

ACTIVE **BLADE** MANAGEMENT
technology

Mass Fusion Splicer Kit 41R

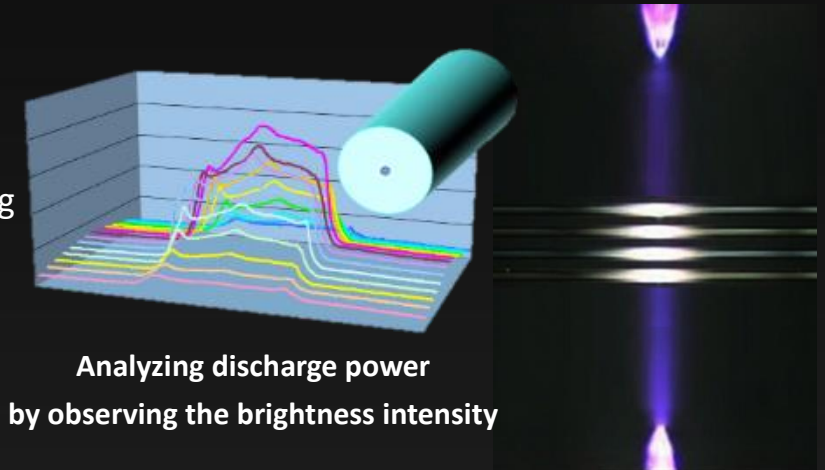
Smart Management



Fujikura

Mass Fusion Technology

The 41R mass fusion splicer has a wide heating area for up to 4 fibers. The wide electrode gap melts the fibers uniformly and has real-time discharge power control by analyzing the fiber's brightness intensity. The 41R does not have active core alignment mechanisms, however, during the discharge, the effects of fiber surface tension minimize preexisting offsets.

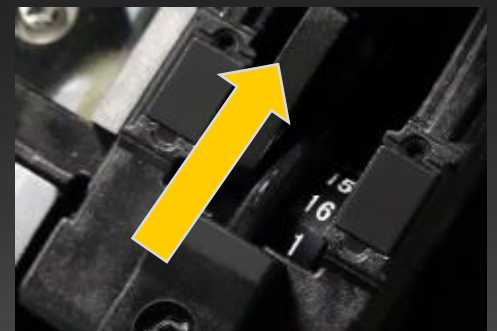


Analyzing discharge power
by observing the brightness intensity

Active Blade Management Technology

1. Automatic Blade Rotation

The 41R fusion splicer and CT50 fiber cleaver are enabled with wireless data connectivity. This capability allows automatic cleaver **blade** rotation when the splicer judges the blade is worn.



Motorized blade rotation

No.4

40mmR

Large Cleave Angle

Y

No.	Gap	Offset	Cleave	
			Left	Right
1	41 μm	0.5 μm	1.0°	1.0°
2	45 μm	0.6 μm	5.7°	0.9°
3	49 μm	0.7 μm	5.3°	0.6°
4	44 μm	0.8 μm	1.0°	0.2°

