

# Fiber Optic Components

## Patch Cords Ultra PC Fiber Optic Patch Cords

ADC offers *Ultra PC Connector* polish\* on D4, ST®, FC and SC patch cords. Return losses on ADC Ultra PC patch cords are guaranteed to be greater than 50 dB (less than one photon reflected for every 100,000 transmitted), with typical values averaging 57 dB. Typical insertion loss is 0.2 dB.

Tomorrow's high speed networks, such as high bit rate digital systems, AM video, coherent communications, and single fiber bidirectional communications, will require the superior qualities that ADC's ultra PC connectors provide.

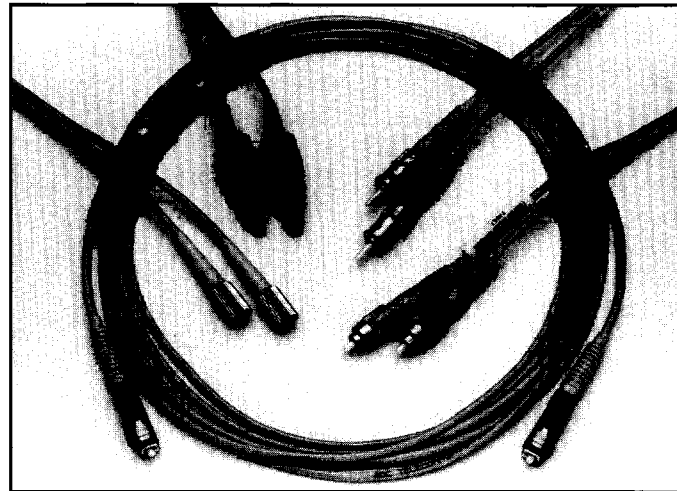
Every patch cord manufactured by ADC must pass rigorous qualification testing that includes:

Item	Test Specifications
Temperature shock	FOTP-3
Humidity	FOTP-5
Temperature life	FOTP-4
Mating durability	FOTP-21
Vibration	FOTP-11
Cable flex	FOTP-1A
Cable retention	FOTP-6
Cable twist	FOTP-36
Impact	FOTP-2

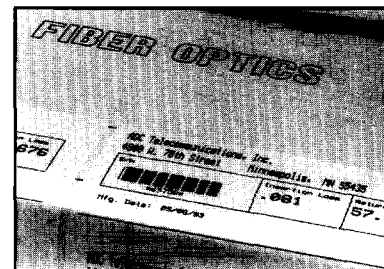
Every patch cord shipping container shows the catalog number clearly and includes the exact measured values for insertion and return loss. Through the use of bar code data acquisition techniques, ADC can determine the exact date of manufacture, the materials used and the process level of manufacturing.

*For ordering information, see page 11.*

\*Patent pending.



All singlemode fiber patch cords use ADC's 3mm jacketing and are offered with either Corning SMF 28 fiber (standard) or AT&T fiber.



Patch cord shipping container



ADC's patch cord manufacturing people must be certified through ADC's rigorous internal fiber patch cord training processes.

