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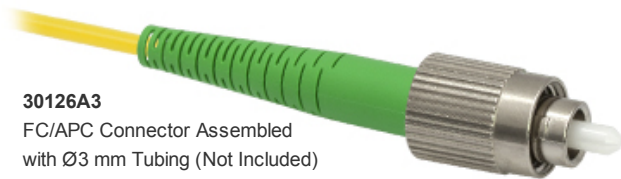


**30080K1 - AUG 03, 2016**

Item # 30080K1 was discontinued on AUG 03, 2016. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

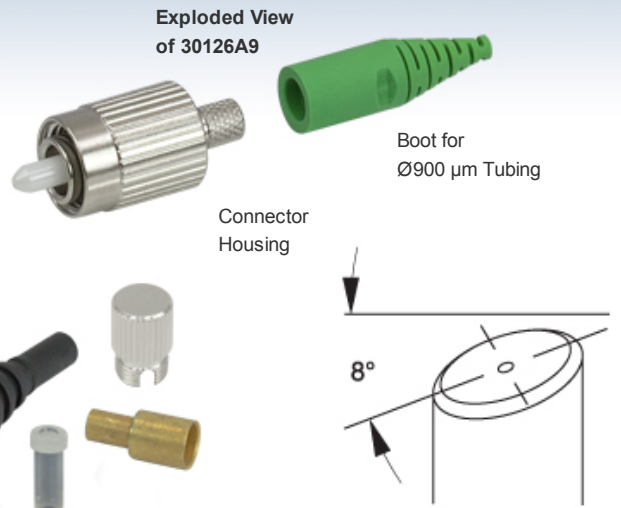
**FC/APC FIBER CONNECTORS: SINGLE MODE**

- ▶ **Screw-In Connectors**
- ▶ **8° Pre-Angled, Spring-Loaded, Ceramic Ferrules**
- ▶ **Typical 10 dB Improvement in Return Loss Compared to FC/PC Connectors**
- ▶ **2.0 mm Narrow Keys**



**30126A3**  
 FC/APC Connector Assembled with Ø3 mm Tubing (Not Included)

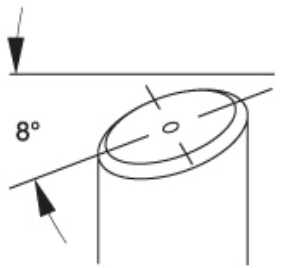
Dust Caps and Strain Relief Boots for Ø2 mm Tubing Can be Purchased Separately



Exploded View of 30126A9

Boot for Ø900 µm Tubing

Connector Housing



**OVERVIEW**

**Features**

- FC/APC Connectors with 2.0 mm Narrow Keys
- Screw-In Connector for High Stability
- 8° Pre-Angled, Spring-Loaded, Ø2.5 mm, Ceramic Ferrules
- Strain Relief Boot for Ø3.0 mm or Ø900 µm Tubing and Connector Cap Included

Threaded FC/APC connectors are designed for high-vibration environments and minimal back reflections. The "APC" stands for "angled physical contact" because these connectors allow the surfaces of two connected fibers to be in direct contact with each other and because the fiber end is polished at an angle to prevent reflected light from traveling back up the fiber. These FC/APC connectors have an 8° pre-angled ceramic ferrule, which when properly polished, results in a typical return loss of 60 dB. Each connector package includes a fiber connector cap and plastic boot.

These connectors also feature a low 0.25 dB connector-to-connector typical loss. However, significant insertion loss can result when mating to different styles, and because of this, we recommend that FC/APC connectors be mated only with other FC/APC connectors. If your application requires that you switch connector types, we recommend using a hybrid patch cable.

As an alternative to buying and assembling separate optical fiber, connectors, and furcation tubing, Thorlabs also offers pre-built patch cables from stock using the connectors sold on this page. See the table to the right and the *Patch Cables* tab for a listing of patch cables available that incorporate connectors sold on this page.

Fiber Connector Selection Guide	
Single Mode	Multimode
FC/PC FC/APC ST/PC LC/PC SC/PC	FC/PC (SS Ferrule) FC/PC (Ceramic Ferrule) FC/APC SMA905 ST/PC SC/PC
Bare Ferrules	
Bare Fiber Terminator	
Stock Patch Cables Available with Connectors Sold on This Page	
Single Mode	Polarization-Maintaining
FC/APC Hybrid Connectors AR-Coated BS-Coated Mirror-Coated Low-Insertion-Loss	FC/APC Hybrid Connectors AR-Coated Mirror-Coated

## PATCH CABLES

### Stock Patch Cables Available with These Connectors

As an alternative to buying and assembling separate optical fiber, connectors, and furcation tubing, Thorlabs offers pre-built patch cables from stock using the connectors sold on this page. Stocked patch cables are available with single mode or polarization-maintaining single mode optical fiber, as indicated by the table to the right. Additionally, Thorlabs offers Custom Patch Cables with same-day shipping, which can be constructed using the connectors sold on this page.

