

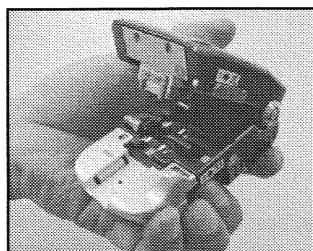
SET

Optical Fiber Cleaver

FC-7R

Operation Manual

SUMITOMO ELECTRIC
OME0826003



IMPORTANT SAFETY PRECAUTIONS

This product has been designed and manufactured to assure personal safety. Improper use can result in bodily injury and serious damage to the fiber cleaver. Please read and observe all warnings instructions given in this operation manual.



- Never disassemble and lubricate any part of the cleaver. Doing so could cause serious damage to the cleaver.
- The FC-7 is a precision tool. Do not impact the cleaver by hitting or dropping it. Doing so may cause personal injury and loss of cleaving performance. It must be handled with care.
- The cleaver blade is extremely sharp. Never touch it with bare hands. If the edge is hit against metallic objects, it will crack, resulting in poor cleaving performance. Handle with care.
- Glass fiber fragments are extremely sharp. Handle with care. Wear safety glasses at all times during cleaving operation for protection from glass fibers.
- In a high location, use a specified strap to prevent the cleaver from dropping.
- Dispose of glass fiber fragments in exclusive waste places.
- If the cleaver is damaged or an abnormality occurs, please contact our maintenance service center.
- Be sure to release the lock pin and open the cover beforehand when moving the cutter slider (sliding the blade). Unless the lock pin is not released, a failure will occur. When the cover is closed, for example, at storage, take care not to apply a load to the cutter slider portion.
- Do not wipe off the grease applied to the upper surface of the slider, which is located between the blade and back clamp. If you wipe off the grease, consult our maintenance service center.
- Do not push the slider with the stop lever lowered.
- Do not use or store the cleaver in high temperature or high humidity. Using the cleaver while condensation is present can cause malfunction.

1. General

There are 3 types in the FC-7R series. Note that the specification is different depending on the type.

FC-7R-F / FC-7R-M	FC-7R-S
For fusion splicer. For single fiber and up to 8c ribbon fiber.	For single fiber.
Use the fiber holder for the fusion splicer to cleave optical fiber with the FC-7R-F(-M).	The FC-7R-S comes with the single fiber adapter. Single fiber is placed in the adapter.

Specifications

		For low fiber count	For high fiber count
		Single fiber	(Single fiber and up to 8c ribbon fiber)
		FC-7R-S	FC-7R-F / FC-7R-M *3
Size and Weight	Size (main body)	98 (W) x 58 (D) x 47 (H) mm	
	Weight	Approx. 300g	
Features	Automatic blade rotation	24 positions per rotation	
Applicable fiber	Cladding diameter	125µm	
	Fiber count	Single fiber	Single fiber and up to 8c ribbon fiber
	Fiber coating diameter *1	250µm, 900µm	Single fiber 250µm, 900µm Ribbon fiber
	Cleave length	For 250µm: 6 to 20mm For 900µm: 10 to 20mm	*2 10mm

If the FC-7R-F(-M) is equipped with the single fiber adapter (Optional, Part No.:AP-FC7), it can be used as the FC-7R-S.

*1: The FC-7R-F(-M) can be used with a fiber holder.

*2: The cleave length is different depending on the fiber splicing method.

*3: For mechanical splice, the FC-7R-M is applicable.

Standard package

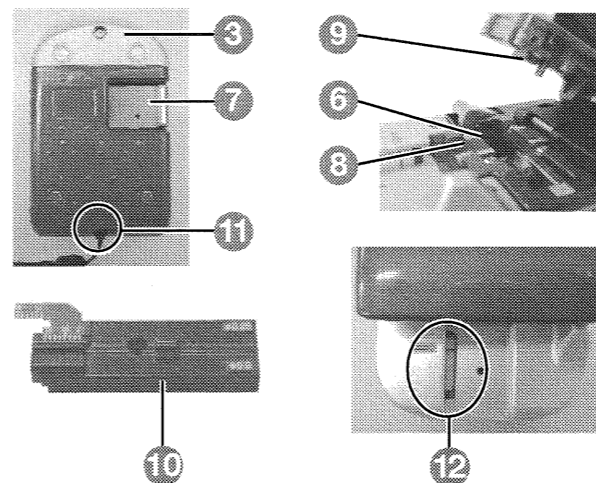
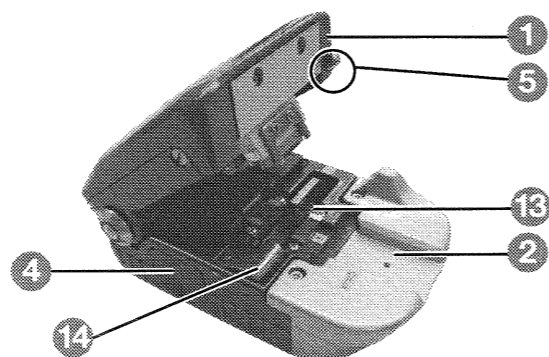
Part name	Part No.	FC-7R-F(-M)	FC-7R-S
Optical fiber cleaver	FC-7R	1	1
Strap	—	1	1
Carrying case	—	1	1
Cleaning brush	—	1	1
Hexagonal wrench	—	1	1
Fiber offcut collector (spare)	TR-FC7	1	1
Operation manual *1	—	1	1