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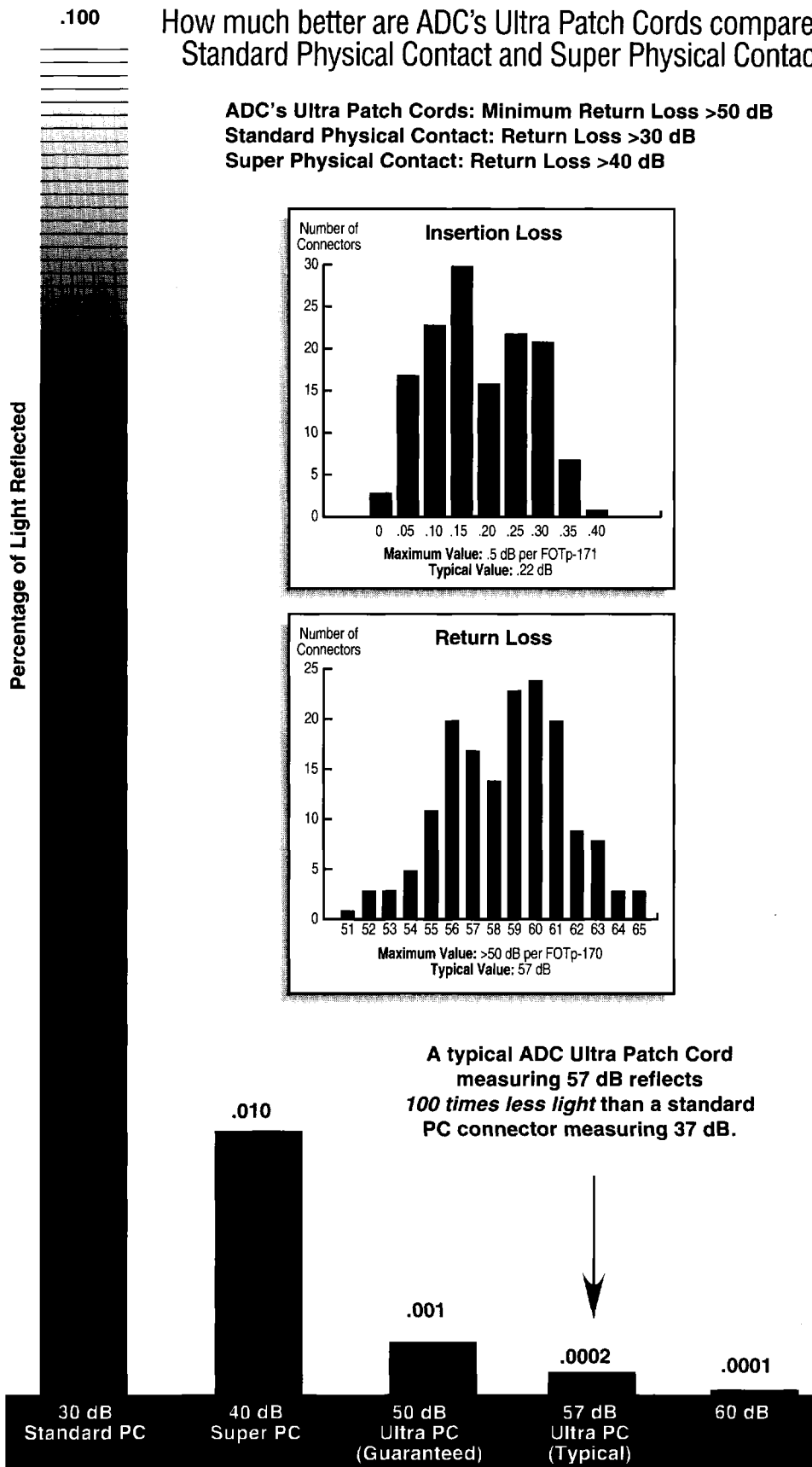
## Patch Cords Ultra PC Fiber Optic Patch Cords

How much better are ADC's Ultra Patch Cords compared to Standard Physical Contact and Super Physical Contact?

ADC's Ultra Patch Cords: Minimum Return Loss >50 dB

Standard Physical Contact: Return Loss >30 dB

Super Physical Contact: Return Loss >40 dB



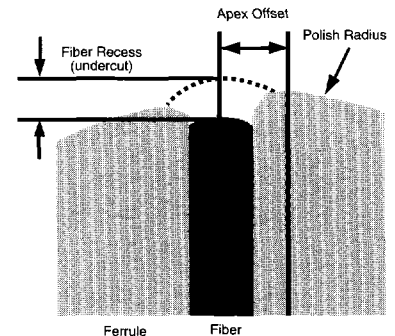
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## Patch Cords Ultra PC Fiber Optic Patch Cords

### How Did ADC Become an Industry Leader in Fiber Connector Technology?

#### – By Taking a Close Look at the Parameters Affecting End Face Geometry.

End face characteristics like polish radius, apex offset and fiber recess/ undercut greatly affect long-term reliability. During the polishing process, the glass fiber, which is a softer material than the surrounding ferrule, will recess slightly from the ferrule surface. It is important to monitor the resulting undercut. Mating connectors with overly recessed fibers will jeopardize the likelihood of physical contact. ADC has painstakingly worked to achieve a polishing process which results in an undercut of less than .05 microns.



