

MILITARY FIBER OPTIC TERMINUS

-M29504/14 PIN & M29504/15 SOCKET-

ABOUT

FOSTEC Military fiber optic terminus(MIL-PRF-29504/14 & 29504/15 is designed to connect into a pin/socket by physical contact. It is usually used for connecting with **MIL-DTL-28876** Series III connector. FOSTEC's unique alignment techniques maximize optical performance and provide reliable.



M29504/14 Pin Terminus



M29504/15 Socket Terminus



M29504/3 Dummy Pin Terminus (Option)

Specification & Feature

1. Performance Specification

Description	M29504/14	M29504/15	Remark
Operating temperature	-65°C to +150°C		Dependent on epoxy and cable
Thermal Cycling	-40°C to +85°C		
Thermal Shock	-55°C to +85°C		
Temperature Life	+110°C for 240 hours		
Vibration	X Y Z 15G @ 4hours each axis		
Mating durability	500+ cycles		
Salt Spray	500 hours		
Terminus Mating Force	5 lbs.[22.2 N] nominal		
Weight	0.7 grams max		

2. Materials & Finish

Description	Materials	Finish	Remark
Terminus body	Stainless steel	Passivated	
Alignment sleeve	Zirconia	None	
Alignment sleeve hold	Beryllium	Nickel Plated	
Ferrule(bushing)	Zirconia	None	
Retaining clip	Beryllium	None	
Belleville springs	Beryllium	None	
-Ring seal	Fluorosilicone	None	

3. IL & RL

Insertion Loss

Fibers	M29504/14	M29504/15	Remark
9/125	-0.75dB (MAX), -0.35dB(TYP)		
50/125			
62.5/125			

Return Loss

Polishing	M29504/14	M29504/15	Remark
PC (Single mode)	≤ 40dB		
UPC (Single mode)	≤ 50dB		

Model Variants

Pin Terminus(M29504/14)

Part number	Fiber core/Cladding	A Dia(um)	Reference no.
F1000-501SMPI	-S50	9/125 (Single Mode)	M29504/14-4140C
	-S55	9/125 (Single Mode)	N/A
	S60	9/125 (Single Mode)	M29504/14-4141C
	-M55	50/125 or 62.5/125 (Multi Mode)	N/A
	-M60	50/125 or 62.5/125 (Multi Mode)	M29504/14-4131C

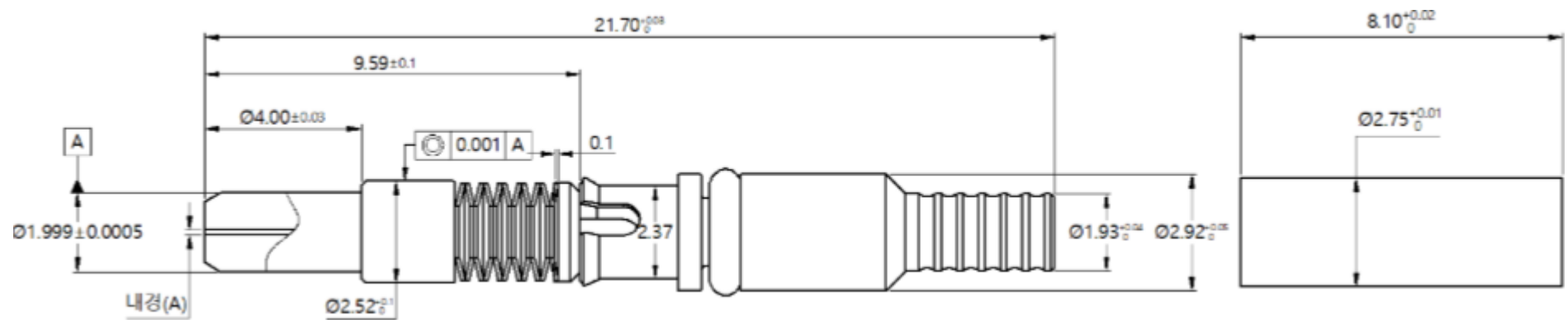
Socket Terminus(M29504/15)

Part number	Fiber core/Cladding	A Dia(um)	Reference no.
F1000-501SMSO	-S50	9/125 (Single Mode)	M29504/15-4180C
	-S55	9/125 (Single Mode)	N/A
	-S60	9/125 (Single Mode)	M29504/15-4181C
	-M55	50/125 or 62.5/125 (Multi Mode)	N/A
	-M60	50/125 or 62.5/125 (Multi Mode)	M29504/15-4171C
	-M70	50/125 or 62.5/125 (Multi Mode)	M29504/15-4172C

