

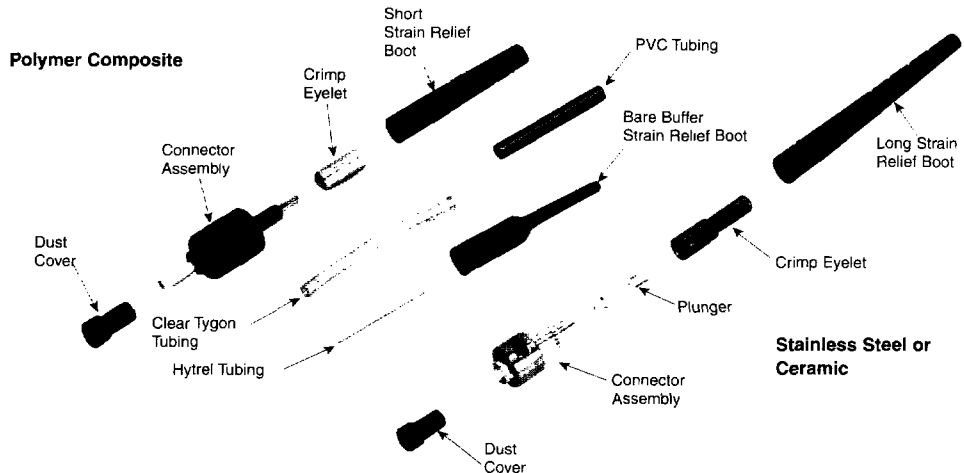
Fiber Optic Connectors

ST Style Connector Products

LightCrimp XTC Epoxyless ST Style Connectors

Product Facts

- Singlemode or multimode
- Just crimp it on the fiber
- No epoxy
- 2-minute termination



Performance Characteristics

		Multimode	Multimode	Multimode	Singlemode
Ferrule		Polymer Composite	Stainless Steel	Ceramic	Ceramic
Body		Polymer	Aluminum	Aluminum	Aluminum
Coupling Nut		Polymer	Die Cast Zinc	Die Cast Zinc	Die Cast Zinc
Nominal Fiber Size, μm		125	125, 140	125	126
Performance Specifications					
Insertion Loss	dB, Avg.	1.0	0.4	0.4	0.2
Back Reflection	dB	—	—	—	<40
Storage Temperature Range	C	-40° to +85°	-40° to +85°	-40° to +85°	-40° to +85°
Operating Temperature Range	C	-20° to +60°	-10° to +65°	-40° to +65°	-40° to +85°
Durability	cycles change (dB)	500 < .20	500 < .20	1,000 < .20	1,000 < .20
Part Numbers					
	125 μm	503453-1	504034-1	504001-1	504000-1
	140 μm	—	504034-3	—	—
Instruction Sheet					
		408-4013	408-9860	408-9860	408-9860

LightCrimp XTC Termination Kits

For all LightCrimp XTC Connectors

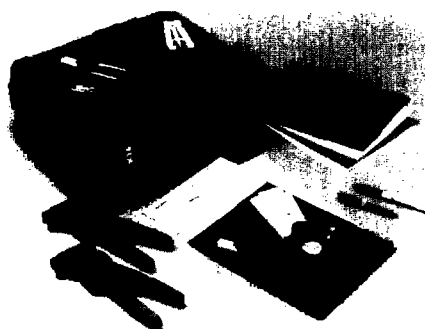
Termination Kit: All the tools required to prepare and terminate all LightCrimp ST Style connectors.

Tool Kit without microscope: 503330-1

Tool Kit with Premium microscope: 503330-2

Tool Kit with Economy microscope: 503330-3

LightCrimp XTC Cleave Tool: 502700-2



Accessories: All are included in termination kit.

