



500 W Fiber to Free Space Isolator

Description

AFR's High Power Fiber to Free Space Isolator (HPFSI) is the best choice for high power industrial pulse fiber lasers. A newly designed isolator can handle 500W average laser power and at competitive cost. It also can be integrated with AFR's patented SteadiBeam™ and SeasonBeam™ technologies to achieve thermal lensing-free beam quality and temperature insensitive high isolation.

Specifications

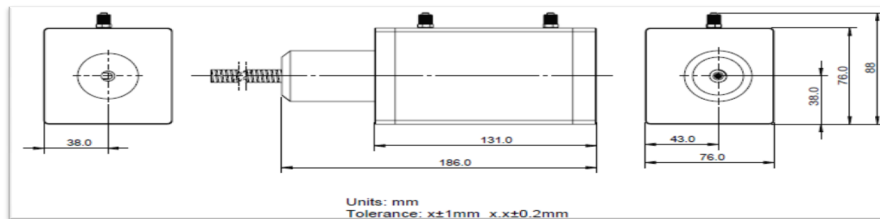
Optical Parameter	Unit	Value
Operating Wavelength (λ_c)	nm	1064 \pm 30
Max. Insertion Loss at 23 °C, at λ_c	dB	0.4
Typ. Isolation at 23 °C, at λ_c	dB	38
Min. Isolation at 23 °C, at λ_c	dB	30
Min. Isolation at all temperature, at λ_c	dB	20
Min. Return Loss	dB	50
Nominal Output Beam Diameter ($1/e^2$) ¹	mm	2.0 \pm 0.2
Beam Circulatory	%	> 90
M ² Degradation	%	< 10
Max. Average Optical Power	W	500
Max. Peak Power for ns pulse	kW	50
Beam offset	mm	\pm 0.5
Pointing Error	mrad	2.5
Astigmatism	Z _R	< 0.25

Fiber and Conditions

Fiber and Conditions	Unit	Value
Fiber Type	-	specified by ordering info
Cooling	-	Water
Water Quality	-	Purified or Distilled Water
Flow Rate	L / min	1.5 - 2.5
Water Pressure	Mpa	\leq 0.3
Water Temperature	-	\geq 5 °C above Dew Point
Water PH Value	-	Temperature
Reverse Power Handling	W	5.6 - 7.9
Operating Temperature	°C	200 W Continuous
Storage Temperature	°C	+ 10 to + 50 - 10 to + 60

¹Optional beam expander available for different beam diameter.

Package Dimensions



Ordering Information

HPFSI-500-①①-②②-③③-④④-P

①①: Wavelength	②②: Jacket Type	③③: Fiber Length	④④: Fiber Type
06 - 1064 nm	10 - 10 mm Armoured Cable	6 - 6.0 m	1 - Nufern BD-S100/120/360-STN
SS - Specify	SS - Specify	S - Specify	2 - Nufern LMA-GDF-20/400-M
			S - Specify