Advanced Fiber Resources (Hong Kong), Ltd.

# Dragon 30 kW Q+ Compatible High Power Laser Cable (Dragon - UPD+ Series)

Rev 11B

## Description

AFR's Dragon 30 kW product provides Q+ compatible connector for high power fiber lasers up to 30 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

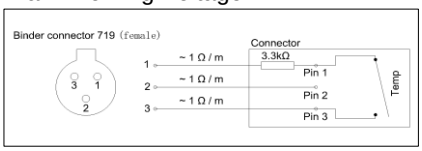
- Fiber Laser
- Fiber Coupling

## Specifications

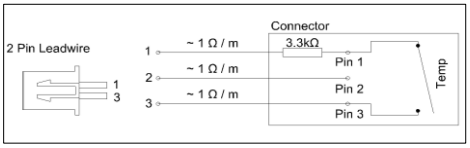
| Parameter | Unit | Value |
|---|---|---|
| Operation Wavelength | nm | 1080 ± 30 |
| Fiber Core Diameter | μm | 100, 150, 200 or Specify |
| Numerical Aperture (NA) | - | 0.22 |
| Max. Transmission Loss of Fiber Core | % | 2 |
| Max. Power Handling | kW | 30 |
| Max. Peak Power | - | Max. 1 mW @ 50 ns |
| Max. Stripping Cladding Power | - | 1.5 kW for 10 min |
| | - | 1 kW Continuously |
| Max. Z-Position Tolerance | μm | ± 80 |
| Max. Angular Deviation | mrad | 10 |
| **Cooling Water Requirements** | | |
| Min. Flow Rate | L/min | 4.0 |
| Max. Water Pressure | Mpa | 0.8 |
| Water Temperature | ℃ | 10 - 35 |
| Water Hose Diameter | mm | ID/OD = 6/8 |
| **Others** | | |
| Mechanical Interface | - | Compatible with the Standard Q+ Interface |
| Type of Cable Gland | - | Metal |
| Min. Fiber Tensile Load | N | 5 |
| Operating Ambient Temperature | ℃ | + 5 to + 50 |
| Storage Temperature | ℃ | - 20 to + 70 |

## Safety Interlock

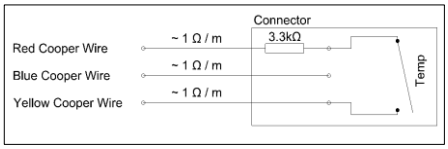
| | |
|---|---|
| Interlock Circuit Resistance | 3.3 kΩ ± 5% + 2 Ω/m Fiber |
| Thermoswitch Limit | 70 °C ± 5 °C, Reset temp < 30°C |
| Max. Working Voltage | 33 V |




Binder Connector



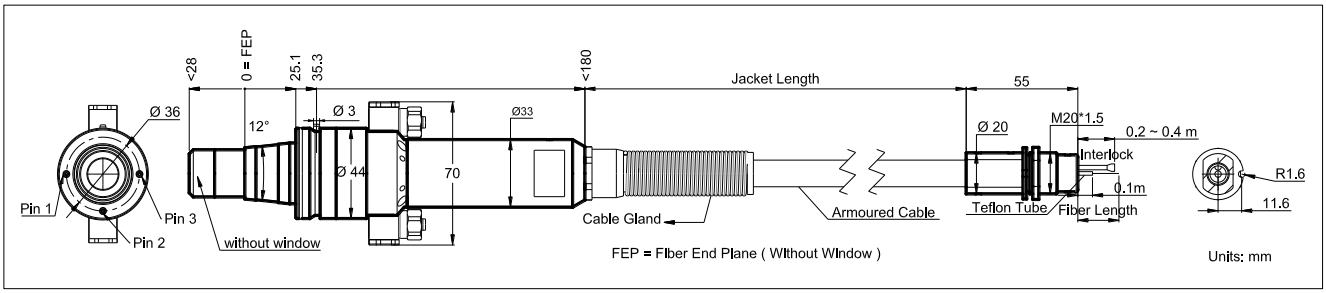

2 Pin Leadwire




None

## Package Dimensions

UPD+2




## Ordering Information

**Dragon**-①①-②②②②-③③③-④④-⑤-⑥⑥⑥-⑦-⑧-⑨⑨⑨⑨⑨

①①: Handling Power
10 - 10 kW
20 - 20 kW
30 - 30 kW
SS - Specify

②②②②: Wavelength
1080 - 1080 nm
SSSS - Specify

③③③: Fiber Type
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
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
UPD+2 - Type UPD+2