

Optical Fiber Cleaver
FC-6R+

Operation Manual

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.



This symbol indicates explanations about dangerous matters. If users ignore this symbol and handle the cleaver the wrong way, bodily injury and damage to the cleaver could result.

1. Do not disassemble or lubricate any parts of the cleaver. Doing so can cause serious damage to the cleaver.
2. The FC-6R+ is a precision tool. Do not impact the cleaver by hitting or dropping it. Doing so can cause personal injury and loss of cleaving performance.
3. Glass fiber fragments are extremely sharp. Handle with care. Wear safety glasses at all times during cleaving operation for protection from glass fibers.
4. Dispose of glass fiber fragments properly. After use, please empty the off-cut bin and then store the cleaver in the case. There is a possibility that fiber offcuts could spill out of the bin during transportation if remain in the bin.
5. The blade of the cleaver is extremely sharp. Do not touch it with bare hands.
6. The FC-6R+ has the "automatic blade return" function. When the clamp cover is opened after cleaving, the blade carriage returns automatically to the forward. Be careful not to be hit your fingers by the blade or blade carriage.
7. Do not impact the top clamp lever and switching lever. Doing so can cause damage to the levers and loss of cleaving performance.
8. Do not attempt to push further the blade carriage which has been in the rear of the cleaver. Doing so can cause loss of cleaving capability and performance.
9. If the cleaver is damaged or a problem occurs, please contact our service department.

1. General

Specification

	FC-6R+
Cladding Diameter	125 μ m
Fiber Count	Single fiber (ϕ 0.25 & ϕ 0.9mm)
Coating Diameter	Up to 12-fiber ribbon
Cleave length	5~20mm (single ϕ 0.25mm) 10~20mm (single ϕ 0.9mm) 10mm (fiber ribbon)
Cleaving position	24 positions
Blade rotation function	Fixed / Automatic rotation/ Manual rotation
Blade return function	Automatic return
Dimensions	100(W) x 86(D) x 63(H) mm
Weight	Approx. 440g

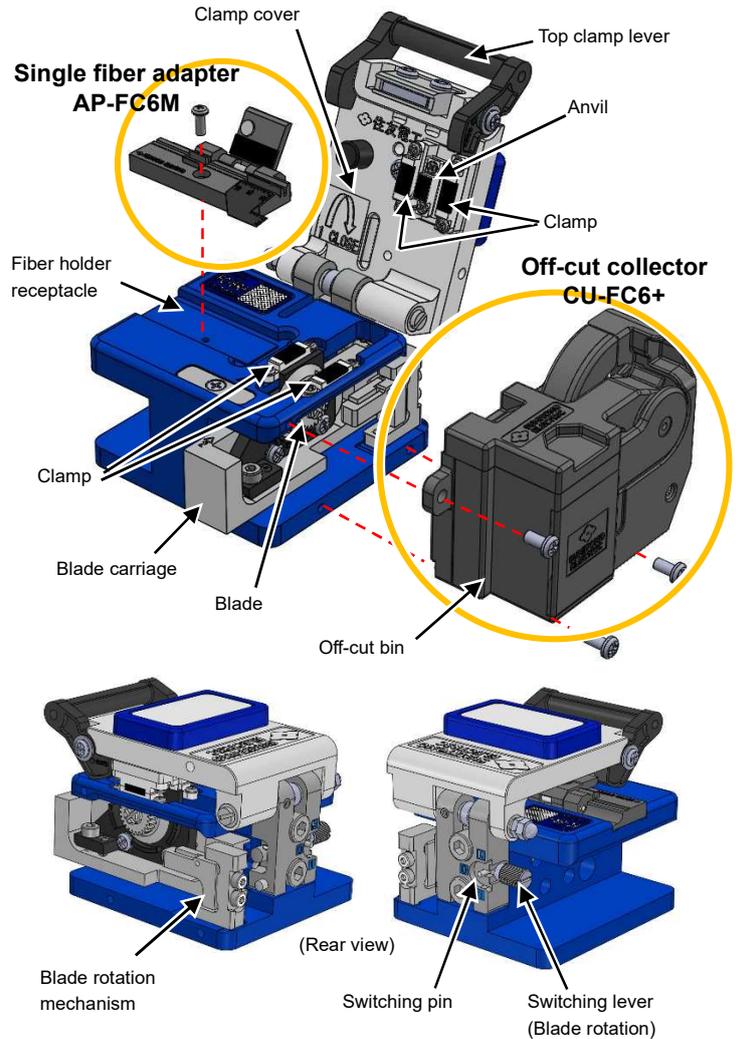
Standard package

Items	Qty.
Optical fiber cleaver FC-6R+	1 pc
Carrying case	1 pc
Fiber off-cut collector CU-FC6+	1 pc (pre-fitted)
Single fiber adapter AP-FC6M	1 pc (pre-fitted or attached)

