

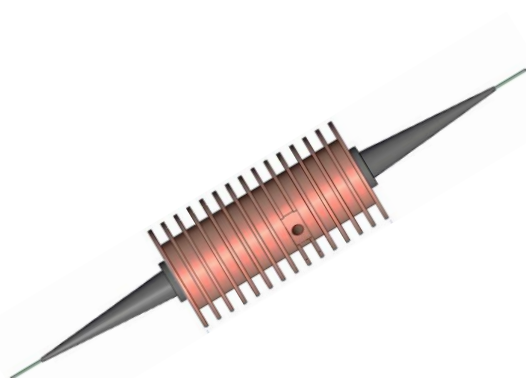
Fiber Cladding Power Stripper With Internal Liquid Cooling

(100W – 1kW)



DATASHEET

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Features

- High Reliability
- Ultra-Low Loss
- Passive
- Integrated Tap

Applications

- Laser
- Protection
- High Power Device

Our Fiber Cladding Power Stripper remove unwanted cladding light from a high optical power transmission fiber, that is harmful to the downstream components. This device does not break the fiber, offering continuous core transmission with little loss. The devices have unique internal passive liquid circulation micro-chambers to cool localized hot spots effectively. The devices are designed for aerospace systems with high reliability and power level exceeding kW. We offer both medium power compact size and high power compatible packages, both with internal self-containing liquid cooling. The devices should be mounted in contact with a heat sink, such as metal frame to transfer the heat from the device surfaces.

Specifications

Parameter	Min	Typical	Max	Unit
Operation Wavelength	450		2600	nm
Core Insertion Loss ^[1]		0.01	0.03	dB
Polarization Dependent Loss (SM version only)		0.01	0.03	dB
Cladding Attenuation	17	20	25	dB
Extinction Ratio (PM version only)	19	23	25	dB
Return Loss	55			dB
Cladding Power Stripping	20	100	1000 ^[2]	W
Operating Temperature	-5		75	°C
Storage Temperature	-40		85	°C

Note:

- [1]. Without connector and at room temperature
- [2]. Require to mount on an effective heat sink

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

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P +1 781-935-1200

E sales@photonwares.com

W www.agiltron.com

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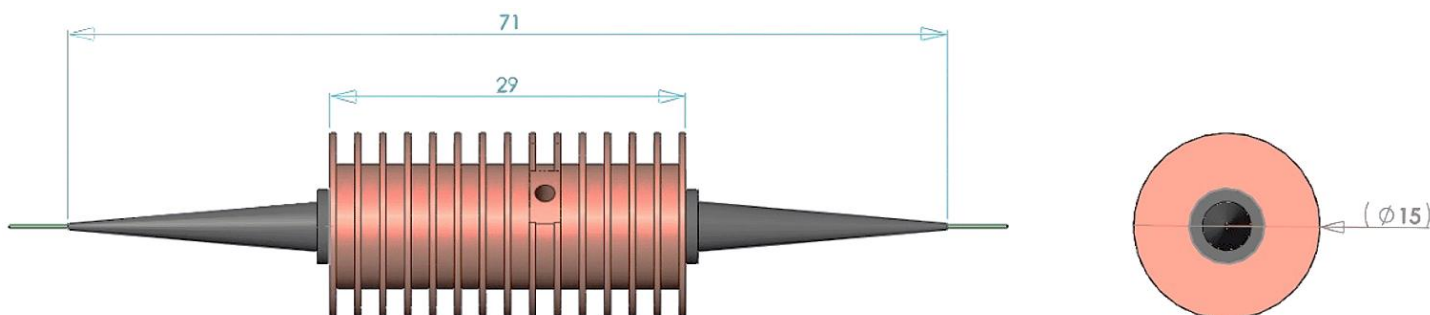
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Mechanical Dimensions (mm)

The sizes vary with the stripping power requirements.



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information (Part Number)

Prefix	Stripping Power	Wavelength	Type	Fiber Type	Fiber Cover	Fiber Length	Connector ^[1]
FCPS-	10W = 1 20W = 2 50W = 3 100W = 4 500W = 5 700W = 6 1kW = 7 1.5kW = 8 2.5kW = 9 Special = 0	1020-1080nm = 1 1520-1590nm = 2 1800-2500nm = 3	PM = 1 Non-PM = 0	6/125 DC = 061 10/125 DC = 101 15/125 DC = 151 20/125 DC = 201 20/200 DC = 202 25/250 DC = 252 30/250 DC = 302 20/400 DC = 204 GDF-1550 = G15 12/130,NA.2/.46 = 121 25/300,NA.09/.46 = 253 10/130,NA.15/.46 = 103 25/350,NA.09/.46 = 253 25/400,NA.15/.46 = 254	Bare fiber = 1 900 µm tube = 3 3mm tube = 5 Armor = 7 Special = 0	0.25m = 1 0.5m = 2 1.0m = 3 1.5m = 4 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 Special = 0

* The high power connectors are special orders

[1]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

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Application Notes

Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

Fiber Cleanliness

Fibers with smaller core diameters ($<5 \mu\text{m}$) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the how handling by expanding the core side at the fiber ends.