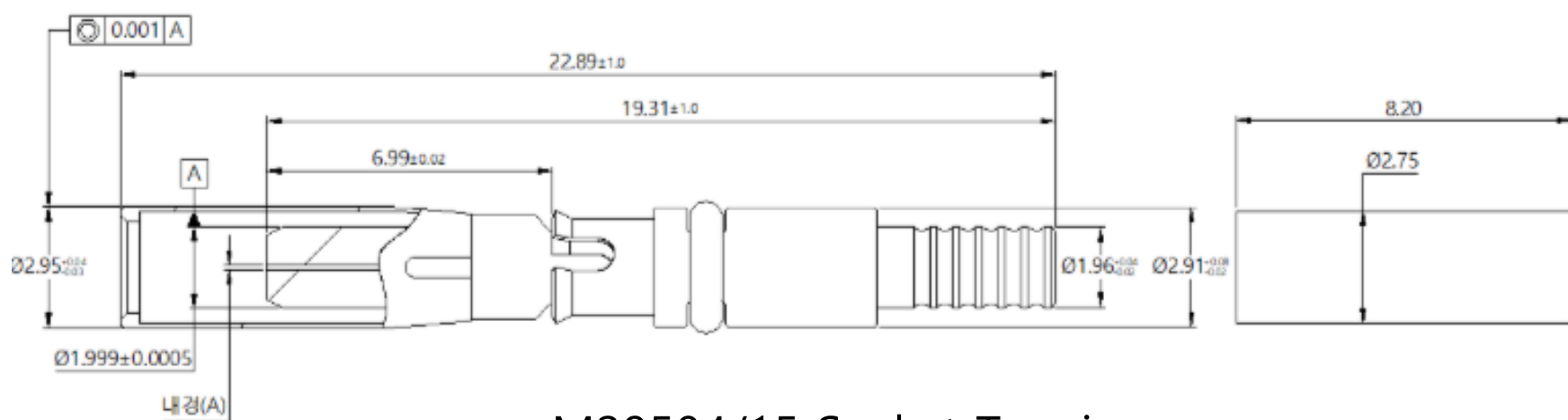
Dummy Terminus(M29504/3)

Part number	Fiber core/Cladding	A Dia(um)	Reference no.
F1000-501DT-NA			M29504/3-4138

Drawings



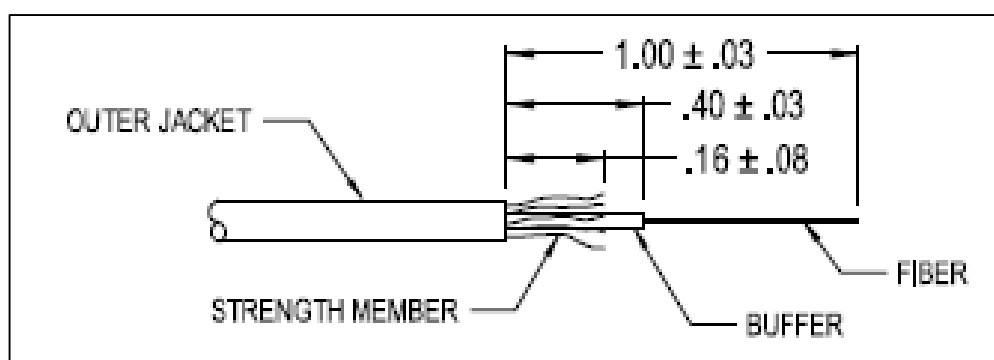
M29504/14 Pin Terminus



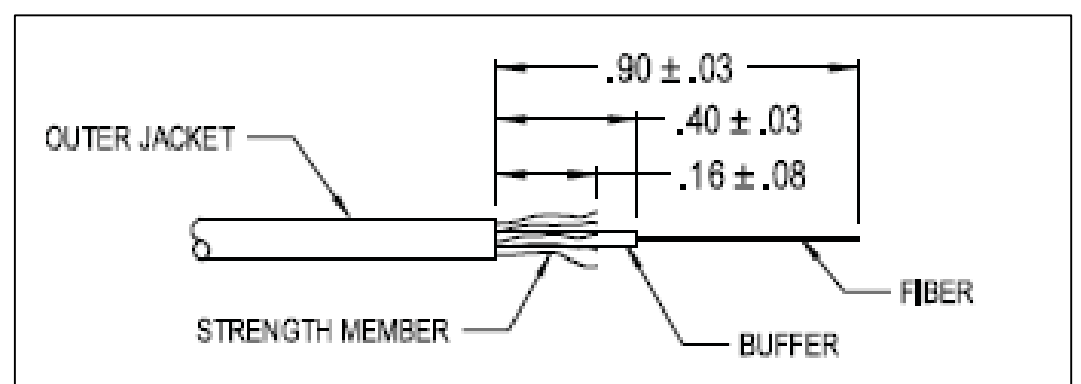
M29504/15 Socket Terminus

Termination

1. Install terminus shrink sleeve to the cable.
2. Strip fiber to appropriate length according to the cable and terminus type. Refer to the feature#1 and feature#2.
3. Inject enough epoxy to the terminus.
4. Insert the fiber to the pin or socket terminus.
5. Evenly distribute the strength member over rear of terminus.
6. Locate the sleeve to base of terminus and heat shrink using heat gun enough.
7. Clean terminus body.
8. Add a small amount of epoxy to the tip of the terminus to avoid any risk from over-polishing.
9. Polish the terminus end as per required specification.
10. Inspect the terminus end and clean it if necessary.
11. Connect with connector and complete the termination.