Connector	Polishing Tool	Polishing Plate	Polishing Pad	Strip Card
LightCrimp XTC Polymer Composite	503304-2 (Beige Polymer)	501197-2	501523-1	503455-1
LightCrimp XTC Ceramic/Stainless Steel	503337-1 (metal) 503304 (Black Polymer)	501197-2	504584-1	503574-1
AMP LightCrimp SC Ceramic	503787-1 (metal) 502631-1 (Black Polymer)	501197-2	504584-1	503694-1

Fiber Optic Connectors

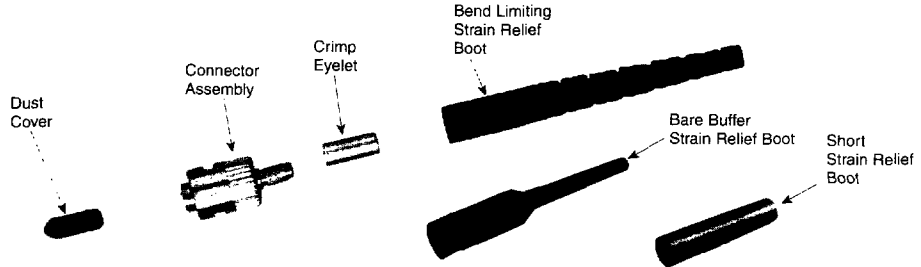
ST Style Connector

Products (Continued)

**ST Style Connectors
Epoxy Type**

Product Facts

- High performance multimode and singlemode ST compatible connectors.
- Quick cure epoxy type
- Pre-radiused PC finish



Performance Characteristics

	Multimode	Multimode	Multimode	Multimode	Multimode	Singlemode
Ferrule Material	Composite Polymer	Stainless Steel	Ceramic	Stainless Steel	Ceramic	Ceramic
Body Material	Polymer	Polymer	Polymer	Ni. Br.	Ni. Br.	Ni. Br.
Coupling Nut Material	Polymer	Polymer	Polymer	Die Cast	Die Cast	Die Cast
Connector Type	1	1	1	2	2	2
Nominal Fiber Size, um	125	125, 140	125	125 to 1,000	125, 140	126*, 127
Performance Specifications						
Insertion Loss dB, Avg.	0.3	0.3	0.4	0.3	0.3	0.3
Back Reflection dB	---	---	---	---	---	< -40
Storage Temp. Range C	-40° to +85°	-40° to +85°	-40° to +85°	-40° to +85°	-40° to +85°	-40° to +85°
Operating Temp. Range C	-20° to +75°	-20° to +75°	-20° to +75°	-30° to +70°	-30° to +70°	-20° to +75°
Durability cycles change (dB)	500 < .20	500 < .20	1000 < .20	500 < .20	1,000 < .20	200 < .20

* Recommended Fiber Size

**Multimode
Zirconia Ceramic Ferrule**

Part Numbers Hole Size um		Connector Type	Boot Type & Color	Max. Cable Diameter	Instruction Sheet
125	140				
501380-1	501380-6	2	Bend Limiting/Black	3.0	408-6935
1-501380-6	---	2	Short/Black	3.0	408-6935
503571-1	---	1	Short/Black	3.0	408-9971
2-501380-1	---	2	Bare Buffer/Black	.9	408-6935
503051-1*	---	2	Bulk Pk. No Boot	3.0	408-6935

**Multimode
Stainless Steel Ferrule**

Part Numbers Hole Size um		Connector Type	Boot Type & Color	Max. Cable Diameter	Instruction Sheet
125	140				
504008-3	504008-7	2	Bend Limiting/Black	3.0	408-4151
503416-1	503416-2	1	Short/Black	3.0	408-9971
5-504008-4	---	2	Bulk Pk. No Boot	3.0	408-4151

**Multimode
Polymer Composite Ferrule**

Part Numbers Hole Size 125um	Connector Type	Boot Type & Color	Max. Cable Diameter	Instruction Sheet
503415-1	1	Short/Black	3.0	408-9971
503424-3*	1	Short/Black	3.0	408-9971
503424-1*	1	Bulk Pack No Boot	3.0	408-9971
503424-5*	1	Bare Buffer/Black	.9	408-9971

* Bulk packages are 1000 piece quantities.
Bulk packaged epoxy style components and kits are available with other strain relief colors. Contact AMP.

