

DIAMOND

Fiber Optic Components

Attenuators are used to adapt the transmitted light power to the characteristics of the implanted receiver.

The OAF E-2000™ attenuator line brings together the benefits of an attenuator created by doped fiber and the innovative features of the E-2000™ connector system.

They are available for SM PC and APC applications.

Highlights

- Specially doped attenuating fiber
 - Precise attenuation ($\pm 10\%$ tolerance)
 - Keyed ferrule is removable
 - Injection moulded housing (UL 94 V0 flammability rating)
 - Positive locking mechanism with interchangeable, color coded and mechanical keyed thumb-latch
 - Spring-loaded shutter and spring-loaded protective cap
- Benefits
 - Wavelength independent attenuation.
 - Can be placed even directly in front of the receiver.
 - PC or APC compatible.
 - Suitable for high power up to +20dBm.
 - Easy and reliable cleaning operation.
 - Repeatable attenuation.
 - Long life.
 - Durable and economical construction.
 - Connector housing protects and precisely guides the attenuated ferrule and the alignment sleeve.
 - Prevents undesired removal of the attenuator, when disengaging the interfaced connector.
 - Eliminates need to grasp around connector body when demating, enabling higher packing density.
 - Permits clear and unmistakable identification of lines.
 - Guards against improper connections.
 - Automatically protects ferrule and sleeve.
 - Optional metal cap and shutter offers radiation protection up to +20 dBm.

LSH SINGLE MODE IN LINE ATTENUATOR OAF E-2000™



Cleaning of attenuators ensures precise repeatable attenuation and extended life for the fiber front face.

The OAF E-2000™ series are purposely designed with a removable “attenuated ferrule” for easy and reliable cleaning procedure.

How to remove the ferrule

- Slide the service adapter over the front part of the attenuator, until it locks (audible click).
- Position the handling tool over the ferrule and turn it for 90 degrees clockwise until it disengages the ferrule.
- Pull the ferrule from the body and remove the alignment sleeve and spacer.
- Proceed to clean both front faces as described in our cleaning procedure.

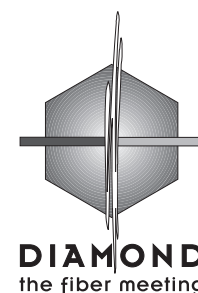
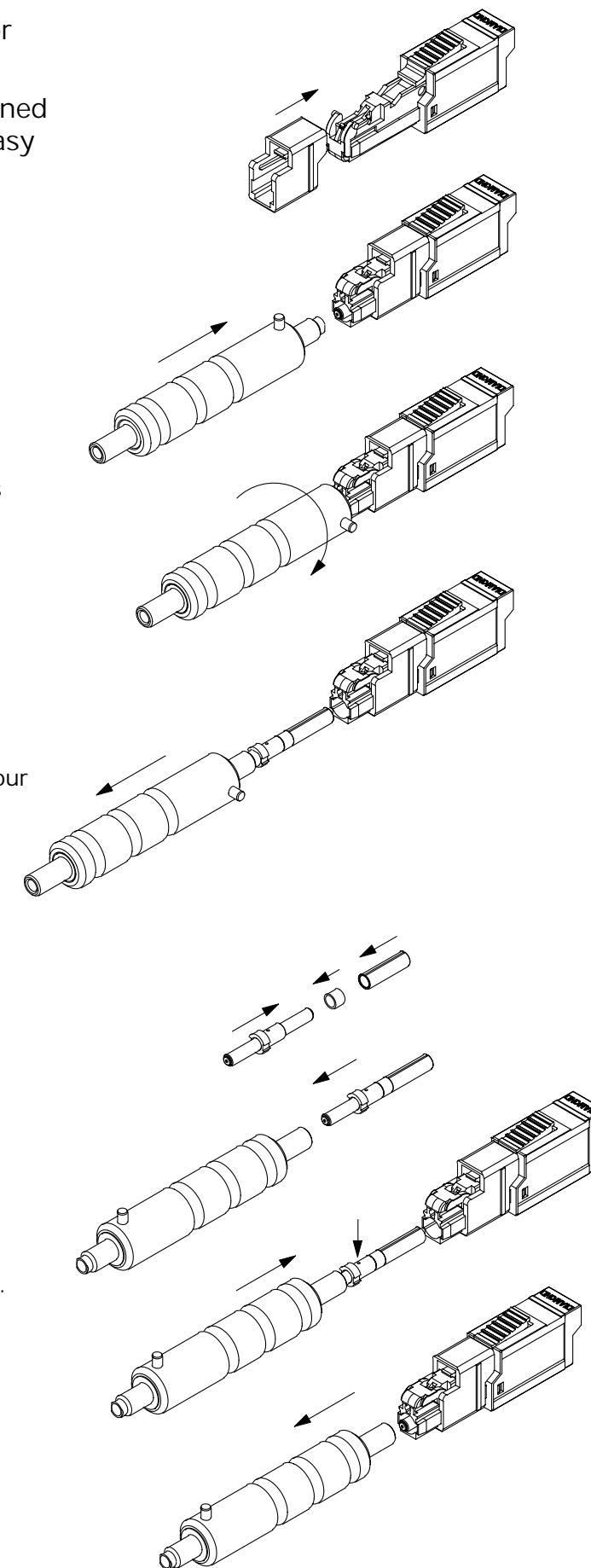
DIAMOND offers a cleaning set containing all necessary tools and a 300x microscope for visual inspection.