Fiber Type	Patch Cable Type	Connectors	Fiber Wavelength Range
Single Mode	Standard FC/APC	FC/APC to FC/APC	320 - 2100 nm <sup>a</sup>
	Hybrid Connectors	FC/PC to FC/APC or FC/PC to SMA905	320 - 2100 nm <sup>a</sup>
	AR-Coated	FC/PC to FC/PC, FC/APC to FC/APC, or FC/PC to FC/APC	320 - 2100 nm <sup>a</sup>
	BS-Coated	FC/PC to FC/PC or FC/APC to FC/APC	1260 - 1620 nm
	Reflective-Coated	FC/PC or FC/APC	970 - 1620 nm <sup>a</sup>
	Low Insertion Loss	FC/PC to FC/PC, FC/PC to FC/APC, or FC/APC to FC/APC	320 - 800 nm <sup>a</sup>
Polarization-Maintaining Single Mode	Standard FC/APC	FC/APC to FC/APC	405 - 2000 nm <sup>b</sup>
	Hybrid Connectors	FC/PC to FC/APC	405 - 2000 nm <sup>b</sup>
	AR-Coated	FC/PC to FC/PC or FC/PC to FC/APC	620 - 1620 nm <sup>b</sup>
	Reflective-Coated	FC/PC or FC/APC	970 - 1550 nm

- This is the wavelength range covered by multiple fibers.
- PM patch cables are aligned at discrete wavelengths in this range, based on the fiber type.

### FC/APC Fiber Connectors: Single Mode

Item #	Style	Bore	Concentricity	Ferrule	Included Boot	Crimp Tool for Ø3.0 mm Tubing <sup>a</sup>	Operating Temperature
30080K1	2.0 mm FC/APC Narrow Key	Ø81 +1/-0 µm	1 µm	Ø2.5 mm, Ceramic	Ø900 µm	Not Required	-40 - 70 °C
30126A3	2.0 mm FC/APC Narrow Key	Ø126 +1/-0 µm	1 µm	Ø2.5 mm, Ceramic	Ø3.0 mm	CT042	-40 - 70 °C
30126A9	2.0 mm FC/APC Narrow Key	Ø126 +1/-0 µm	1 µm	Ø2.5 mm, Ceramic	Ø900 µm	Not Required	-40 - 70 °C

- A crimp tool is not required for Ø900 µm boots. For more details, please see our FN96A Connectorization Guide.

Part Number	Description	Price	Availability
30080K1	FC/APC Single Mode Connector, Ø81 µm Bore, Ceramic Ferrule, Ø900 µm Boot	\$22.00	Lead Time
30126A3	FC/APC Single Mode Connector, Ø126 µm Bore, Ceramic Ferrule, Ø3.0 mm Boot	\$8.34	Today
30126A9	FC/APC Single Mode Connector, Ø126 µm Bore, Ceramic Ferrule, Ø900 µm Boot	\$8.34	Today

### Strain Relief Boots and Dust Caps

- ▶ Strain Relief Boots and Crimp Sleeves for Ø2 mm Tubing (25 Pack)
- ▶ CAPF Dust Cap for Ø2.5 mm Ferrules (25 Pack)
- ▶ CAPFM Threaded Metal Dust Cap for FC Connectors (4 Pack)

Thorlabs offers strain relief boots and dust caps that can be purchased separately from our fiber connectors. The black strain relief boots sold here include a crimp sleeve and are compatible with FC/PC and FC/APC connectors and Ø2 mm furcation tubing (our stock connectors do not include a boot compatible with Ø2 mm tubing).

The CAPF Clear Plastic Dust Caps are for use with all Ø2.5 mm fiber connector ferrules and FC connectors, and the CAPFM Threaded Nickel-Plated Brass Dust Caps are for use with narrow-key FC connectors. Dirt on the fiber tip can result in permanent damage to the fiber connector, which can increase coupling losses or create undesirable mode structures in the output light. To prevent damaging the connectorized fiber, clean before each use with an appropriate fiber and connector cleaning product and use a fiber connector cap to protect the end face of the connectorized fiber when it is not in use.

Part Number	Description	Price	Availability
<b>190066CP</b>	<b>Black Strain Relief Boots and Crimp Sleeves for Ø2 mm Tubing and FC/PC Connectors, 25 Pack</b>	<b>\$22.80</b>	<b>Today</b>
<b>CAPF</b>	<b>Clear Plastic Dust Caps for Ø2.5 mm Ferrules, 25 Pack</b>	<b>\$6.60</b>	<b>Today</b>
<b>CAPFM</b>	<b>Customer Inspired!Metal Threaded caps for FC Connectors, 4 Pack</b>	<b>\$7.00</b>	<b>Today</b>

Visit the *FC/APC Fiber Connectors: Single Mode* page for pricing and availability information:  
[https://www.thorlabs.com/newgrouppage9.cfm?objectgroup\\_id=6246](https://www.thorlabs.com/newgrouppage9.cfm?objectgroup_id=6246)