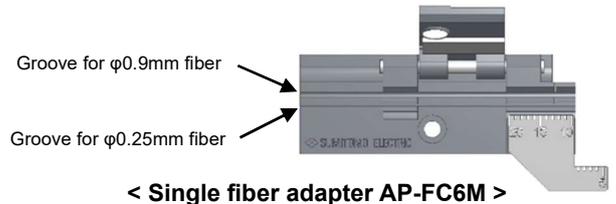
Optional accessories / Consumables

Items	Name
Fiber off-cut collector	CU-FC6+
Single fiber adapter	AP-FC6M
Spare blade	FCP-20BL(7R)

2. Structure



< Fiber cleaver FC-6R+ >

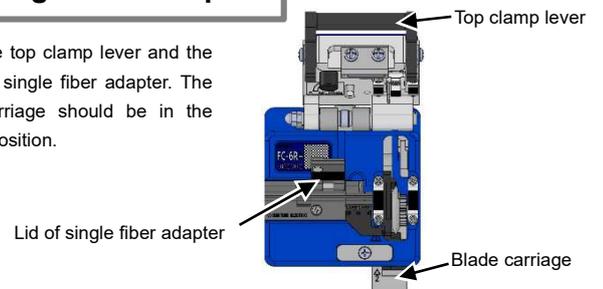


< Single fiber adapter AP-FC6M >

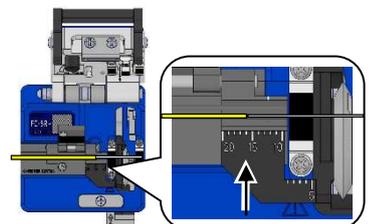
3. Operating procedures

With single fiber adapter

- 1: Open the top clamp lever and the lid of the single fiber adapter. The blade carriage should be in the forward position.

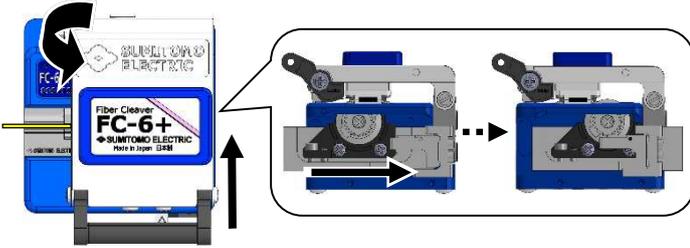


- 2: Lower the fiber straight into the correct V-groove with the end of the fiber coating (e.g. if the cleave length is 16mm) at the 16mm mark on the ruler.



3: Close the lid of the single fiber adapter.

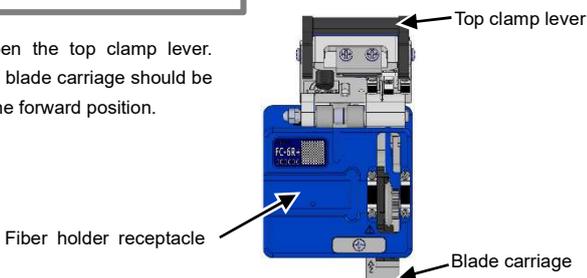
4: Lower the top clamp lever. Slide the blade carriage to the rear of the cleaver. The fiber will be cleaved.



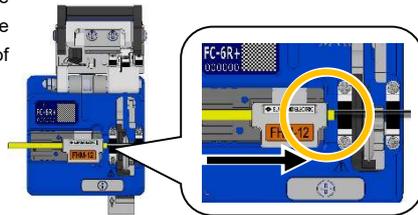
5: Open the top clamp lever. Then open the lid of the single fiber adapter and lift the newly cleaved fiber. Lift the off-cut and dispose it properly. (The FC-6R+ automatically collects an off-cut in the off-cut collector.) The blade carriage returns automatically after cleave, please refer "Automatic blade return function".