No.1

SM AUTO

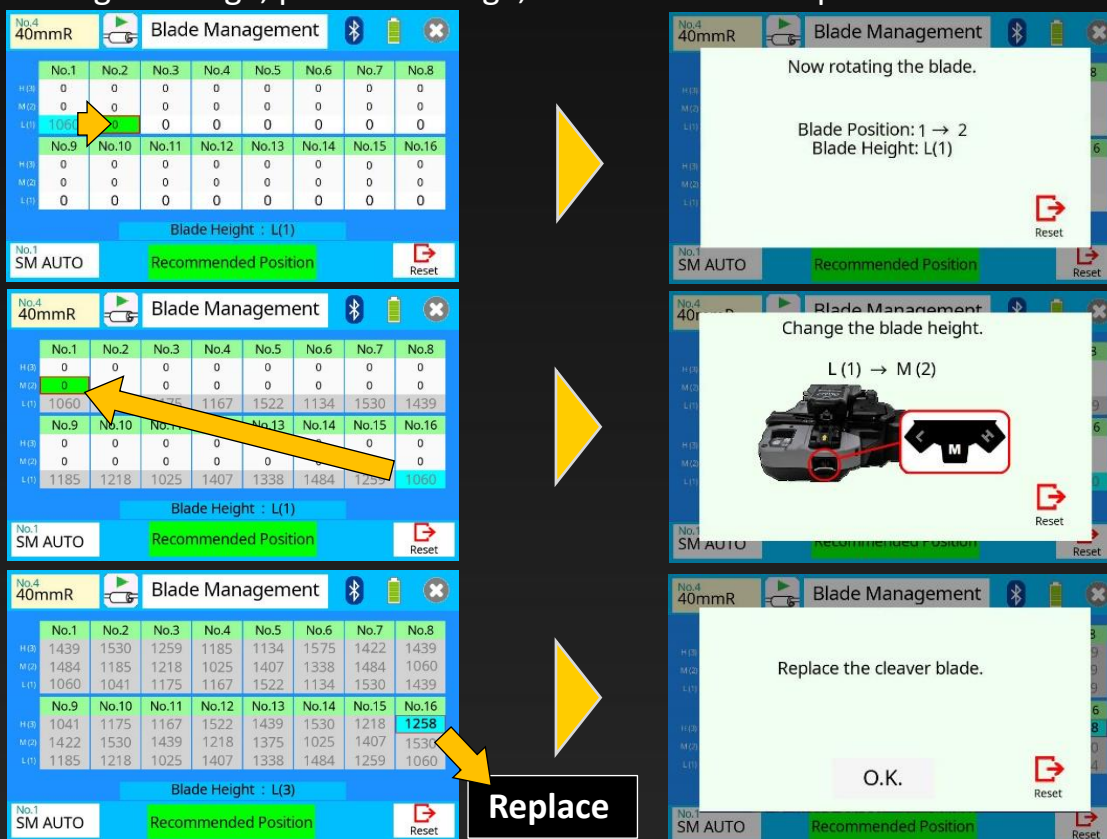
Reset

Continue

No.4 40mmR		Large Cleave Angle		Bluetooth		Sun		Battery	
Y		Now rotating the blade.							
		Blade Position: 1 → 2							
		Blade Height: L(1)							
		Reset							
No.1 SM AUTO		Reset		Continue					

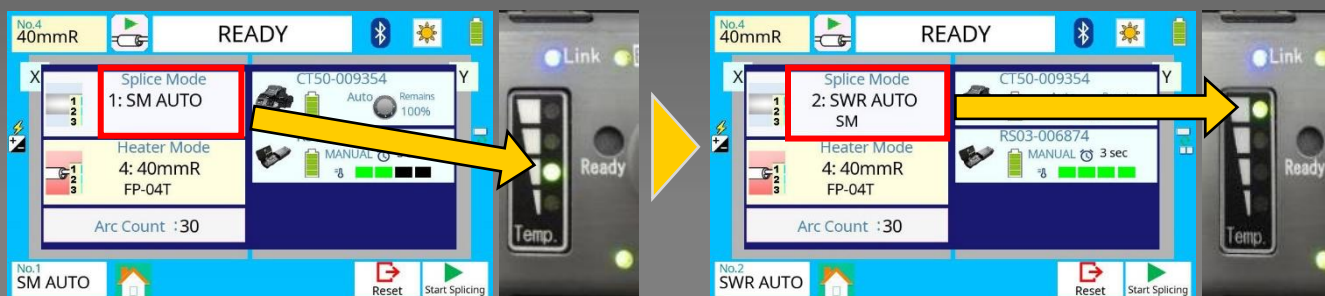
2. Blade Life Management

The 41R fusion splicer displays the remaining blade life and informs the user when a blade height change, position change, or new blade is required.



3. Stripping Condition Control

When the user changes the splice mode, e.g. from 4 fiber ribbon splice mode to SWR fiber splice mode, the ribbon stripper RS03 automatically changes its heating temperature and time with a wireless command from the splicer.



