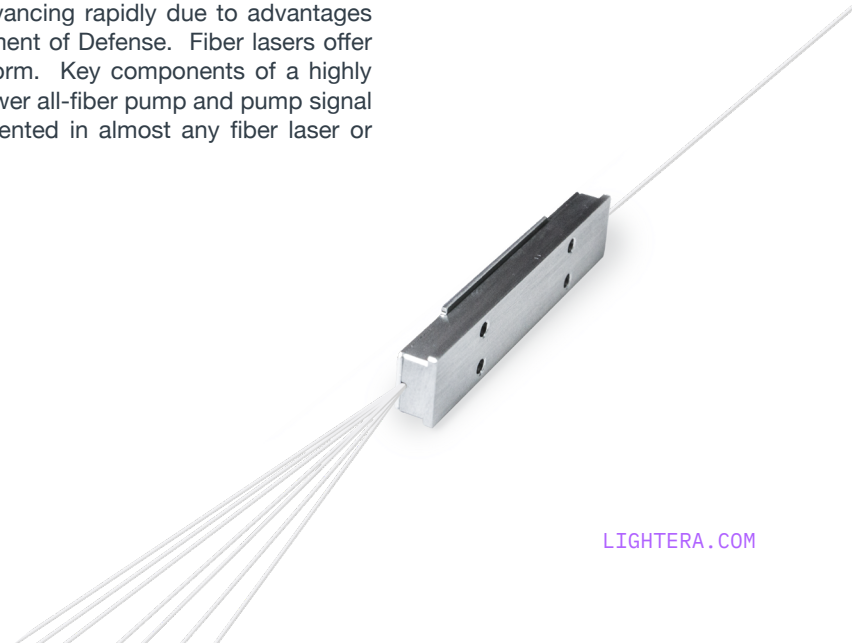




High Power CoolMode™ Pump Combiner & High Power CoolMode Pump Signal Combiner for Directed Energy

Fiber laser technology for defense applications is advancing rapidly due to advantages over solid state lasers and funding by the US Department of Defense. Fiber lasers offer features that are critical to the Directed Energy platform. Key components of a highly integrated fiber laser and amplifier system are high-power all-fiber pump and pump signal combiners. Lightera fiber combiners can be implemented in almost any fiber laser or amplifier architecture.

- High Pump Transmission
- Low Signal Loss
- Compact Size
- Reduced Cooling Requirements

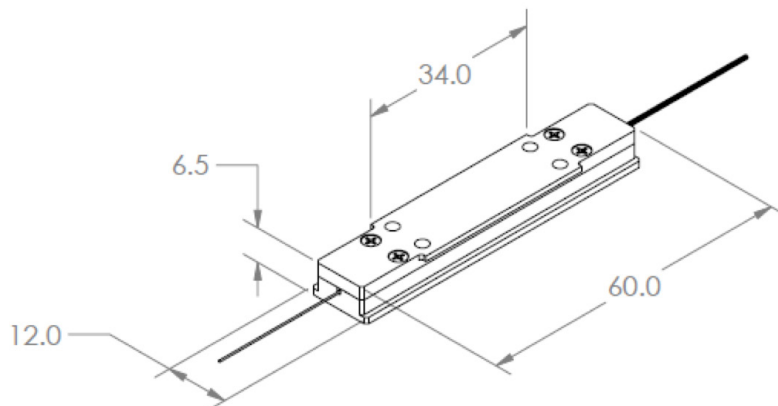


High Power CoolMode™ Pump Combiner

7:1 High Power CoolMode Pump Combiner Multimode Fiber Specification

Feature	Min.	Typical	Max.	Unit	NOTE
Multimode Input Fibers					
Number		7			
Numerical Aperture (NA)		0.22			
Coating Outer Diameter	240	245	250	μm	
Clad Diameter		125		μm	
Core Diameter		110		μm	
Pigtail Fiber Length	1			m	
Coating	High Index Acrylate				
Output Fiber					
Core NA		0.22			
Coating Diameter		425		μm	
Clad Diameter	244	246	248	μm	
Core Diameter	229	231	233	μm	
Pigtail Fiber Length	1			m	
Coating	Low Index Acrylate				
Optical Performance					
Multimode Transmission	95	98	99	%	Lightera Standard Test Condition: 95% power within 0.15 NA
Overall Backward Cross Talk		TBD			
Average Isolation (per leg)		TBD			
Pump Power Per Leg		71W			
Total Pump Power		400W			
Environmental	Transport and Storage Temperature Transport and Storage Humidity				-40 to +85 °C < 85% (non-condensing)
Mechanical Package	60 x 12 x 6.5 mm				See Drawing
Package Weight	12g				
Order by Part Number	7000626B				
Applications: Directed Energy					

NOTE: Custom configurations and packages are available upon request.



