3x1 and 7x1
Fiber Laser Combiners

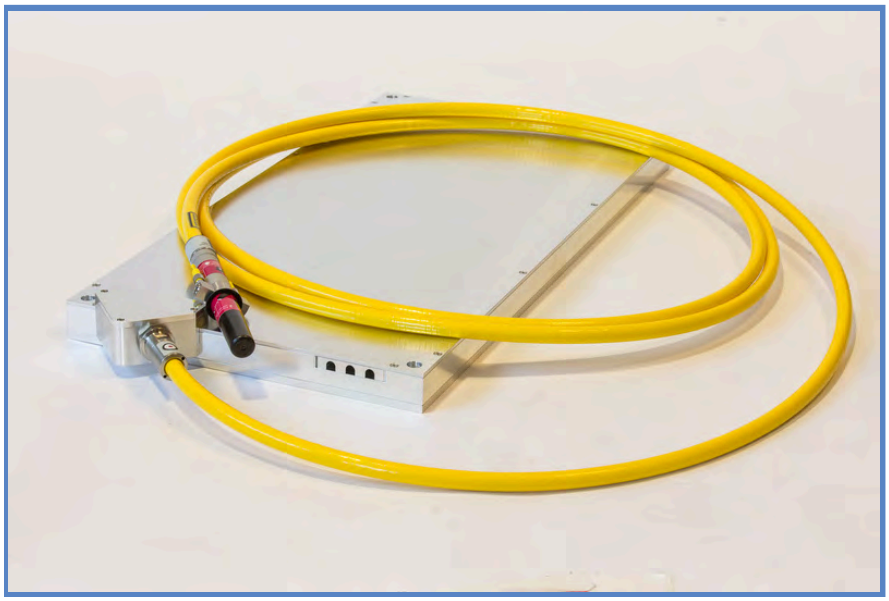
For Multi-kW Industrial Fiber Laser Systems

ITF Technologies' High Power Laser Combiners are designed and built based on our vast expertise in optical fiber combiners manufacturing, large mode area fiber handling and fiber laser design.

They feature excellent transmission efficiency and will preserve the beam quality of the combined input lasers. With a power handling of up to 2kW per laser input, they are a key component toward 6kW and 10+kW fiber laser systems.

For optimal reliability, they are protected against back reflections and undesired cladding light, and also feature multiple internal sensors for complete diagnostics during installation and operation.

Our laser combiner can be used in combination with ITF's Optical Laser Engines for a more complete solution for multi-kW fiber laser systems, or could be used independently with your current kW laser source.



KEY FEATURES

- High Transmission Efficiency
- Excellent preservation of beam quality
- Protected against back reflections
- Protected against residual pump / cladding light
- Module case includes a splice tray for easy fiber management

APPLICATIONS

- Multi-kW fiber laser systems
- Beam combining
- Industrial & Research

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3x1 and 7x1 Laser Combiners

3x1 Optical specifications

	1 KW CLASS	2 KW CLASS
Input laser wavelength	1040nm - 1080nm	
Output fiber core	50um or 100um	
Output BPP (For input M^2=1.2)	1.6 to 2.5 (50um) / 2.3 to 3.5 (100um)	
Total optical losses	< 0.05 dB	
Operation regime	CW	
Input ports	20/400 or 25/400	25/400
Input power handling per port	1 kW	2 kW

3x1 Mechanical and environmental specifications

	VALUE	NOTES
Dimension	610mm x 305mm x 37mm	
Operating temperature	15°C to 25°C	Base plate temperature
Storage temperature	-40 to 75°C	
Relative Humidity	< 80%	Non condensing
Communication with internal sensors	DB-15 connector	
Output cable	QBH output cable optional	

7x1 Optical specifications

	1 KW CLASS	2 KW CLASS
Input laser wavelength	1040nm - 1080nm	
Output fiber core	100um	
Output BPP (For input M^2=1.2)	2.5 to 5	
Total optical losses	< 0.05 dB	
Operation regime	CW	
Input ports	20/400 or 25/400	25/400
Input power handling per port	1 kW	2 kW

7x1 Mechanical and environmental specifications

	VALUE	NOTES
Dimension	610mm x 406 mm x 32mm	
Operating temperature	15°C to 25°C	Base plate temperature
Storage temperature	-40 to 75°C	
Relative Humidity	< 80%	Non condensing
Communication with internal sensors	DB-15 connector	
Output cable	QBH output cable optional	