*1: The latest version is provided.

Optional accessories / Consumables

Part name	Part No.	FC-7R-F(-M)	FC-7R-S
Single fiber adapter	AP-FC7	○	○
Fiber offcut collector	TR-FC7	○	○
Replacement blade	FCP-20BL(7R)	○	○

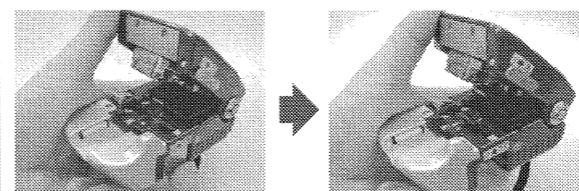
2. Structure



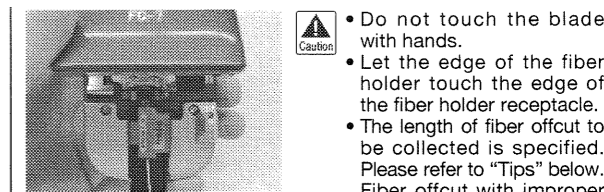
- Cover**
Optical fiber is cleaved and fiber offcut is collected by opening and closing the cover.
- Fiber holder receptacle**
The receptacle to place a fiber holder in. For the FC-7S, a single fiber adapter is loaded in this receptacle.
- Bottom case**
The bottom case needs to be removed when the blade is rotated or replaced.
- Fiber offcut collector (TR-FC7)**
Fiber offcut is collected in this collector.
- Locking pin**
The locking pin is used to keep the cover closed.
- Blade**
The blade to scratch optical fiber.
- Slider**
The slider to move the blade.
- Clamp**
The rubber to clamp optical fiber.
- Anvil**
The rubber to cleave a scratched fiber.
- Single fiber adapter**
The guide tool to place single fiber in the cleaver.
- Tab**
The tab to attach a strap.
- Hook**
The hook to lock the fiber holder.
- Gear for blade rotation**
- Stop lever**

3. Operating procedures

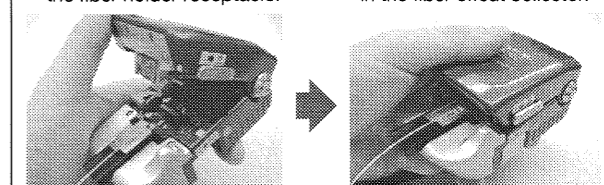
FC-7R-F



- Press the slider until it is locked. At this moment the blade automatically rotates by approx. 15°.

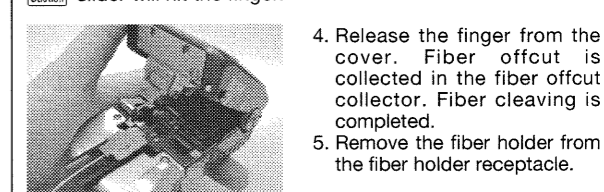


- Place the fiber holder in the fiber holder receptacle.



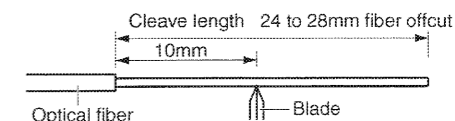
- Press the cover. The slider will be moved.

Caution Do not position your finger where the slider is moved. The slider will hit the finger.

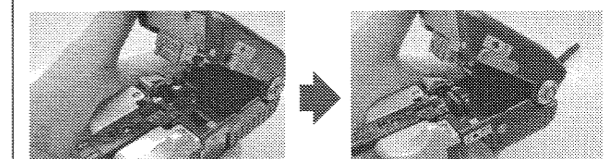


- Release the finger from the cover. Fiber offcut is collected in the fiber offcut collector. Fiber cleaving is completed.
- Remove the fiber holder from the fiber holder receptacle.

