



Dragon 3 kW High Power Laser Cable (Dragon Series)

Rev 11C

Description

AFR's Dragon 3 kW Laser Cable provides QBH compatible connector for high power fiber lasers up to 3 kW. Technologies incorporated include cladding mode stripping, indirect water cooling, protective window and safety interlock.

Key Features

- Low Transmission Loss
- High Power Handling
- High Reflection Power Endurance
- Indirect Water Cooling
- Safety Interlock

Applications

- Fiber Laser
- Fiber Coupling

Specifications

Parameter	Unit	Value
Operation Wavelength	nm	945 ± 50 or 1080 ± 30
Fiber Core Diameter	μm	20 - 400
Numerical Aperture (NA)	-	≤ 0.22
Max. Transmission Loss of Fiber Core	%	2
Max. Power Handling	W	3000
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	-	Nylon
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