Universal Features

1. Universal Fiber Holder

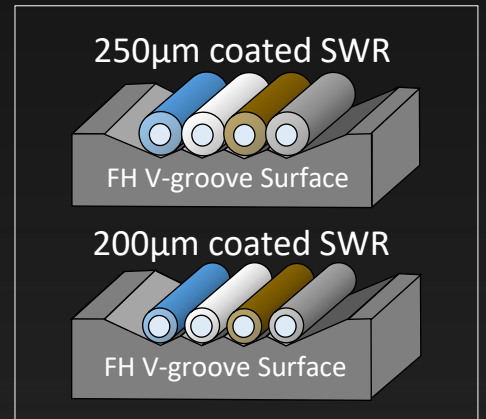
The FH-70-4 fiber holder is compatible with many types of fiber ribbon, such as 0.3mm or 0.4mm thick encapsulated ribbons and 200 μ m or 250 μ m coated Spider Web Ribbon (SWR). The 250 μ m pitch V-grooves in the FH-70-4 fiber holder simplify SWR loading and ribbon preparation.



SWR

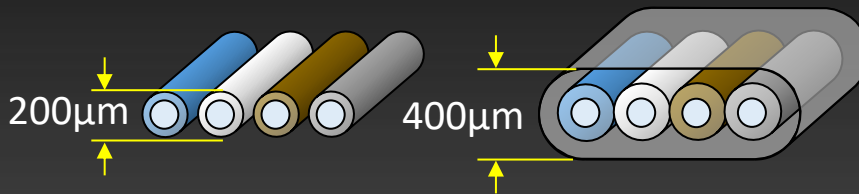


FH-70-4



2. Universal Ribbon Stripper

The RS series ribbon strippers are compatible with 200 μ m to 400 μ m coated fibers without replacing the stripper blades.



Available thickness range



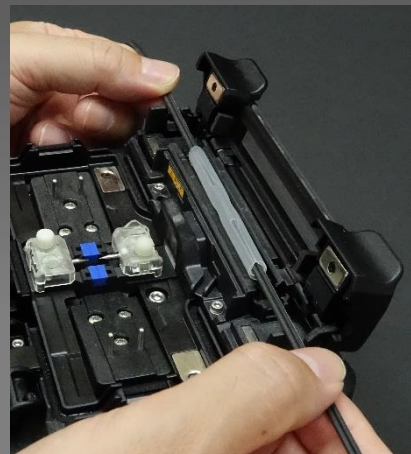
RS03

3. Universal Tube Heater

The 41R mass 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.