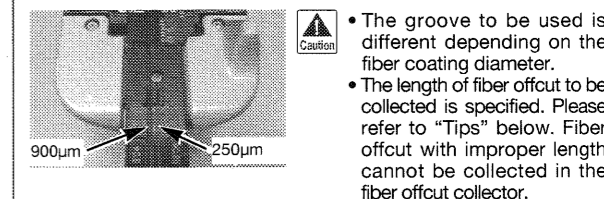
Tips The length of fiber offcut to be collected is specified.



FC-7R-S

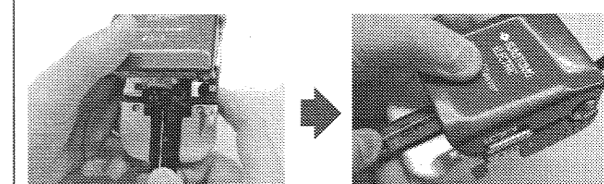


- Press the slider until it is locked. At this moment the blade automatically rotates by approx. 15°.



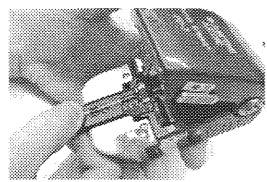
- Place the stripped fiber in the groove. Using the scale, adjust fiber position to obtain necessary cleave length.

Tips Place the fiber straight in the groove to avoid cleaving it obliquely.



- Press the cover. The slider will be moved.

Caution Do not position your finger where the slider is moved. The slider will hit the finger.



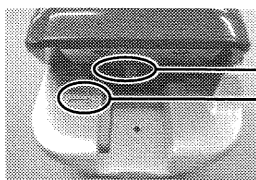
4. Release the finger from the cover. Fiber offcut is collected in the fiber offcut collector. Fiber cleaving is completed.
5. Remove the fiber from the single fiber adapter.

FC-7R-M

Regarding how to use the FC-7R-M, refer to the FC-7R-F operating procedure.

To cleave fiber, place the fiber holder for mechanical splice in the holder stage.

There are different ways of placing the fiber holders depending on the types of mechanical splice.



- ① For the type which allows the fiber holder to contact the edge of the holder stage.
- ② For the type which allows the fiber holder to contact a stopper. (The edge of the fiber holder is positioned at the arrow.)

Caution The cleaver collects a limited length of fiber off-cut. Refer to "Tips" in the previous section.

4. Packing and storage instructions

The fiber cleaver is provided with a locking pin. When packing, storing or transporting the cleaver, be sure to close the cover with the locking pin. Failure to do so could cause fiber offcut to pop out of the fiber offcut collector.

5. Maintenance

Caution Do not disassemble and lubricate any part of the cleaver. Doing so may cause the cleaver to malfunction and invalidate any warranty.

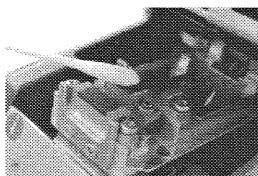
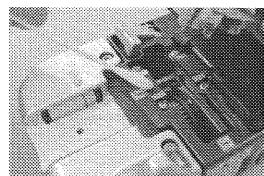
Caution The edge of a blade is manufactured precisely. Do not touch the edge when handling the blade.

Caution The edge of a blade is extremely sharp. Do not touch the edge with hands.

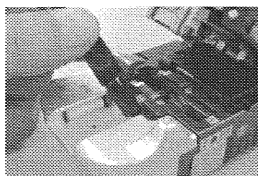
Regular cleaning

To keep excellent cleaving quality, cleaning should be performed before and after each use.

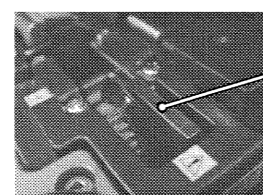
1. Cleaning clamp and anvil
Clean the clamp and anvil (especially black rubber surface) with a cotton swab moistened with alcohol.



2. Cleaning fiber holder receptacle
Clean the edge of the fiber holder receptacle and the tab with a supplied cleaning brush or a dry cotton swab.



Do not remove the blue grease applied to the surface of the slider. Doing so could cause the slider not to move properly.



The grease is applied to the surface of the slider.

Caution Precaution in cleaning

Discarding fiber offcut

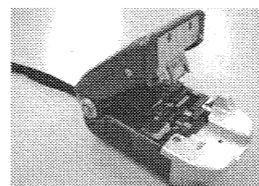


1. Fiber offcut is collected in the fiber offcut collector.
2. Take the collector out of the cleaver.
3. Dispose of the fiber offcut properly.