With fiber holder

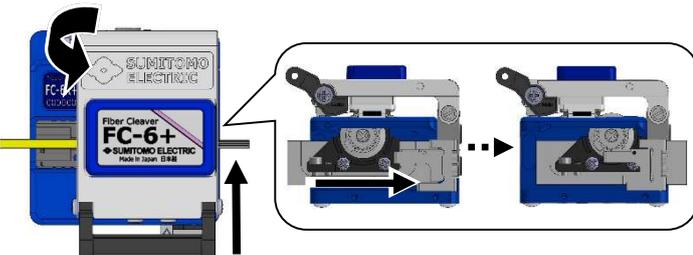
1: Open the top clamp lever. The blade carriage should be in the forward position.



2: Place the fiber holder in the cleaver. Place the edge of the fiber holder against the edge of the fiber holder receptacle.



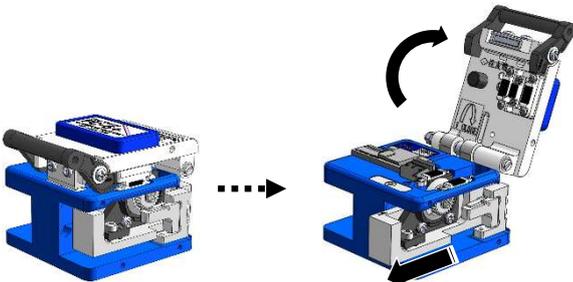
3: Lower the top clamp lever. Slide the blade carriage to the rear of the cleaver. The fiber will be cleaved.



4: Open the top clamp lever. Remove the fiber holder from the cleaver. Lift the off-cut and dispose it properly. (The FC-6R+ automatically collects an off-cut in the off-cut collector.) The blade carriage returns automatically after cleave, please refer "Automatic blade return function".

Automatic blade return function

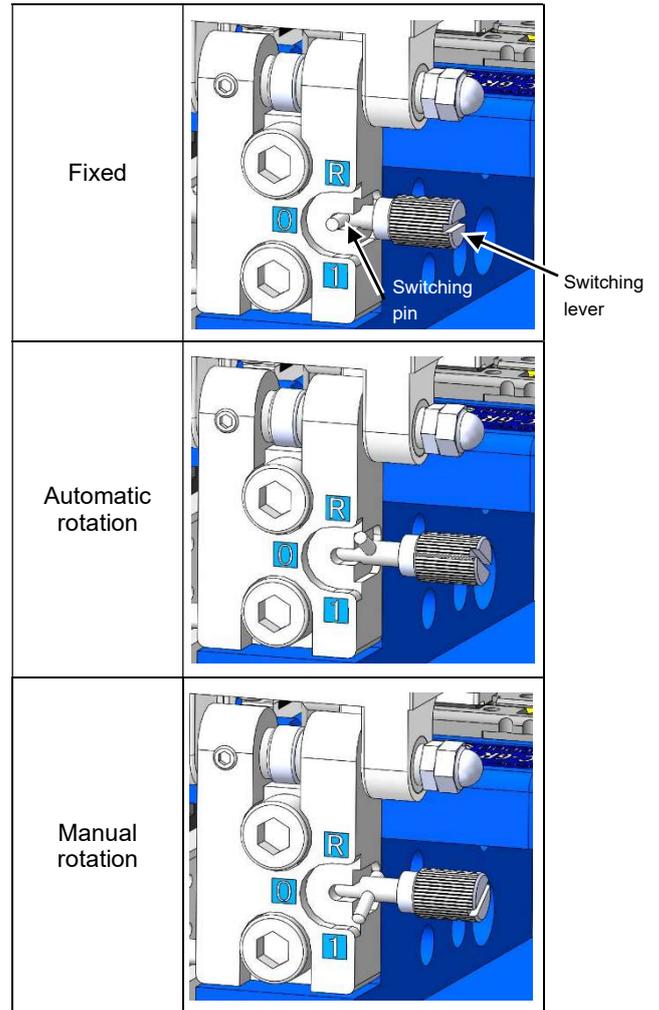
The FC-6R+ has the "automatic blade return" function. When the clamp cover is opened after cleaving, the blade carriage returns automatically to the forward.



Switching of blade rotating operations

Blade rotating operation can be set by bringing the switching pin to a given position.

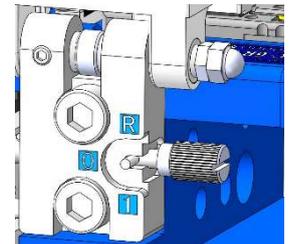
< Blade rotating operations >



0 Fixed (Default setting)

Blade is not rotated.