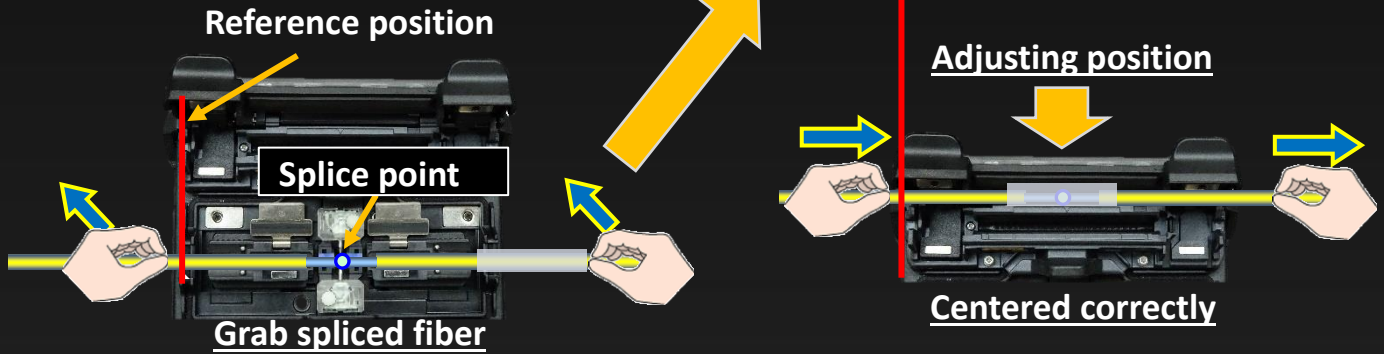
Max. 6.0mm diameter
before shrinking



User Friendly

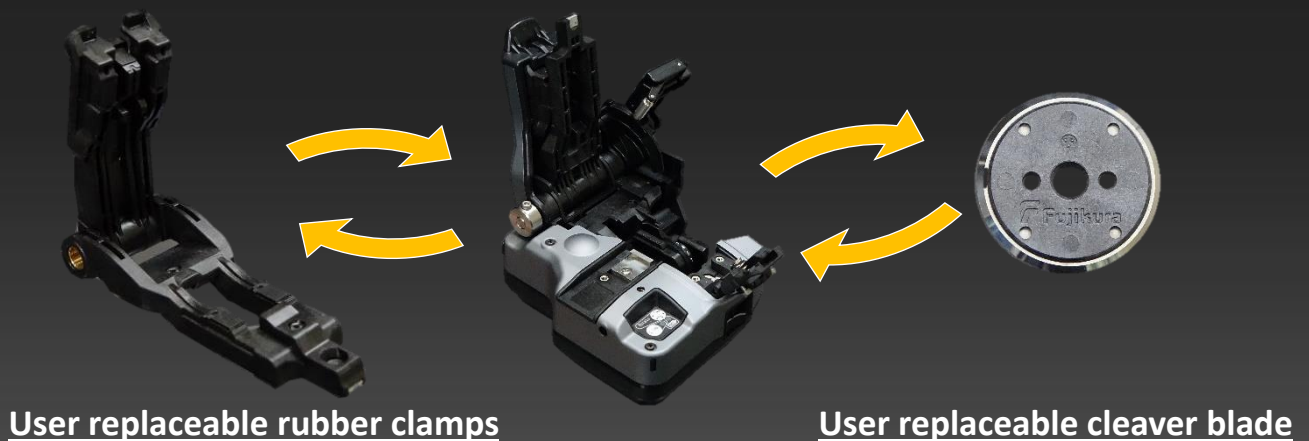
1. Simple sleeve centering

The 41R mass fusion splicer features simple sleeve positioning with its designated centering area on top of the tube heater.



2. 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.

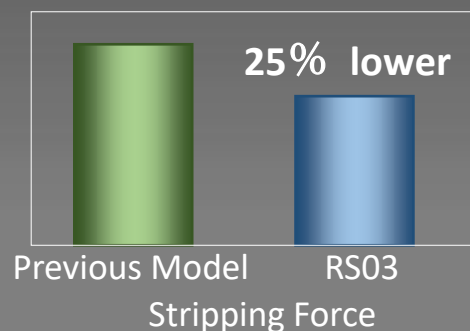


3. Lower Stripping Force

The RS series ribbon stripper has an ergonomic design and requires lower stripping force than the previous stripper.