Mechanical Dimensions (all units in mm)
For both 7000626B and 7000665B-05

High Power CoolMode™ Pump Signal Combiner

6+1:1 High Power CoolMode Pump Signal Combiner Specification - 400 μm Output

Feature	Min.	Typical	Max.	Unit	NOTE
Multimode Pump Input Fibers					
Number		6			
Numerical Aperture (NA)		0.22			
Coating Outer Diameter		425		μm	
Clad Diameter	244	246	248	μm	
Core Diameter	229	231	233	μm	
Pigtail Fiber Length	3			m	
Coating	Low Index Acrylate				
Single Input Fiber				Double Clad	
Core MFD @ 1064 nm		11		μm	
Coating Outer Diameter	240	245	250	μm	
Clad Diameter		125		μm	
Pigtail Fiber Length	3			m	
Coating	Low Index Acrylate				
Output Fiber					
Core NA		0.065			
Cladding NA		0.46			
Core MFD @ 1064 nm		18		μm	
Coating Outer Diameter	555	560	565	μm	
Clad Diameter		400		μm	
Pigtail Fiber Length	5			m	
Coating	Low Index Polymer				
Optical Performance					
Multimode Transmission		98		%	Lightera Standard Test Condition: 95% power within 0.15 NA
Signal Transmission @ 1064 nm		90		%	Fundamental mode transmission
Overall Backward Cross Talk		TBD			
Average Isolation (per leg)		TBD			
Pump Power Per Leg		500 W			
Total Pump Power		2400 W			
Environmental	Transport and Storage Temperature Transport and Storage Humidity			-40 to +85 °C < 85% (non-condensing)	
Mechanical Package	60 x 12 x 6.5 mm			See Drawing	
Package Weight	21g				
Order by Part Number	7000665B-05				

Applications: Directed Energy

NOTE: Custom configurations and packages are available upon request.

7+1:1 High Power CoolMode™ Pump Signal Combiner

7+1:1 High Power CoolMode Pump Signal Combiner Specification - 400 µm Output

Feature	Min.	Typical	Max.	Unit	NOTE
Multimode Pump Input Fibers					
Number		7			
Numerical Aperture (NA)		0.22			
Coating Outer Diameter	375	400	425	μm	
Clad Diameter	244	246	248	μm	
Core Diameter	229	231	233	μm	
Pigtail Fiber Length	1	2		m	
Coating	Low Index Acrylate				
Single Input Fiber					Double Clad
Core MFD @ 1064 nm		11		μm	
Coating Outer Diameter	235	245	255	μm	
Clad Diameter	124	125	126	μm	
Pigtail Fiber Length	1	2		m	
Coating	Low Index Acrylate				
Output Fiber					
Core NA		0.065			
Cladding NA		0.46			
Core MFD @ 1064 nm		20		μm	
Coating Outer Diameter	555	560	565	μm	
Clad Diameter	395	400	405	μm	
Pigtail Fiber Length	1	2.5		m	
Coating	Low Index Polymer				
Optical Performance					
Multimode Transmission	96	97	98	%	Lightera Standard Test Condition: 95% power within 0.15 NA
Signal Transmission @ 1064 nm	85	90	91	%	Fundamental mode transmission
Pump Power Per Leg		500 W			
Total Pump Power		3500 W			
Environmental	Transport and Storage Temperature Transport and Storage Humidity			0 to +60 °C < 85% (non-condensing)	
Mechanical Package	60 x 12 x 6.5 mm			See Drawing	
Package Weight	21g				
Order by Part Number	7004005				
Applications: Directed Energy					

NOTE: Custom configurations and packages are available upon request.

For additional information please contact your sales representative.

You can also visit our website at www.lightera.com or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.



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our certifications,
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