



Introduction

Pee-Wee is a series of subminiature, high voltage connectors and cable assemblies for use in high voltage applications where dense electronic packaging is required. Pee-Wee uses the Advanced interface sealing system illustrated in Figure 2 on page 11. This unique method of sealing high voltage at reduced atmospheric pressure permits the Pee-Wee series to be rated at 12 KVDC at 70,000 feet and over a temperature range of -55 to +125° C. The series consists of a wide selection of interconnection components:

- Single and multiple pin receptacles
- Plastic and ceramic receptacles
- Single and multiple pin plug cable assemblies

TWT (Traveling Wave Tube) Applications

Pee-Wee connectors and cable assemblies are well suited to interconnect TWTs to a power supply by providing reliable interconnections from the gun, collector and ion pump.

Modularization of Airborne High Voltage Power Supplies

By using Pee-Wee connectors, it is possible to package or re-package a high voltage power supply into a set of four or five modules which can be easily and reliably mated and un-mated with one another. This packaging technique permits the pre-testing of individual modules as they are being manufactured and to replace failed modules in the field when spare modules are available.



General Specifications

Receptacle Body

ULTEM Plastic (unless otherwise noted)

Receptacle Interface Seal

Molded Silicone Rubber

Plug Body & Insulator

ULTEM Plastic

Receptacle Contact

Type: Male

Design: Spherical radius, molded in place

Material: BeCu, gold plated

Size: 22 (.030 Dia.)

Soldering bucket: Accommodates 22 AWG max.

Plug Contact

Type: Female

Design: Split finger, closed entry, molded in place

Material: BeCu, gold plate with CRES hood

Size: 22 (.030 Dia.)

Cable Assemblies

Back end of connector is encapsulated with silicone rubber

Electrical

Rated Voltage: 12 KVDC @ 70,000 feet

Test voltage (mated): 150% of rated voltage @ 70,000 feet

Operating temperature rating: -54° to +125° C

Cable Options

.050 Dia. etched FEP Ready-to-Bond cable

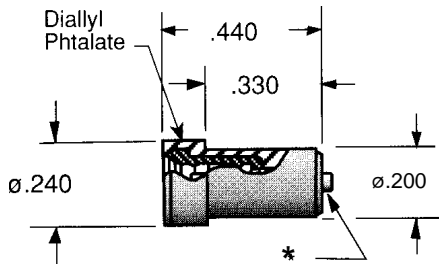
.050 Dia. etched FEP Ready-to-Bond cable with NOMEX jacket

.060 Dia. silicone coated FEP Ready-to-Bond cable

.060 Dia. silicone coated FEP Ready-to-Bond cable with NOMEX jacket

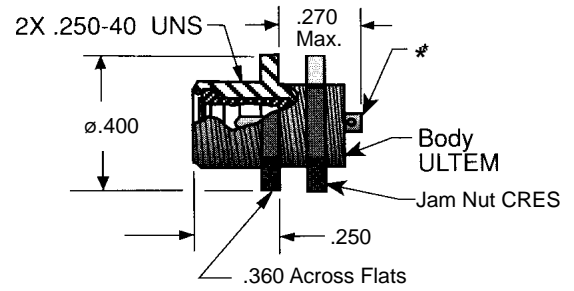


P/N 178-7937 Panel Connector	Mating See Note 1
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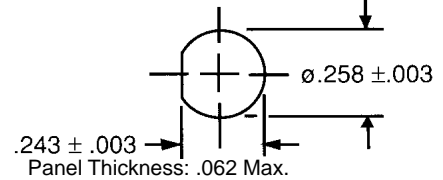


Recommend bonding into epoxy G-10 plate .080 or .120 inch thick. hole dia. .243 in.

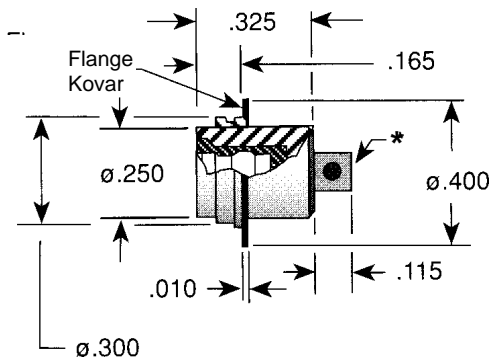
P/N 178-9341 Panel Receptacle (Threaded) Front Panel Mount	Mating See Note 2
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"D" Mounting Hole (Optional)



P/N 467-7022 (Weld Flange) P/N 467-7024 (Solder Mount) Hermetic Ceramic Panel Connectors	Mating See Note 1
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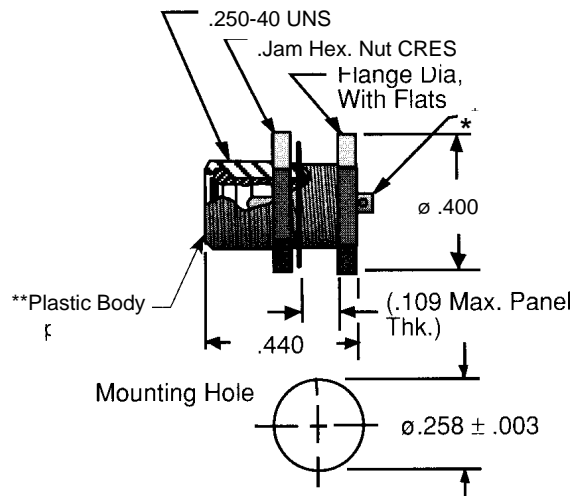


Ceramic body: 94% Alumina min.
Brazing mat'l.: 99% pure copper braze

Rear of receptacle to be potted or immersed in dielectric fluid or gas

*Contact pot will accommodate 24 gage wire. Do not exceed 400°F when soldering. Use SN 60 solder.