**Singlemode
Zirconia Ceramic Ferrule**

Part Numbers Hole Size um		Connector Type	Boot Type & Color	Instruction Sheet
126	127			
502579-2	502579-3	2	Bend Limiting/Yellow	408-9645
502580-2	502580-3	2	Short/Yellow	408-9645
502613-2	---	2	Bare Buffer/Yellow	508-4645

Fiber Optic Connectors

ST Style Connector Products (Continued)

ST Style Connector Components

Strain Relief (Bulk packaged 100 piece package)

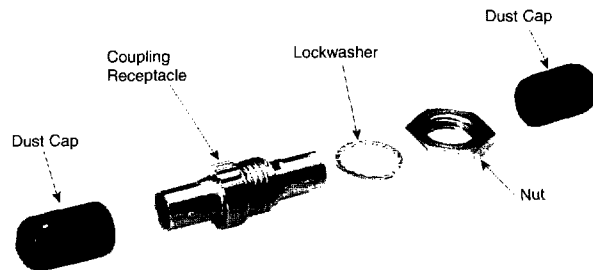
Color	Part Numbers			
	Bend Limiting Boot	Short Boot	Right-Angle	Bare Buffer
Black	502128-9	501457-8	502667-6	502628-2
Red	1-502128-1	1-501457-0	502667-9	—
Blue	1-502128-3	1-501457-2	502667-7	503628-9

Build up tubes

Size	Part Numbers	Pcs Per Pack
.250 mm to 3.0 mm	503000-2	1000
.900 mm to 3.0 mm	502179-9	100
2.0 mm to 3.0 mm	501275-4	100

Coupling Receptacles

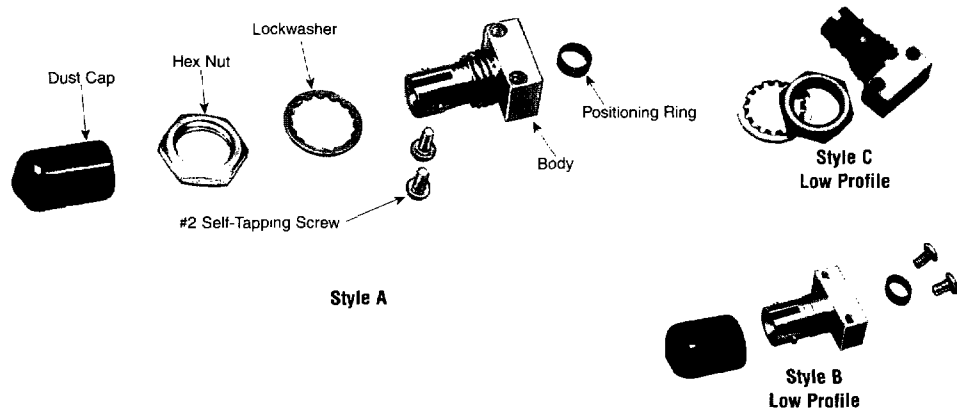
- Free-hanging or panel mount design
- Singlemode and multimode



Alignment Sleeve Material	Application	Packaging	Part Numbers
Polymer Composite	Multimode	Single	501381-1
		Bulk (1000)	501381-2
Metal	Singlemode/Multimode	Single	504021-1
		Bulk (50)	504021-2
Zirconia Ceramic	Singlemode/Multimode	Single	502750-1

Active Device Mounts

- Designed to accept multimode TO-18, TO-46, and TO-52 active devices
- Nickel plated, die cast zinc
- Mount to PCB or through panel
- Includes positioning ring



Description	Packaging	Style	Height	Part Numbers
Standard height	Single	A	.410 [10.4]	501474-1
Low profile	Single	B	.280 [7.1]	502585-2
Low profile	Single	C	.314 [8.0]	504022-2
Low profile	Bulk (50)	C	.314 [8.0]	504022-3

Fiber Optic Connectors

AMP SC Connector Products (Continued)

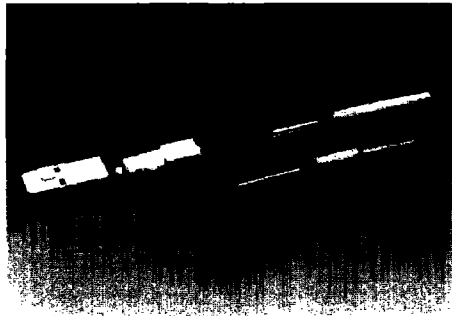
AMP LightCrimp SC Epoxyless Connector

Product Facts:

- Innovative crimp design
- Compliant with EIA/TIA 568A
- No epoxy or adhesives
- Shorter assembly time
- Reduced polishing time
- Lower installed cost
- Secure repeatable matings
- No need for curing oven or power supply
- Consistent performance over a wide range of temperatures

AMP LightCrimp SC Universal Cleave Tool: 503705-1

Instruction Sheet
IS 408-4066



Part No. 503692-1 Components shown.

