



Dragon 20 kW High Power Laser Cable (Dragon Series)

Rev 11B

Description

AFR's Dragon 20 kW Laser Cable provides QBH compatible connector for high power fiber lasers up to 20 kW. Technologies incorporated include cladding mode stripping, indirect water cooling 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	1080
Numerical Aperture (NA)	-	≤ 0.22
Max. Transmission Loss of Fiber Core	%	2
Max. Power Handling	kW	8 - 20
Max. Peak Power	-	Max. 50 kW @ 1 ms Max. 1 MW @ 50 ns
Max. Stripping Cladding Power	W	1 kW for 10 min 500 W Continuously
Max. Z-Position Tolerance	μm	50
Max. Angular Deviation	mrاد	10

Cooling Water Requirements

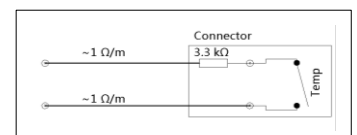
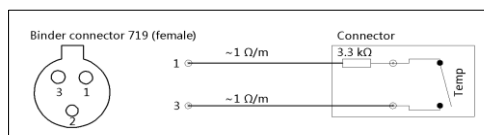
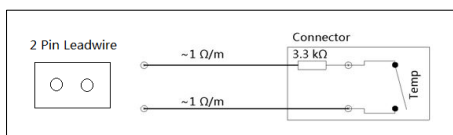
Flow Rate	L/min	1.5 - 3.0
Max. Water Pressure	MPa	0.8
Water Temperature	$^{\circ}\text{C}$	10 - 45
Water pH Value	-	5.6 - 7.9
Water Hose Diameter	mm	ID/OD = 4/6

Others

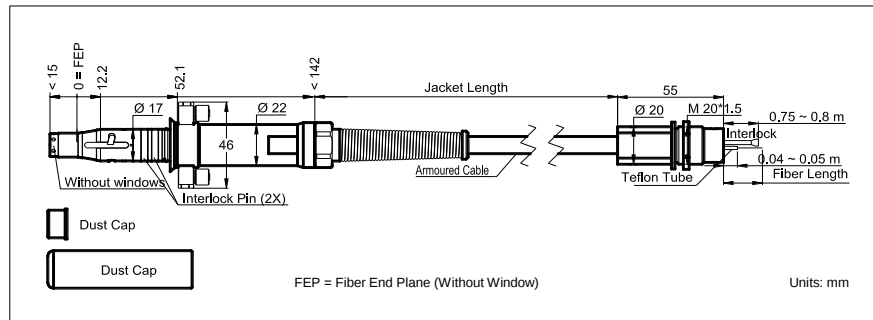
Mechanical Interface	-	Compatible with the Standard QBH Interface
Type of Cable Gland	-	Metal
Operating Temperature	$^{\circ}\text{C}$	+ 5 to + 50
Storage Temperature	$^{\circ}\text{C}$	- 20 to + 70

Safety Interlock

Interlock Circuit Resistance	$3.3\text{ k}\Omega \pm 5\% + 2\text{ }\Omega/\text{m fiber}$
Thermo-Switch Limit	$70\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$, Reset temp. $< 30\text{ }^{\circ}\text{C}$



Package Dimensions



Ordering Information

Dragon-①①-②②②②-③③③-④④-⑤-⑥⑥-⑦-⑧-⑨⑨⑨⑨⑨

①①: Handling Power

10 - 10 kW

15 - 15 kW

SS - Specify

②②②②: Wavelength

1080 - 1080 nm

SSSS - Specify

③③③: Fiber Type

007 - BrightCore YZ042 50/70/360, 0.22 NA

008 - BrightCore YZ050 100/140/250, 0.12 NA

009 - BrightCore 100/120/200, 0.15 NA

010 - Nufern 50/70/360, 0.22 NA

011 - Nufern 100/120/360, 0.22 NA

SSS - Specify

④④: Jacket Length

10 - 10 m

15 - 15 m

20 - 20 m

SS - Specify

⑤: Fiber Length

1 - 1 m

2 - 2 m

S - Specify

⑥⑥: Armoured Cable

13T - 13.3 mm, TPU

13P - 13.3 mm, PVC

⑦: Cable End Package

B - Binder Connector Type

P - 2-Pin Leadwire

N - None

⑧: Window Option

N - Without Window

⑨⑨⑨⑨⑨: Package Type

HPD11 - Type HPD11