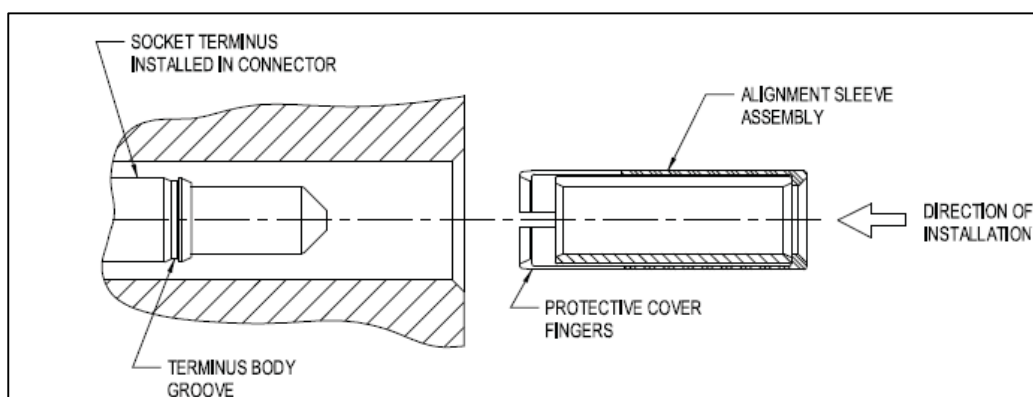


feature#1(29504/14 fiber striping way)

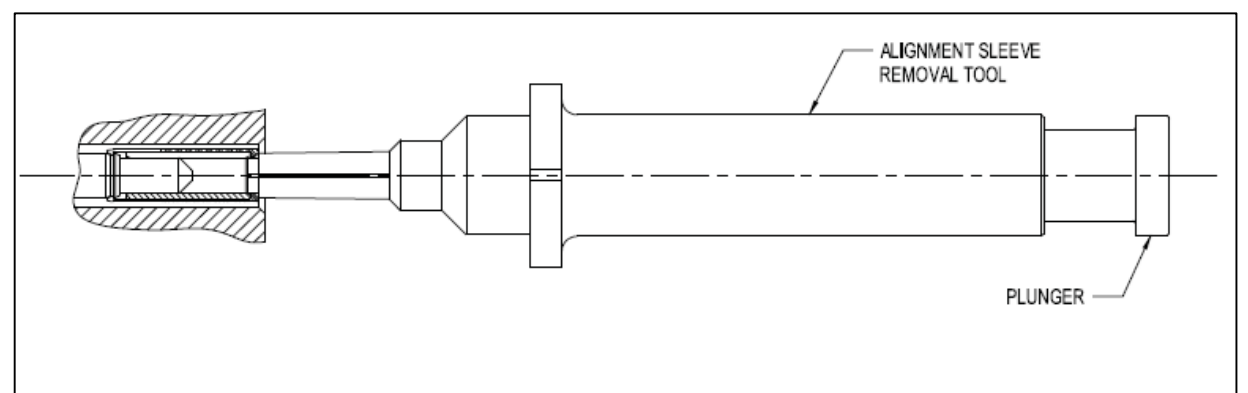


feature#2(29504/15 fiber striping way)

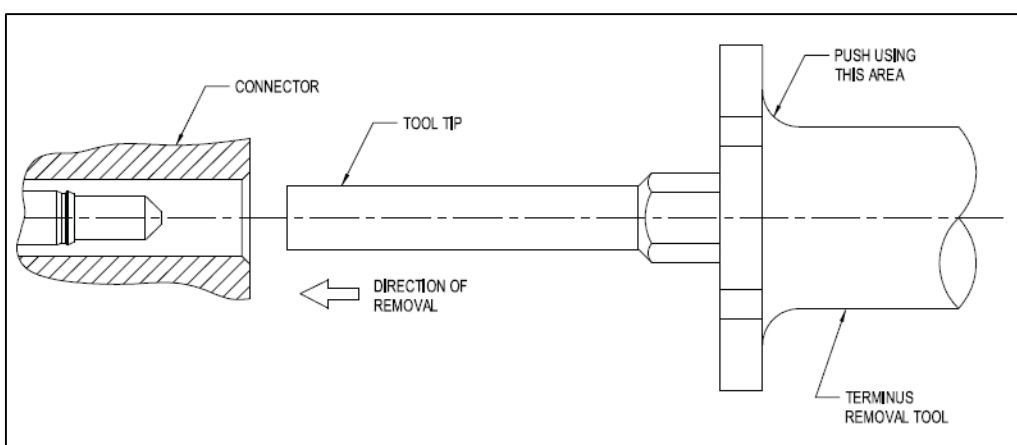
M29504/15 Socket terminus Insert/Extraction tool usage



Inserting way for socket



1st step of Extraction way for socket



Extraction way for pin and final step for socket