



Dragon 20 kW QD Compatible High Power Laser Cable (Dragon-UPD Series)

Rev 11

Description

AFR's Dragon 20 kW product provides QD 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 ± 30
Numerical Aperture (NA)	-	≤ 0.22
Max. Transmission Loss of Fiber Core	%	2
Max. Power Handling	kW	20
Max. Peak Power	-	Max. 50 kW @ 1 ms Max. 1 mW @ 50 ns
Max. Stripping Cladding Power	-	1 kW for 10 min 500 W Continuously
Max. Z-Position Tolerance	μm	± 80
Max. Angular Deviation	mrاد	10

Cooling Water Requirements

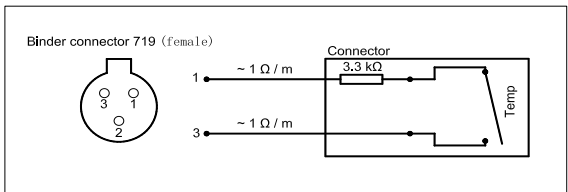
Flow Rate	L/min	1.5 - 3
Min. Water Pressure	Mpa	0.8
Water Temperature	°C	10 - 45
Water Hose Diameter	mm	ID/OD = 4/6

Others

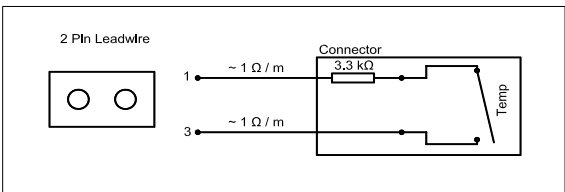
Mechanical Interface	-	Compatible with the Standard QD Interface
Type of Cable Gland	-	Metal
Min. Fiber Tensile Load	N	5
Operating Ambient Temperature	°C	+ 5 to + 50
Storage Temperature	°C	- 20 to + 70

Safety Interlock

Parameter	Unit	Value
Interlock Circuit Resistance	-	3.3 kΩ ± 5 % + 2 Ω/m Fiber
Thermoswitch Limit	-	70 °C ± 5 °C, Reset temp < 30 °C
Max. Working Voltage	-	33 V

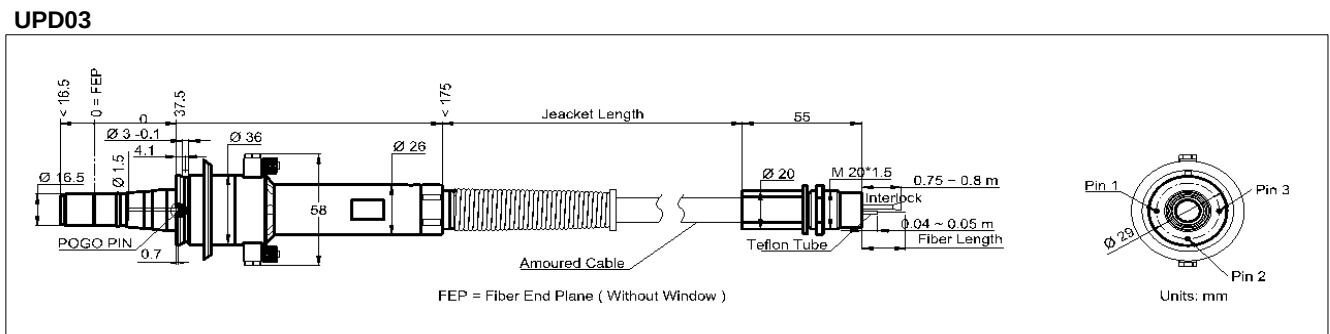


Binder Connector



2 Pin Leadwire

Package Dimensions



Ordering Information

Dragon-①①-②②②②-③③③③-④④-⑤-⑥⑥⑥-⑦-⑧-⑨⑨⑨⑨⑨

①①: Handling Power 10 - 10 kW 20 - 20 kW SS - Specify	②②②②: Wavelength 1080 - 1080 nm SSSS - Specify	③③③: Fiber Type 007 - Brightcore 50/70/360, 0.22/0.46 NA 008 - Brightcore 100/140/250, 0.12 NA 011 - Nufern BD-S100/120/360-STN, 0.22 NA 022 - YOFC SI 100/120/360, 0.22 NA 030 - YOFC SI 150/170/360-22/540, 0.22 NA 031 - Nufern BD-S150/180/660-STN, 0.22 NA 032 - YOFC SI200/220/360-22/650E, 0.22 NA 033 - Nufern BD-S200/220/360-STN, 0.22 NA 054 - YOFC SI 70/90/360, 0.22NA SSS - Specify
④④: Jacket Length 10 - 10 ± 0.2 m 20 - 20 ± 0.2 m 30 - 30 ± 0.3 m SS - Specify	⑤: Fiber Length 1 - ≥ 1 m 2 - ≥ 2 m S - Specify	⑥⑥⑥: Armoured Cable 13T - 13 mm, TPU 13P - 13 mm, PVC
⑦: Cable End Package B - Binder Connector P - 2 Pin Leadwire N - None	⑧: Window Option N - Without Window	⑨⑨⑨⑨⑨: Package Type UPD03 - Type UPD 03