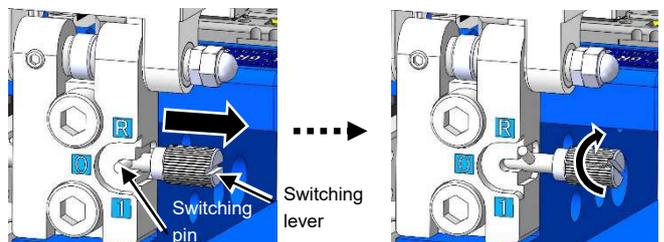
The blade is fixed and not rotated. If a certain area of the blade cannot cleave fiber, rotate the blade with "Automatic rotation" or "Manual rotation" option, referring to the next sections.



R Automatic rotation

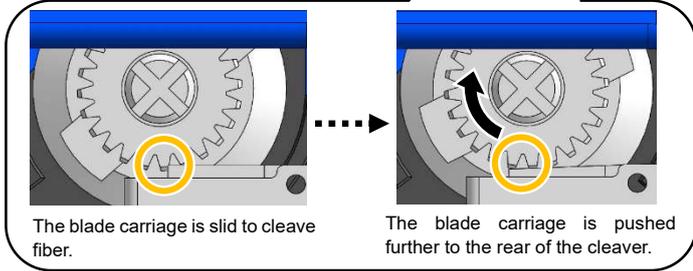
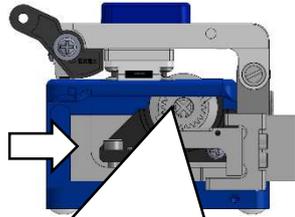
Blade is rotated by approx. 15° with each cleave.

1: As illustrated in the figure below, pull the switching lever to the right and turn it upwards to bring the switching pin to R.



(Continued to page 3.)

2: After sliding the blade carriage to make a cleave, push it further to the rear of the cleaver. The blade is automatically rotated by approx. 15° every time this operation is performed. If you would like to stop "Automatic rotation", bring back the switching pin to 0.



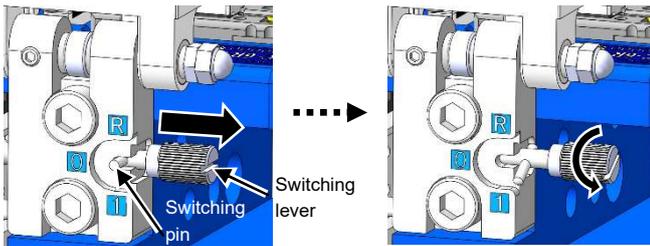
Ensure that the blade carriage is completely pushed to the rear of the cleaver. Otherwise, the blade is not rotated.

Caution

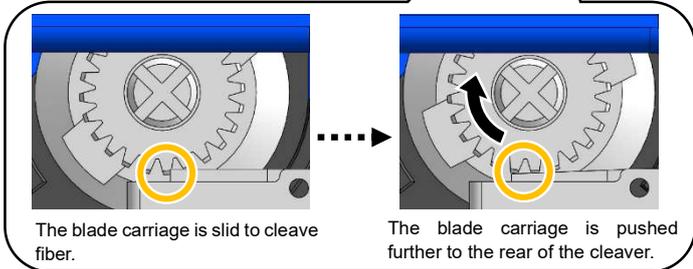
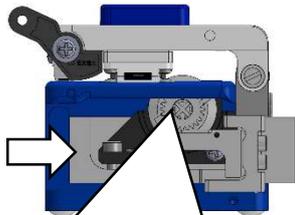
1 Manual rotation

The blade is rotated by 1/24 turn (approx. 15°) once. After the rotation, blade rotating operation returns to [0 Fixed].

1: As illustrated in the figure below, pull the switching lever to the right and turn it downwards to bring the switching pin to 1.



2: After sliding the blade carriage to make a cleave, push it further to the rear of the cleaver. The blade is automatically rotated by approx. 15° (to a new scoring position).

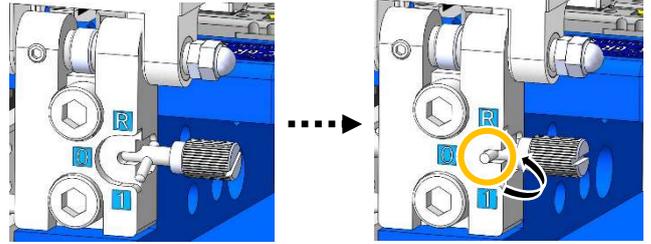


Ensure that the blade carriage is completely pushed to the rear of the cleaver. Otherwise, the blade is not rotated.