Ergonomic Design

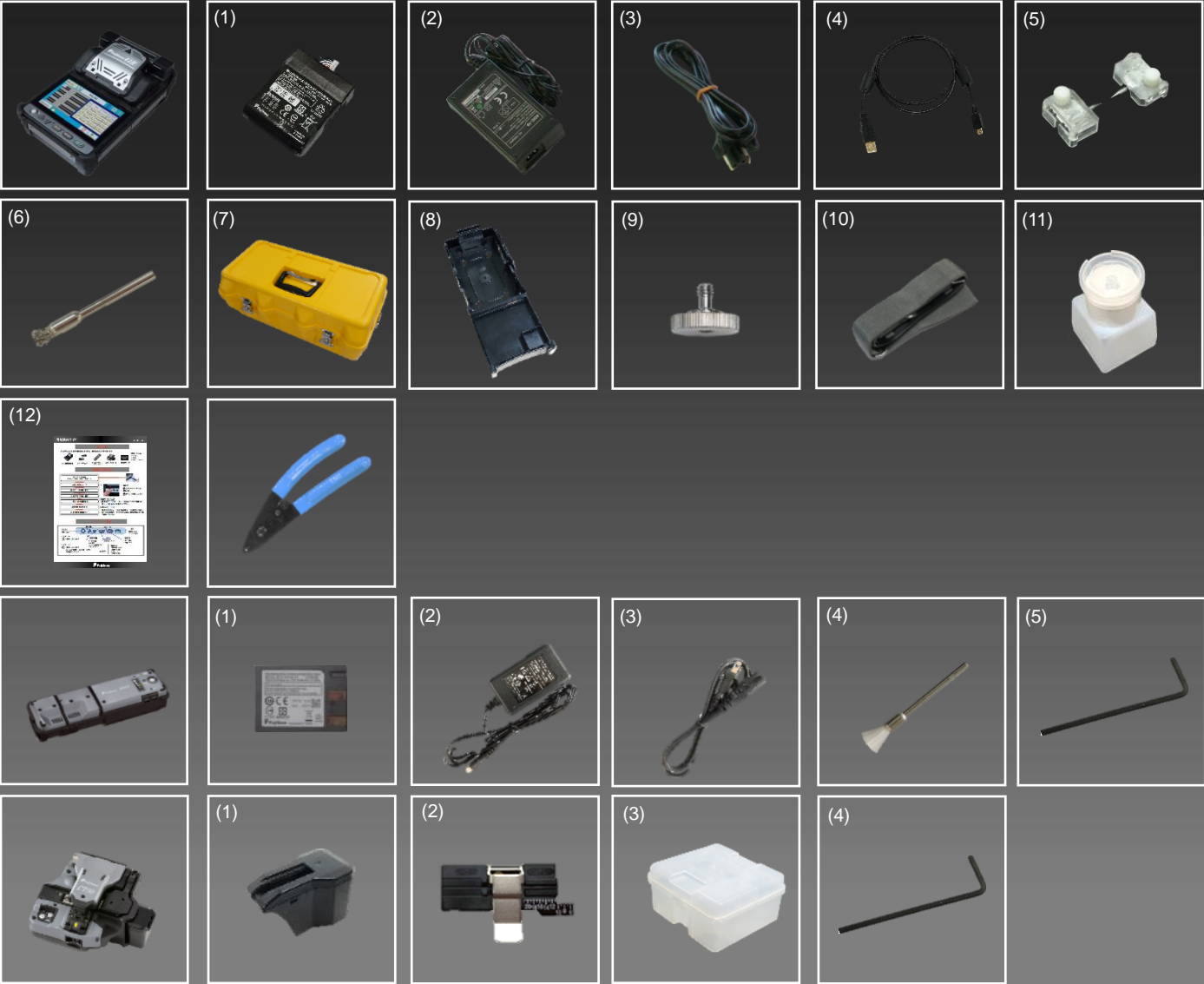


Standard Package

41R Standard package

Item	Model	Qty
Mass Fusion Splicer	41R	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) V-groove Cleaning Brush	VCB-01	1 pc
(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-04-E	1 pc
Single Fiber Stripper	SS03 or SS01	1 pc
Ribbon Fiber Stripper	RS03	1 pc
(1) Battery Pack *	BTR-12A	1 pc
(2) AC Adapter	ADC-09A	1 pc
(3) AC Power Cord	ACC-08, 09, 10, 11 or 12	1 pc
(4) Blade Cleaning Brush	BRS-02	1 pc
(5) Hexagonal Wrench	HEX-01	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