AMP LightCrimp SC Termination Kit

Type	Part Number
Simplex Multimode connector kit	503692-1
Duplex Multimode connector kit	503693-1
Accessories	
AMP LightCrimp SC Termination kit (no microscope)	503706-1
Microscope	502978-1
Microscope adapter (Universal 2.5mm)	502977-1
AMP LightCrimp SC Upgrade Kit (add to an ST Style kit for SC terminations)	503707-1
AMP LightCrimp Termination Kit for all LightCrimp Connectors (ST and SC Style)	503957-3

Specifications	Method	Requirement	Results
Attenuation @1300 nm FOTP 171	Concatenation	0.60 dB	Mean 0.12 dB Max. 0.35 dB
Environmental			
Temperature Cycling FOTP 3	5 cycles at -40° to 65°C	0.50 dB Max. increase	<0.50 dB Max. increase
Steady State Humidity FOTP 5	4 days at 90 to 95% RH	0.50 dB Max. increase	0.40 dB Max. loss increase
Thermal Shock FOTP 71	5 cycles at -40° to 65°C	0.50 dB Max. increase	0.20 dB Max. loss increase
Mechanical			
Cable Flexing FOTP 1	0.5 kg (1.1 lbs.) load applied a min. of 200 mm (8.0 in.) from strain relief and rotated 0° to +90° to 0° to -90° for 500 cycles	0.50 dB Max. increase	0.10 dB Max. increase
Cable Retention FOTP 6	Apply a 33 N (7.5 lbs.) load at 0° to mated connector for 1 min.	0.50 dB Max. increase	0.40 dB Max. increase
Durability FOTP 21	mate and unmate connector 500 cycles	0.70 dB increase after 500 cycles	0.20 dB Max. increase
Operational Temperature Cable Dependent			40° to 65°C
Materials			
Connector Ferrule			Zirconia Ceramic
Connector Body			Thermoplastic
Strain Relief			Thermoplastic
Fiber Size			62.5/125/3.0 mm Multimode
Mating Adapter			
Housing			Thermoplastic
Alignment Sleeve			Zirconia Ceramic

Fiber Optic Connectors

AMP SC Connector
Products (Continued)AMP SC Connectors
Epoxy Type

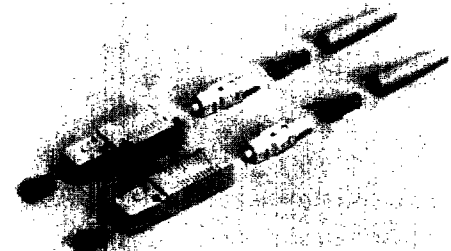
Product Facts

- Easy to install
- Singlemode or multimode
- Two versions available to match various assembly techniques
- Compliant with:
 - Bellcore 326
 - JIS C-5973
 - Fibre Channel
 - TIA 568
- Pre-radiused ferrules



Simplex Connector

The AMP SC connector offers high performance, ease of assembly, simplicity, and value. There are two types of AMP SC connectors. The One-Piece connector consists of only a few parts and provides the fastest assembly. It is the best connector for field assembly, use with polish machines that



Duplex Connector

accept assembled connectors, and for high volume assembly. The Multi-Piece version of the AMP SC connector is provided in components form. Because the internal components are the same for both SC and FC type connectors, both types of connector housing can be used on the same cable

sub-assembly. Just assemble the components to the cable and snap-on either SC or FC type housing. You can also use the Multi-Piece version on polish machines that only accept ferrules, or when tuning is required for optimum performance.

One-Piece Connectors

Hole Diameter	Cable Diameter		
Simplex Connector	3.0mm	2.5mm	2.0mm
125µm	504646-1	504933-1	504934-1
126µm	504646-2	504933-2	504934-2
Duplex Connector			
125µm	—	504935-1	504936-1
126µm	504655-1	504935-2	504936-2

Multi-Piece/Tunable Connectors

Hole Diameter	Cable Diameter		
Simplex Connector			
125µm	504647-1	504937-1	504938-1
126µm	504647-2	504937-2	504938-2
Duplex Connector			
125µm	—	504939-1	504940-1
126µm	504656-1	504939-2	504940-2

One-Piece Connector

Hole Diameter	Cable Diameter		
Fiber Size 125µm	3.0mm	2.5mm	2.0mm
Simplex Connector	503948-1	504930-1	504931-1
Duplex Connector	504657-1	504927-1	504928-1

Multi-Piece/Tunable Connectors

Simplex Connector	504909-1	—	—
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Singlemode
SC Type Connectors

Performance Characteristics

Insertion Loss:

0.2 dB typ. Return Loss: <-59 dB typ.