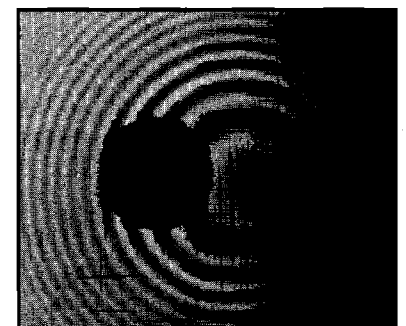
*Interface Geometry*

The geometry of the end face polish is critical to high performance singlemode connectors. An overly recessed fiber from standard polishing techniques can limit physical contact reliability. ADC ultra PC connectors have a fiber recess less than 0.06  $\mu\text{m}$ .



*Atomic Force Microscope*

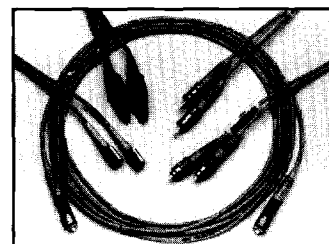
Poor alignment of the fiber core with the ferrule apex prevents physical contact and can compromise long-term connector reliability. ADC uses interferometry to accurately measure apex offset. ADC patch cords are produced with an apex offset of less than 50  $\mu\text{m}$ .



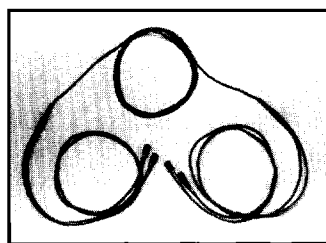
*Interference Microscope*

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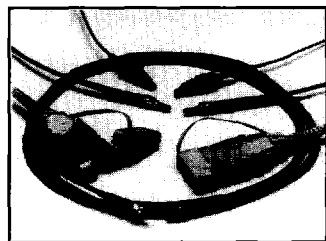
## Patch Cords Ultra PC Fiber Optic Patch Cords



Singlemode Patch Cord



Singlemode Dual Patch Cord



Multimode Patch Cord

### Singlemode

#### Cable/Fiber

FPC	Stranded Corning fiber: connector on both ends (patch cord)
FPT	Stranded Corning fiber: connector on one end (pigtail)
FPA	AT&T fiber: connector on both ends (patch cord)

#### Special Cable/Fiber

LEAVE BLANK	Standard 3 mm cable
D	Dual cable (2.5 mm)
9	900 micron cable
Z	Dual zip cable*

#### Catalog Number

- S - S - M -

H	High Performance ≥ 57 dB
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#### Length (in meters)

ADC stocks 3, 6, 7, 10, 12 and 15 meter standard singlemode patch cords and many types of hybrid patch cords. Other lengths can be manufactured to customer specifications.

#### Connector Style

PD4	Ultra PCD4
PFC	Ultra PCFC
PST	Ultra PCST
PSC	Ultra PCSC
BC	Singlemode biconic
BK	Singlemode keyed biconic
BIC	For biconic hybrid patch cords
PSTB	Ultra PC ST ADC short boot
APFC**	Angled PCFC 8°
APST**	Angled PCST 8°
APSC**	Angled PCSC 8°
APST10**	Angled PCST 10°

For hybrid patch cords, enter both connector types in this field. Separate them with a slash mark.

Example: FPC-SPFC/PSC-S-7M

\*Available 3/95.

\*\*For angled PC, do not use the S before the connector style. Example: FPC-APFC-S-5M

### Multimode

#### Cable/Fiber

FPC	Corning fiber: connector on both ends (patch cord)
FPT	Corning fiber: connector on one end (pigtail)
FPA	AT&T fiber: connector on both ends (patch cord)

#### Special Cable/Fiber

LEAVE BLANK	Standard 3 mm cable
D	Dual cable (2.5 mm)
Z	Dual zip cable

#### Catalog Number

M

#### Length (in meters)

ADC stocks 3, 6, 7, 10, 12 and 15 meter standard patch cords and many types of hybrid patch cords. Other lengths can be manufactured to customer specifications.

#### Fiber Size

A	50/125
B	62.5/125

#### Connector Style

MD4	Multimode D4
MFC	Multimode FC
MST	Multimode ST®
MBC	Multimode biconic
MS5	Multimode SMA 905
FDDI	Multimode FDDI Multiple keys included
MSC	Multimode SC
MS6	Multimode SMA 906

For hybrid patch cords, enter both connector types in this field. Separate them with a slash mark. Example: FPC-MFC/MST-B-7M