



A Furukawa Company

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

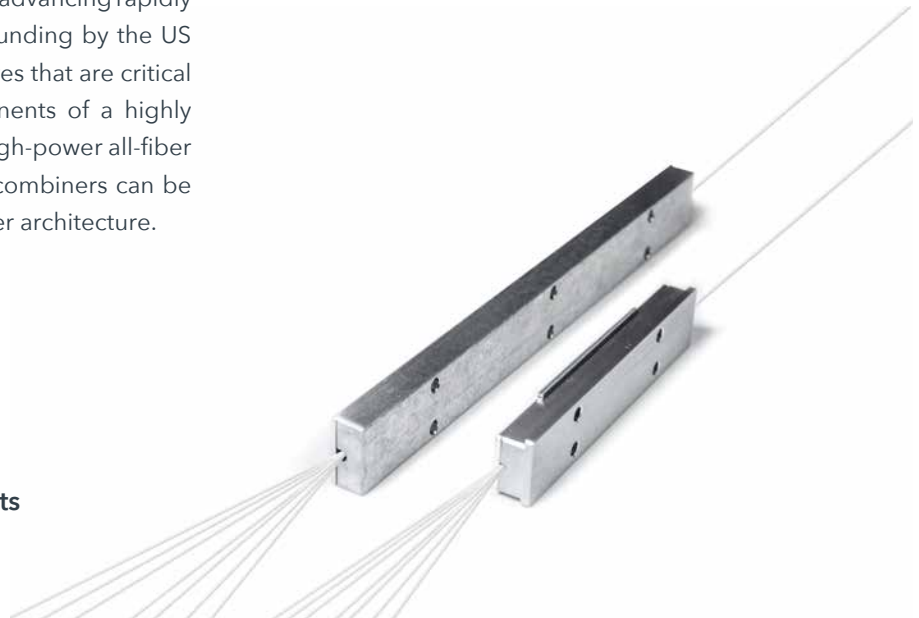


## Optical Fiber Solutions for **DIRECTED ENERGY**

[www.ofsoptics.com](http://www.ofsoptics.com)

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. OFS fiber combiners can be implemented in almost any fiber laser or amplifier architecture.

- High pump transmission**
- Low signal loss**
- Compact size**
- Reduced cooling requirements**



[www.ofsoptics.com](http://www.ofsoptics.com)

## High Power CoolMode™ Pump Combiner

### 7:1 High Power CoolMode Pump Combiner Specification

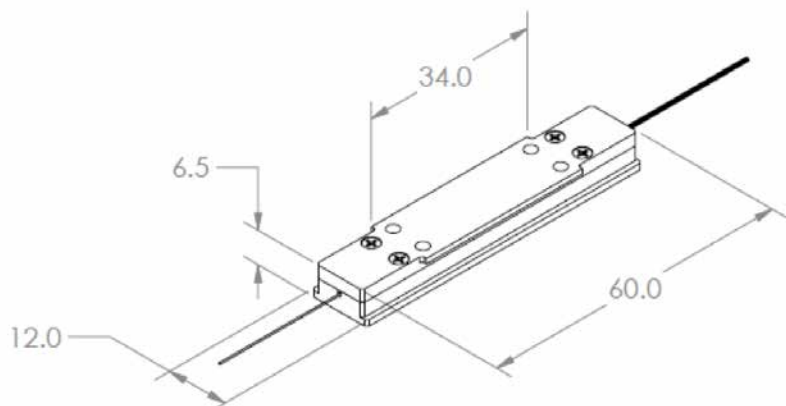
#### Description

7:1 High Power CoolMode Pump Combiner Multimode Fiber

Feature	Min.	Typical	Max.	Unit	NOTE
<b>Multimode Input Fibers</b>					
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				
<b>Output Fiber</b>					
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				
<b>Optical Performance</b>					
Multimode Transmission	95	98	99	%	OFS Standard Test Condition: 95% power within 0.15 NA
Overall Backward Cross Talk	TBD				
Average Isolation (per leg)	TBD				
Pump Power Peg Leg	71W				
Total Pump Power	400W				
Environmental	Transport and Storage Temperature			-40 to +85 °C	
	Transport and Storage Humidity			< 85% (non-condensing)	
Mechanical Package	60 x 12 x 6.5 mm			See Drawing	
Package Weight	12g				
<b>Order by Part Number</b>	<b>7000626</b>				

**Applications:** Directed Energy

**NOTE:** Custom configurations and packages are available upon request.



**Mechanical Dimensions (all units in mm)**  
For both 7000626 and 7000665

# High Power CoolMode™ Pump Signal Combiner



## 6+1:1 High Power CoolMode Pump Signal Combiner Specification

Description						6+1:1 High Power CoolMode Pump Combiner - 400 μm Output	
Feature	Min.	Typical	Max.	Unit	NOTE		
<b>Multimode Pump Input Fibers</b>							
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	1			m			
Coating		Low Index Acrylate					
<b>Single Input Fiber</b>						Double Clad	
Core MFD @ 1064 nm		11		μm			
Coating Outer Diameter	240	245	250	μm			
Clad Diameter		125		μm			
Pigtail Fiber Length	1			m			
Coating		Low Index Acrylate					
<b>Output Fiber</b>							
Core NA		0.065					
Cladding NA		0.46					
Core MFD @ 1064 nm		20		μm			
Coating Outer Diameter	555	560	565	μm			
Clad Diameter		400		μm			
Pigtail Fiber Length	1			m			
Coating		Low Index Polymer					
<b>Optical Performance</b>							
Multimode Transmission		98		%	OFS 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 Peg 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					
<b>Order by Part Number</b>		<b>7000665</b>					

**Applications:** Directed Energy

**NOTE:** Custom configurations and packages are available upon request.



Copyright © 2019 OFS Fitel, LLC.  
All rights reserved, printed in USA.

OFS Marketing Communications  
Date: 01/19

For additional information please contact your sales representative.

You can also visit our website at [www.ofsop-tics.com](http://www.ofsop-tics.com) or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.



CoolMode is a trademark of OFS Fitel, LLC.

OFS reserves the right to make changes to the prices and product(s) described in this document at any time without notice. This document is for informational purposes only and is not intended to modify or supplement any OFS warranties or specifications relating to any of its products or services.