Temperature Range:

-40°C to +85°C; 0.1 dB change typ.

Durability:

0.1 dB typ. change after 200 cycles

Multimode
SC Type Connectors

Performance Characteristics

Insertion Loss: <0.2 dB typ.

Temperature Range:

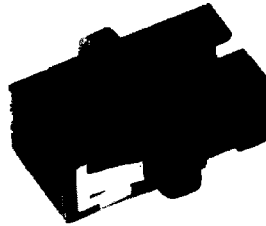
-40°C to +85°C; <0.1 dB change typ.

Durability:

<0.1 dB typ. change after 500 cycles

Fiber Optic Connectors**AMP SC Connector
Products** (Continued)**AMP SC Coupling Adapters****Product Facts**

- Suitable for any SC Type connector
- Available with metal or ceramic alignment sleeves
- Choice of housing colors
- Duplex adapters accept two simplex connectors or one duplex connector
- Assortment of hybrid configurations available
- Most adapters can be used for singlemode or multimode (unless specified otherwise)
- Mounting screws available



AMP SC Simplex Adapter



AMP SC Duplex Adapter

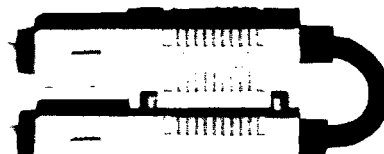
Standard AMP SC Adapters (Individually Packaged)

AMP SC Adapter	Housing Color		
	Black	Blue	Beige
AMP SC Simplex Adapter			
Metal Alignment Sleeve	502632-7	502632-8	502632-9
Ceramic Alignment Sleeve	1-502632-0	1-502632-1	1-502632-2
Metal Sleeve Adapter, without flange	504632-1	—	—
Metal Sleeve Adapter, for multimode use only	—	—	504614-1
AMP SC APC Simplex Adapter			Green
Precision Ceramic Sleeve Adapter, for singlemode APC only flange mt	—	—	106901-6
AMP SC Duplex Adapter	Black	Blue	Beige
Metal Alignment Sleeve	502776-7	502776-8	502776-9
Ceramic Alignment Sleeve	1-502776-0	1-502776-1	1-502776-2
Metal Sleeve Adapter, for singlemode use only	—	503850-1	—
Ceramic Sleeve Adapter, for singlemode use only flange mt	—	503850-2	—
Metal Sleeve Adapter, for multimode use only	—	—	504640-1
AMP SC APC Duplex Adapter			Green
Precision Ceramic Sleeve Adapter, for singlemode APC only	—	—	2-502776-2
AMP SC Duplex Wall Outlet Adapter			Light Almond
Metal Alignment Sleeve	—	—	2-502776-0
Ceramic Alignment Sleeve	—	—	2-502776-1
Metal Sleeve Adapter, for Multimode use only	—	—	504640-3

(Package of 100 Mounting Screws: 503663-1)

**AMP SC Low Loss
Loopback Connector****Part Number 503141-1****Product Facts**

- Multimode
- Use for equipment testing
- 0.6 dB Insertion loss
- 0.5" ferrule centerline



Fiber Optic Connectors

FC Type Connector Products

FC Type Connectors

Product Facts

- Easy to install
- Two versions available to match various assembly techniques
- Compliant with:
 - Bellcore 326
 - JIS C-5973
 - Fibre Channel
 - TIA 568
- Pre-radiused ferrule