Caution

(Continued to step 3.)

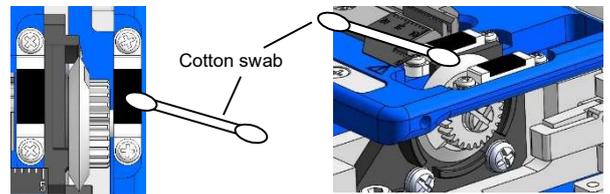
3: When the blade carriage is slid back to the front, the switching pin automatically returns to 0. (No need to bring back the switching pin manually.) Thereafter the blade is fixed.



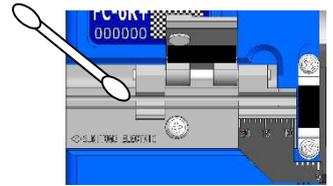
4. Maintenance

Cleaning

To keep excellent cleaving quality, cleaning must be performed after use. Clean the blade edge, the rubber pad of the clamp and the anvil with a cotton swab moistened with isopropyl alcohol.



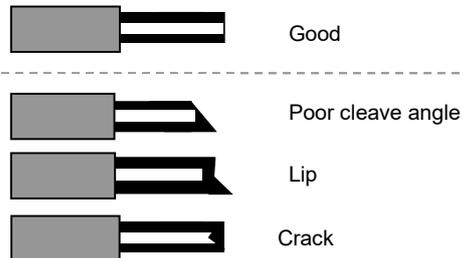
Clean the fiber holder receptacle and the grooves of the single fiber adapter, too.



Caution

- Dust on the blade edge or the clamp might cause loss of cleaving performance or poor quality of fiber end face.
- Do not clean them with any other kind of chemicals.
- If the top clamp lever is closed leaving an off-cut fiber on the clamp, the rubber pad of the clamp will have a trace of fiber on the fiber, causing loss of cleaving performance or poor quality of fiber end face.

Troubleshooting



If the cleaving problem occurs, the followings are possible causes.

- The fiber is placed obliquely in the cleaver.
 - Make sure that the fiber is placed straight in the cleaver.
- The blade height is too high.
 - Adjust the blade height.
- Dust or dirt remains on the clamp.
 - Clean the clamp.
- Dust or dirt remains on the blade.
 - Clean the blade.
- Dust or dirt remains on the fiber.
 - Remove the fiber coating and clean the bare fiber again.

If the problem still persists, please contact our service department.

Maintenance and repair service



If the blade is chipped and cannot cleave fiber, rotate the blade in "Manual rotation" and use the cleaver avoiding the chipped area of the blade. For rotating operation, please refer to "Switching of blade rotating operations."



Do not remove the pin which holds the blade and cleaver body. Do not remove the blade rotating mechanism either. The blade will not rotate or the blade height will change, causing loss of cleaving performance.

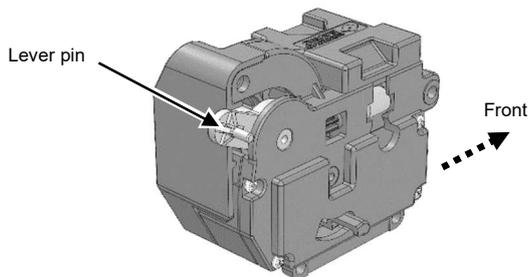


The FC-6R+ must be time for maintenance after 1 year of use or when it cannot cleave fiber. (You will be charged for blade replacement.) Please return it to our service department when the time for maintenance comes.

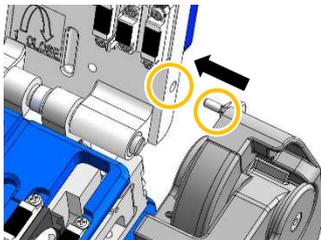
5. Fiber off-cut collector

Installing off-cut collector

- 1: Open the top clamp lever fully.
- 2: Put the lever pin into the pin hole of the cleaver

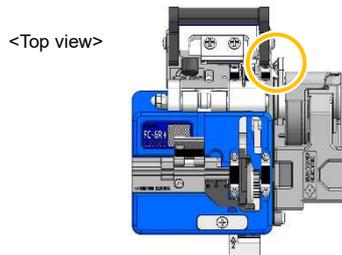


< Fiber off-cut collector CU-FC6+ >

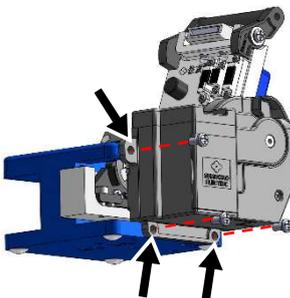


Put the lever pin into the pin hole of the cleaver.