41R Specifications

Item		Specification	
Fiber alignment method		Self cladding alignment with surface melting tension	
Fiber count can be spliced		Up to 4 fiber ribbon	
Applicable fiber	Fiber type	Single mode optical fiber Multi mode optical fiber	
	Cladding dia.	Approx.125µm	
Applicable coating	Fiber holder	Coating shape. : Refer to options Cleave length : Approx. 10mm	
Fiber splice performance	Splice loss *1	ITU-T G.652 : Avg. 0.05dB ITU-T G.651 : Avg. 0.02dB ITU-T G.653 : Avg. 0.08dB ITU-T G.655 : Avg. 0.08dB ITU-T G.657 : Avg. 0.05dB	
		SM FAST mode : Avg. 10 to 12sec. SM AUTO mode : Avg. 15 to 18sec.	
		Splice time *2	
		Applicable protection sleeve	Sleeve type
	Sleeve length		Max. 66mm
Sleeve dia.	Max. 6.0mm before shrinking		
Sleeve heat performance	Heat time *3	40mm FP-04T mode : Avg. 29 to 30sec. Single 60mm mode: Avg. 25 to 27sec.	
Fiber tensile test force		Approx. 2.0N	
Electrode life *4		Approx. 2000 splices	
Physical description	Dimensions W	Approx.131mm without projection	
	Dimensions D	Approx.201mm without projection	
	Dimensions H	Approx.79mm without projection	
	Weight	Approx. 1.2kg including battery	
Environmental condition	Temperature	Operate : -10 to 50 degreeC Storage : -40 to 80 degreeC	
		Operate : 0 to 95%RH non-condensing Storage : 0 to 95%RH non-condensing	
	Humidity		
	Altitude	Max. 3700m	
AC adaptor	Input	AC100 to 240V, 50/60Hz, Max. 1.5A	
Battery pack	Type	Rechargeable Lithium Ion	
	Output	Approx. DC14.4V, 3190mAh	
	Capacity *5	Approx. 140 splice and heat cycles	
	Temperature	Recharge : 0 to 40 degreeC Long Term Storage : -20 to 30 degreeC	
Display	LCD monitor	TFT 4.9 inches with touch screen	
	Magnification	Approx. 44 to 66X	
Illumination	V-grooves	LED lamp	
Interface	PC	USB2.0 Mini B type	
	External	USB2.0 A type	
	LED lamp	Approx. DC5V, 500mA	
	Wireless *7	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	Splice mode select by fiber count analysis Fusion power calibration	
	Reference guide	PDF file stored in splicer	
	Electrode	Replaceable without tool	

41R Options

Item	Model	Remark
Fiber holder	FH-70-200	200µm coating diameter
	FH-70-250	250µm coating diameter
	FH-70-900	900µm coating diameter
	FH-70-2	2 fiber ribbon
	FH-70-4	4 fiber ribbon
	FH-FC-20	900µm in 2mm diameter cable
	FH-FC-30	900µm in 3mm diameter cable
	FH-60-LT900	900µm loose buffer cable
Transfer Clamp	CLAMP-DC-12	Transferring drop cable on work tray
Protection sleeve	FP-04(T)	40mm up to 8 fiber ribbon

Notes

- *1 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.
- *2 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.
- *3 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.
- *4 The electrode life changes depending on the environmental conditions, fiber type and splice modes.
- *5 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.
- *6 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.
- *7 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	Approx. 10mm
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. 60000 fiber cleaves
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	Blade
		Clamp arm

RS03 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
	Coating dia.	200 to 400µm
Stripping length		Max. 35mm
Heat time *1		Approx. 3sec
		Approx. 5sec with Eco-mode
Heat temperature		85 to 140 degreeC
Physical description	Dimensions W	Approx.156mm without projection
	Dimensions D	Approx.49mm without projection
	Dimensions H	Approx.37mm without projection
	Weight	Approx. 265g 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
AC adaptor	Input	AC100 to 240V, 50/60Hz, Max. 0.58A
DC input		DC10 to 17V, Approx. 1A
Battery pack	Type	Rechargeable Lithium Ion
	Output	Approx. DC7.2V, 1840mAh
	Capacity *2	Approx. 600 times with Eco-mode
	Temperature	Operate : -10 to 50 degreeC
		Recharge : 0 to 40 degreeC
		Long Term Storage : -20 to 30 degreeC
Battery life *3	Approx. 500 recharge cycles	
Wireless interface *4		Bluetooth 4.1 LE
Other features	Stripping force	Lower stripping force design
	Automatic heat setting	Controlled from splicer or smartphone

RS03 Options

Item	Model Name	Remark
Spacer	SPA-RS02-08	Coating length 8mm
DC power cord	DCC-11	Splicer to ribbon stripper

Notes

- *1 Measured at room temperature. The heat time changes depending on the environmental conditions and fiber coating type.
- *2 Tested at room temperature with a not degraded battery and Eco-mode. The number of cycles changes depending on the environmental conditions, stripper settings and battery degrading condition.
- *3 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.
- *4 Bluetooth® mark and logos are the registered trademarks of Bluetooth SIG, Inc.

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.

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

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