Caution Glass fiber fragments might fly. Wear safety glasses at all times during cleaving operation for protection from glass fibers.

Tips Using a cotton swab will make it easier to take the fiber offcut out of the collector. Never touch glass fiber fragments with bare hands. Doing so could cause bodily injury.

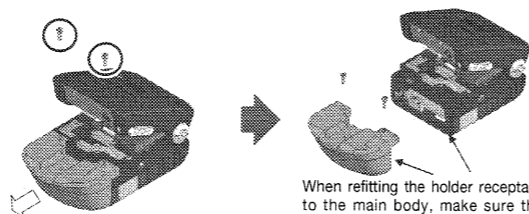
4. After the fiber offcut is removed, close the collector lid and put the collector back in the cleaver.



Blade replacement

<Removing blade>

1. Unscrew the 2 screws with a supplied hexagonal wrench to remove the holder receptacle.



When refitting the holder receptacle to the main body, make sure that there is no gap between them.

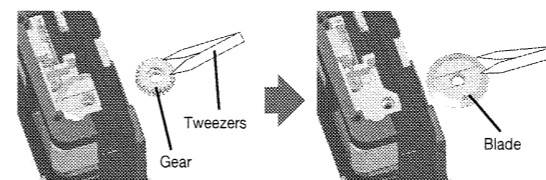
2. Place the cleaver so that the blade is facing up. Loosen the screw which holds the blade with a slotted screwdriver. Remove the screw and spring.



▲Place the cleaver in this direction.

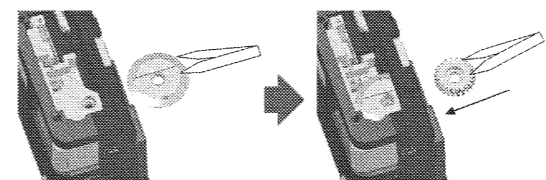
3. Remove the gear with tweezers, and then remove the blade.

Caution Be careful not to touch the edge of the blade with the tweezers.



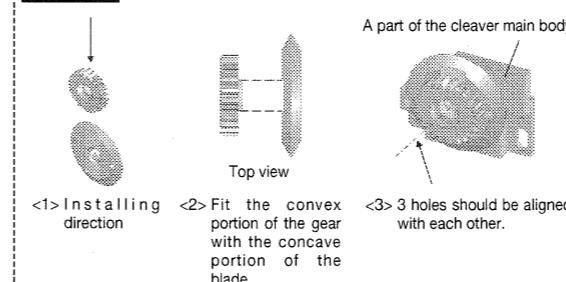
<Installing blade>

4. Prepare a new blade.
5. Install the blade in the main body with tweezers. Then install the gear. Install the blade and gear as illustrated.

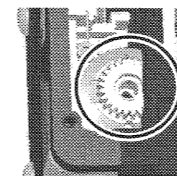


*Be sure to make sure that the convex portion of the gear is fitted with the concave portion of the blade.

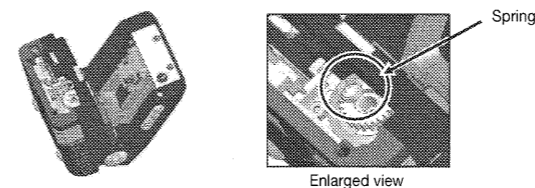
Key point



6. Align the hole on the gear and blade with the hole on the cleaver. (Refer to point <3>.)



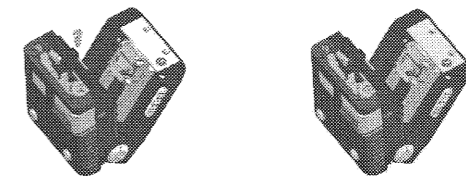
7. Refit the spring into the gear.



Enlarged view

8. Refit and tighten the screw with a slotted screwdriver. [Reference]Optimum torque:Approx.0.98N·m(10kgf·cm)

Caution Do not over tighten the screw. The cleaver will be damaged.



9. Refit the holder receptacle to the main body. (Refer to Step 1.)

Tips After blade replacement, press the slider to ensure that the blade rotates correctly.

Precautions for maintenance

Caution For the need of maintenance and service, contact maintenance service center addresses described in the manual and return the cleaver to the center.

Caution If the cleaver cannot cleave or the blade is chipped, or after 1 year use, it is recommended that the blade be replaced. Refer to "Optional accessories / Consumables" for a replacement blade.

Caution Blade height adjustment is not necessary. Do not adjust and disassemble the parts except the parts which are intended for disassembly for blade replacement. Doing so may cause the cleaver to malfunction.

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