



Dragon 6 kW High Power Laser Cable (Dragon Series)

Rev 11C

Description

AFR's Dragon 6 kW Laser Cable provides QBH compatible connector for high power fiber lasers up to 6 kW. Technologies incorporated include cladding mode stripping, indirect water cooling, protective window and safety interlock.

Key Features

- Low Insertion Loss
- High Power Handling
- High Backward Power Handling
- Indirect Water Cooling
- Safety Interlock

Applications

- Fiber Lasers
- Fiber Coupling

Specifications

Parameter	Unit	Value
Operation Wavelength	nm	945 ± 50 or 1080 ± 30
Numerical Aperture (NA)	-	≤ 0.22
Max. Transmission Loss of Fiber Core	%	2
Max. Power Handling	W	6000
Max. Stripping Cladding Power	W	500
Max. Z-Position Tolerance	μm	± 50
Max. Angular Deviation	mrad	20

Cooling Water Requirements

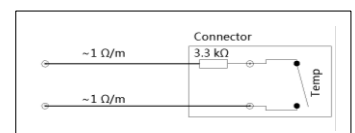
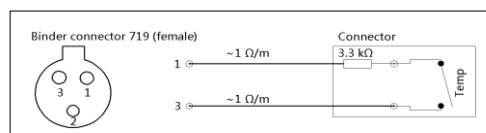
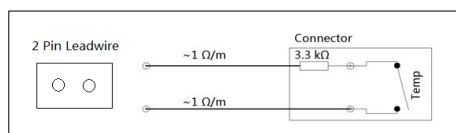
Flow Rate	L/min	1.5 - 3.0
Max. Water Pressure	MPa	0.8
Water Temperature	°C	10 - 45
Water Hose Diameter	mm	ID/OD = 4/6

Others

Mechanical Interface	-	Compatible with the Standard QBH Interface
Type of Cable Gland	-	HPD05: Nylon
	-	HPD06: Metal
Min. Fiber Tensile Load	N	5
Operating Temperature	°C	+ 5 to + 50
Storage Temperature	°C	- 20 to + 70

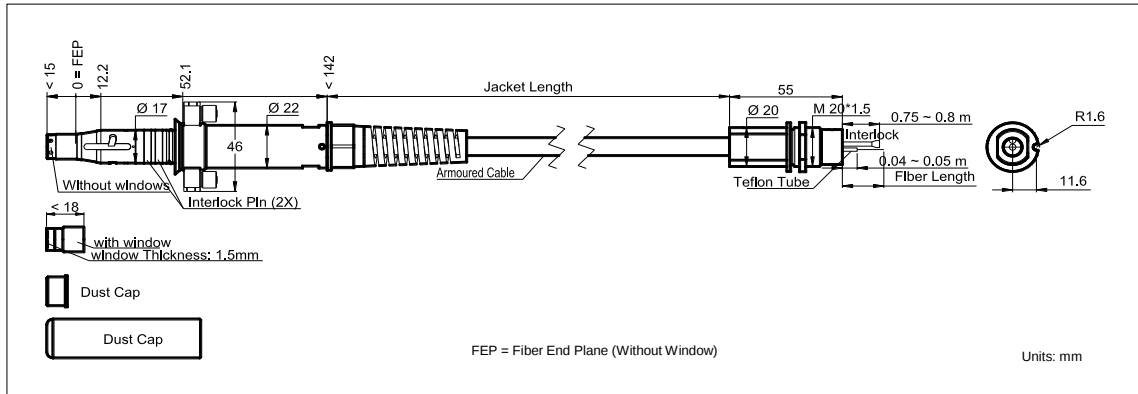
Safety Interlock

Interlock Circuit Resistance	3.3 kΩ ± 5% + 2 Ω/m fiber
Thermo-Switch Limit	70 °C ± 5 °C, Reset temp. < 30 °C
Max. Working Voltage	- 33 V

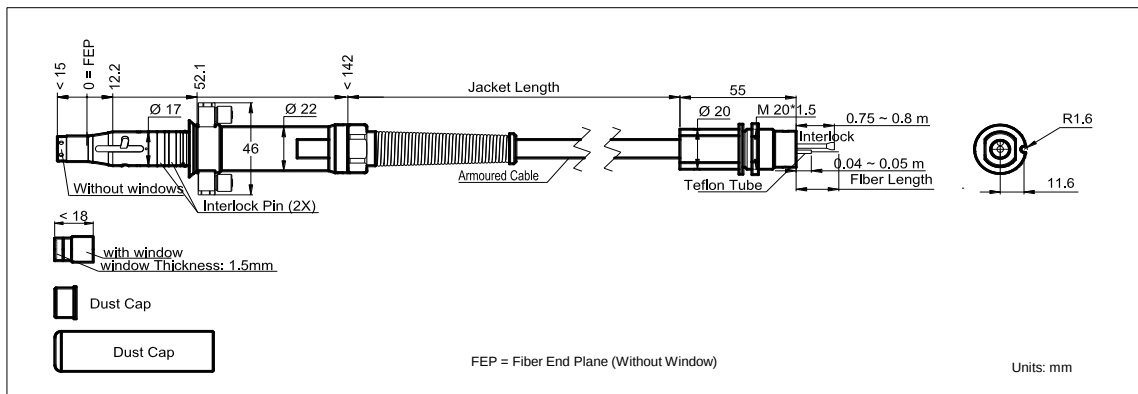


Package Dimensions

HPD05



HPD06



¹When output power is above 3 kW, there is only the protective sleeve without any window.

Ordering Information

Dragon-①①-②②②②-③③③-④④-⑤-⑥⑥⑥-⑦-⑧-⑨⑨⑨⑨⑨

①①: Handling Power

01 - 1000 W

03 - 3000 W

06 - 6000 W

SS - Specify

②②②②: Wavelength

0915 - 915 nm

1080 - 1080 nm

SSSS - Specify

③③③: Fiber Type

001 - BrightCore YZ037 20/250, 0.075 NA

002 - BrightCore YZ041 25/250, 0.11 NA

003 - BrightCore DZ027 20/400, 0.065 NA

004 - BrightCore YZ035 50/400, 0.12 NA

SSS - Specify

④④: Jacket Length

10 - 10 ± 0.2 m

15 - 15 ± 0.2 m

20 - 20 ± 0.2 m

SS - Specify

⑤: Fiber Length

1 - ≥ 1 m

2 - ≥ 2 m

S - Specify

⑥⑥⑥: Armoured Cable

13P - 13 mm PVC, for HPD06

13T - 13 mm TPU, for HPD06

10P - 10.5 mm PVC, for HPD05

10T - 10.5 mm TPU, for HPD05

09P - 9.2 mm PVC, for HPD05

09T - 9.2 mm TPU, for HPD05

⑦: Cable End Package

B - Binder Connector Type

P - 2-Pin Leadwire

N - None

⑧: Window Option

W - With Window

N - Without Window

⑨⑨⑨⑨⑨: Package Type

HPD05 - Type HPD05

HPD06 - Type HPD06