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 Laser
- Fiber Coupling

Specifications

Parameter	Unit	Value
Operation Wavelength	nm	1080
Numerical Aperture (NA)	-	$\leqslant 0.22$
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	mrad	10

Cooling Water Requirements

Parameter	Unit	Value
Flow Rate	L/min	1.5 - 3.0
Max. Water Pressure	MPa	0.8
Water Temperature	°C	10 - 45
Water pH Value	-	5.6 - 7.9
Water Hose Diameter	mm	ID/OD = 4/6

Others

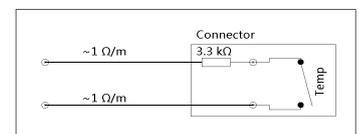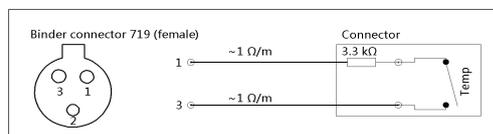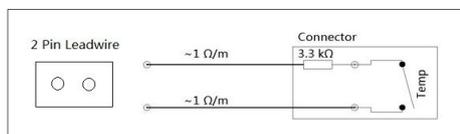| Parameter	Unit	Value
Mechanical Interface	-	Compatible with the Standard QBH Interface
Type of Cable Gland	-	Metal
Operating Temperature	°C	+ 5 to + 50
Storage Temperature	°C	- 20 to + 70

Safety Interlock

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

Package Dimensions

FEP = Fiber End Plane (Without Window)　　　　Units：mm
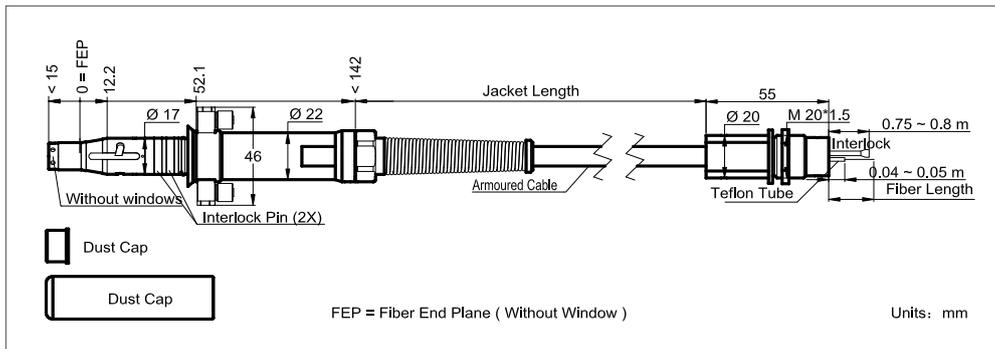
Ordering Information

Dragon-①①-②②②②-③③③-④④-⑤-⑥⑥-⑦-⑧-⑨⑨⑨⑨⑨

①①: Handling Power	②②②②: Wavelength	③③③: Fiber Type
10 - 10 kW	1080 - 1080 nm	007 - BrightCore YZ042 50/70/360, 0.22NA
15 - 15 kW	SSSS - Specify	008 - BrightCore YZ050 100/140/250, 0.12NA
SS - Specify		009 - BrightCore 100/120/200, 0.15NA
		010 - Nufern 50/70/360, 0.22NA
		011 - Nufern 100/120/360, 0.22NA
		SSS - Specify

④④: Jacket Length	⑤: Fiber Length	⑥⑥: Armoured Cable
10 - 10 m	1 - 1 m	13T - 13.3 mm, TPU
15 - 15 m	2 - 2 m	13P - 13.3 mm, PVC
20 - 20 m	S - Specify	
SS - Specify		

⑦: Cable End Package	⑧: Window Option	⑨⑨⑨⑨⑨: Package Type
B - Binder Connector Type	N - Without Window	HPD11 - Type HPD11
P - 2-Pin Leadwire		
N - None		