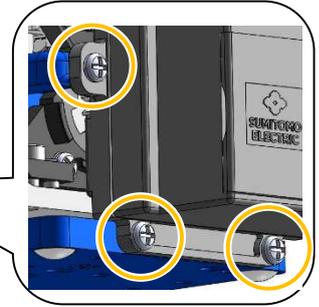
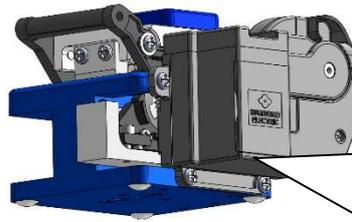
- 3: Ensure that the lever pin and hook fit the cleaver properly.



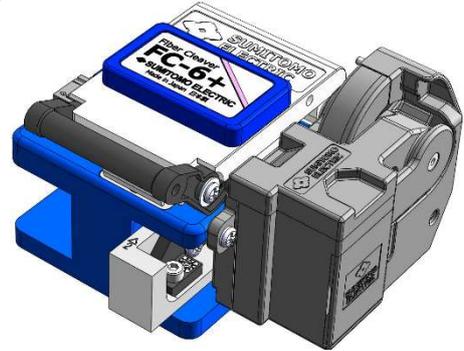
- 4: Align the screw holes on the cleaver with the screw holes on the off-cut collector.



- 5: Tighten the 3 setscrews. Optimum torque: Approx. 40cNm.

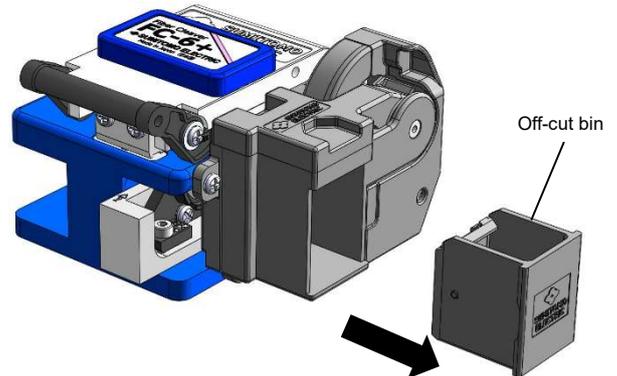


- 6: Completed.



Emptying off-cut collector

- 1: Remove the off-cut bin from the off-cut collector and dispose of the off-cuts in a proper way.



Notice on Sumitomo genuine products



Caution

Please be very cautious of copy products that pretend Sumitomo genuine products.

For more information about counterfeit warning, please visit following website;

https://global-sei.com/sumitomo-electric-splitters/counterfeit_warning/warning01.html



Tokyo (JAPAN)
Sumitomo Electric Industries, Ltd.
(Global Business Dept.)
Akasaka Center Building, 1-3-13,
Motoakasaka, Minato-ku, Tokyo
107-8468, JAPAN
Tel: +81 (0)3 6406 2666
<http://global-sei.com/sumitomo-electric-splitters>

North Carolina (U.S.A.)
Sumitomo Electric Lightwave Corp.
201 South Rogers Lane, Suite 100
Raleigh, NC27610 U.S.A
Toll Free No. 800 358 7378
Tel: +1 919 541 8100
<http://www.sumitomoelectric.com>

London (U.K.)
Sumitomo Electric Europe Ltd.
220 Centennial Park, Centennial Avenue,
Elstree, Herts, WD6 3SL, U.K.
Tel: +44 (0)20 8963 8118
<http://www.sumielectric.com>

Hong Kong (China)
Sumitomo Electric Asia, Ltd.
Tel: +852 2576 0080
<http://www.seac-cn.com/>

Bangkok (Thailand)
Sumitomo Electric (Thailand) Limited
Tel: +66 (0)2 260 7231 to 5
<http://www.set-th.com/>

Singapore
Sumitomo Electric Asia Pacific Pte. Ltd.
Tel: +65 6261 3388
<http://www.seps.com.sg/>

Dubai (U.A.E.)
Middle East office
Tel: +971 4 701 7338

Gurgaon (India)
SEI Trading India Pvt. Ltd. (SETI)
Tel: +91 124 4577 470

Manila (Philippines)
SEI (PHILIPPINES) INCORPORATED
Tel: +63 2 811 2755/2756