Singlemode

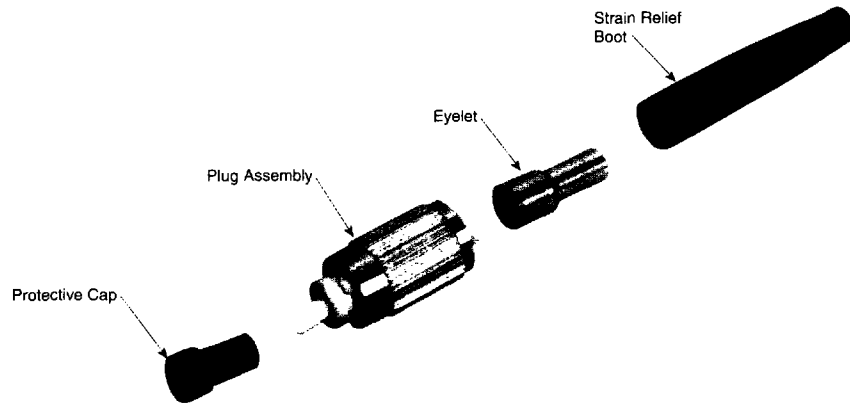
Performance Characteristics

Insertion Loss: 0.2 dB typical
Return Loss: <-59 dB typ.
Temperature Range: -40°C to +85°C; 0.1 dB change typ.
Durability: < 0.2 dB change after 500 mating cycles

Multimode

Performance Characteristics

Insertion Loss: <0.2 dB typ.
Temperature Range: -40°C to +85°C; <0.1 dB change typ.
Durability: <0.1 dB typ. change after 500 cycles



The AMP FC connector offers high performance, ease of assembly, simplicity, and value. There are two types of FC connectors. The One-Piece connector consists of only a few parts and provides the fastest assembly. It is the best connector for field assembly, use with polish machines that accept assembled connectors, and for high volume assembly. The Multi-Piece version of the AMP FC connector is provided in component form. Because the internal components are the

same for both SC and FC type connectors, both types of connector housing can be used on the same cable subassembly. Just assemble the components to the cable and snap-on either the SC or FC type housing. You

can also use the Multi-Piece version on polishing machines that only accept ferrules, or when tuning is required for optimum performance.

Part Numbers for FC Type Connectors

Hole Diameter	Cable Diameter		
	3.0 mm	2.5 mm	2.0 mm
Singlemode			
One-Piece Connectors			
125 µm	504649-1	504914-1	504915-1
126 µm	504649-2	504914-2	504915-2
Multi-Piece/Tunable Connectors			
125 µm	504648-1	504916-1	504917-1
126 µm	504648-2	504916-2	504917-2
Multimode			
One-Piece 125 µm	504920-1	—	—

Receptacles

Square Flange
Part Number 501506-1
(Ceramic Sleeve)

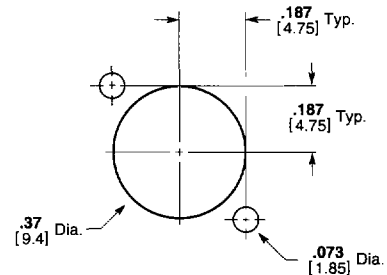
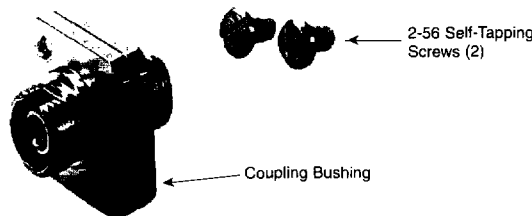
Part Number 501506-2
(Metal Sleeve)

Round Flange
(fits ST Style Cutout)
Part Number 504407-3
(Ceramic Sleeve)

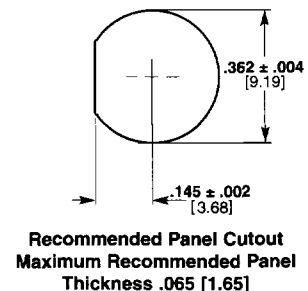
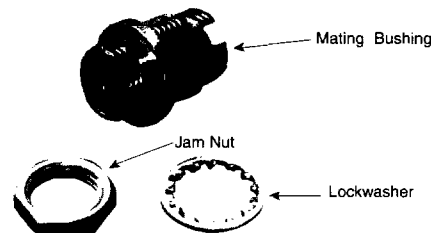
Part Number 504407-1
(Metal Sleeve)

Product Facts

- For singlemode or multimode
- Kit includes dust covers (not shown)



Recommended Panel Cutout



Recommended Panel Cutout
Maximum Recommended Panel Thickness .065 [1.65]