC5V, 500mA
	Wireless *8	Bluetooth 4.1 LE
Data storage	Splice mode	100 splice modes
	Heat mode	30 heat modes
	Splice result	10000 splices
	Splice image	100 images
Screw hole for tripod		1/4-20UNC
Other features	Automatic functions	Fusion power calibration
	Reference guide	PDF file stored in splicer
	Sheath clamp	Easy sleeve positioning clamp
	Electrode	Replaceable without tool

Item	Model	Remark
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.
- \*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 adaptor. 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 : 1 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 a 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, if completely discharged by storing for a long time without recharging.
- \*8 Bluetooth® mark and logos are the registered trademarks of Bluetooth SIG, Inc.

# Specifications



## CT50 Specifications

Item	Specification	
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 setting 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 : *C.D. : coating diameter C.D. = 250µm or less : 5 to 20mm *1 250µm < C.D. < =900µm : 10 to 20mm 900µm < C.D. < =3mm : 14 to 20mm
		Fiber holder
	Single fiber	Avg. 0.3 to 0.9 degrees
Cleave angle *2	Fiber ribbon	Avg. 0.3 to 1.2 degrees
		Approx. 60000 fiber cleaves
Blade life *3		
Physical description	Dimensions W	Approx. 117mm without projection *4
	Dimensions D	Approx. 94mm without projection *4
	Dimensions H	Approx. 59mm without projection *4
	Weight	Approx. 306g including battery and AD-10-M24
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
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

## CT50 Options

Item	Model	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 ribbon fibers. 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>

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