- To assemble the “attenuated ferrule”, proceed as follows:
Replace the spacer and the alignment sleeve onto the ferrule.
Insert the “attenuated ferrule” into the handling tool and position it into the attenuator body. Push the “attenuated ferrule” until it locks into the body.
Note: For 8 degree APC, align mark with latch mechanism to ensure proper APC contact with interfacing fiber.

- Remove the service adapter.

Cleaning tools

- | | Order Number |
|--------------------|-----------------|
| - Service adapter: | 223-100-066V001 |
| - Handling tool: | 221-100-083V001 |
| - Cleaning set: | 242-100-002V001 |



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*Specifications subject to change
without notice*

002-037-210P006020

Specifications

	Single Mode					Single Mode 8° HRL					Unit
Fiber	9/125					9/125					μm
Wavelength	1310/1550					1310/1550					nm
Nominal attenuation	2	4	5	6	10	15	20	25	30	dB	
Tolerance*	±0.5	±0.5	±0.5	±0.5	±1	±1.5	±2	±2.5	±2.5	dB	
Repeatability	< 0.5 over service life									dB	
Service life	min 1000 matings										
Return loss	> 45					> 65					dB
Temperature range	-20/+80									°C	

* Values measured using 1310 or 1550 nm LED source. Additional IL induced by modal noise 0,05 dB/dB.
The excess attenuation due to the 2 connections may be as high as 0.5 dB max. Other attenuations on request.

DESCRIPTION:

In-line fixed attenuators inducing wavelength independent attenuation, suitable for 1310 and 1550 nm, achieved using a special doped attenuating fiber.

DESIGN/MATERIALS:

Polish: 0° convex PC.
8° angled convex (APC).

Ferrule: Ø 2.5 mm zirconia ceramic with extending copper-nickel alloy insert, removable for cleaning, anti-rotation keyed.

Alignment sleeve: Floating zirconia split sleeve.

External parts: PBT (Blue for PC or green for APC).

COMPATIBILITY:

With all LSH/LSH-APC connectors and mating adapters.

ATTENUATOR: OAF E-2000™ PC (0°) SM

Color body: blue
Order Number: 1 6 5 - 3 2 0 - 0 0 3 V

COLOR CODE (frame + latch of same color)

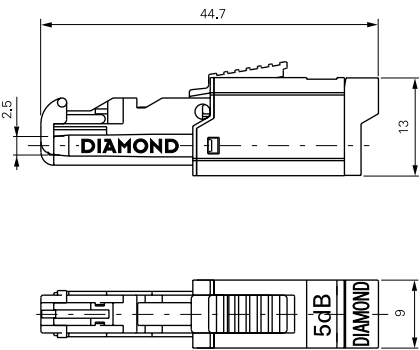
blue	green	black	red	orange	yellow	white	violet
1	2	3	4	5	6	7	8

ATTENUATION

2 dB	4 dB	5 dB	6 dB	10 dB	15 dB	20 dB	25 dB	30 dB
02	04	05	06	10	15	20	25	30

MECHANICAL KEYING (frame + latch of same style)

No. 1 (red)	1 6 5 - 3 2 0 - 0 0 4	V 1
No. 2 (brown)	1 6 5 - 3 2 0 - 0 0 5	V 1
No. 3 (yellow)	1 6 5 - 3 2 0 - 0 0 6	V 1
No. 4 (orange)	1 6 5 - 3 2 0 - 0 0 7	V 1
No. 5 (white)	1 6 5 - 3 2 0 - 0 0 8	V 1
No. 6 (violet)	1 6 5 - 3 2 0 - 0 0 9	V 1



ATTENUATOR: OAF E-2000™ APC (8°) SM

Color body: green
Order Number: 1 6 5 - 3 2 0 - 2 0 2 V

COLOR CODE (frame + latch of same color)

blue	green	black	red	orange	yellow	white	violet
1	2	3	4	5	6	7	8

ATTENUATION

2 dB	4 dB	5 dB	6 dB	10 dB	15 dB	20 dB	25 dB	30 dB
02	04	05	06	10	15	20	25	30

MECHANICAL KEYING (frame + latch of same style)

No. 1 (red)	1 6 5 - 3 2 0 - 2 0 3	V 2
No. 2 (brown)	1 6 5 - 3 2 0 - 2 0 4	V 2
No. 3 (yellow)	1 6 5 - 3 2 0 - 2 0 5	V 2
No. 4 (orange)	1 6 5 - 3 2 0 - 2 0 6	V 2
No. 5 (white)	1 6 5 - 3 2 0 - 2 0 7	V 2
No. 6 (violet)	1 6 5 - 3 2 0 - 2 0 8	V 2