P/N 178-8621 Panel Receptacle (Threaded) Rear Panel Mount	Mating See Note 2
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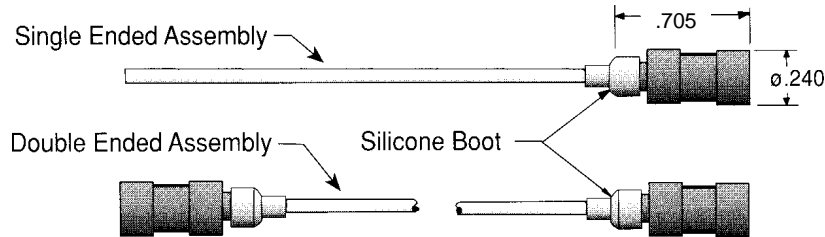
**178-8621: Torlon (machined)
178-8621-1 Ultem (molded)

- NOTES: 1. Mates with all non-threaded Pee-Wee series plug cable assemblies. See pages 22 & 23
2. Mates with threaded plug cable assemblies shown on page 25



Single Pin, Straight Receptacle Cable Assemblies

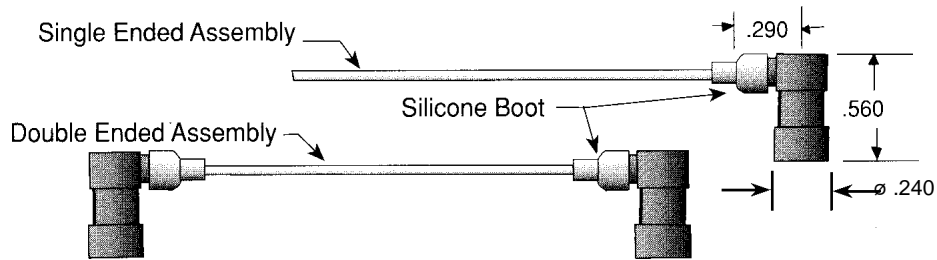
Mating See Note 1



Single Ended Cable Assembly	Double Ended Cable Assembly	Cable Type
P/N 178-8110	P/N 178-8180	.050 Etched FEP
P/N 178-8419	P/N 178- 8420	.060 Silicone Coated FEP

Single Pin, Right Angle Receptacle Cable Assemblies

Mating See Note 1

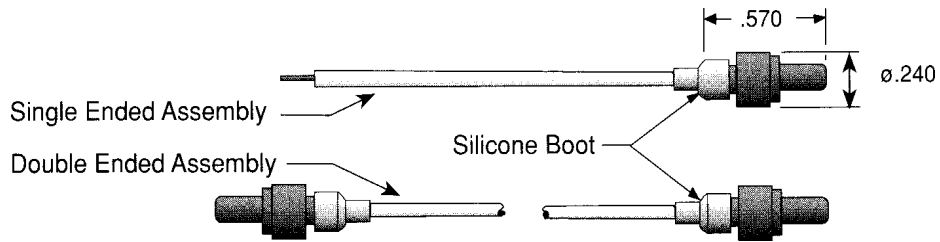


Single Ended Cable Assembly	Double Ended Cable Assembly	Cable Type
P/N 178-8251	P/N 178-9768	.050 Etched FEP
P/N 178-8422	P/N 178-9769	.060 Silicone Coated FEP

NOTE: 1. Mates with all non-threaded Pee-Wee series plug cable assemblies. (see pages 22 & 23)
2. For cable length and ordering information, see page 28

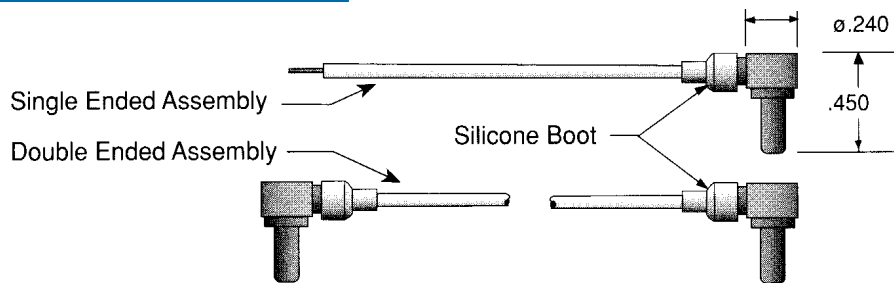


Single Pin Plug Cable Assembly	Mating See Note 1
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Single Ended Cable Assembly	Double Ended Cable Assembly	Cable Type
P/N 178-8166	P/N 178-8169	.050 Etched FEP
P/N 178-8425	P/N 178-8426	.060 Silicone Coated FEP

Single Pin Right Angle Plug Cable Assembly	Mating See Note 1
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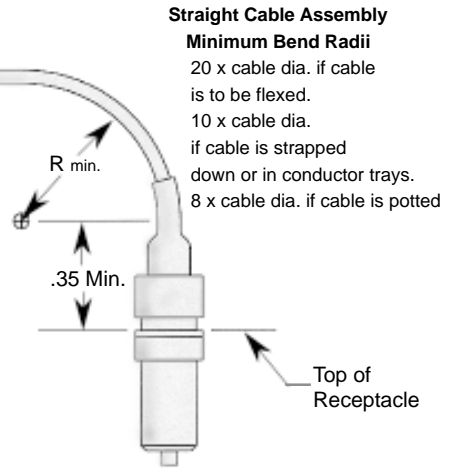
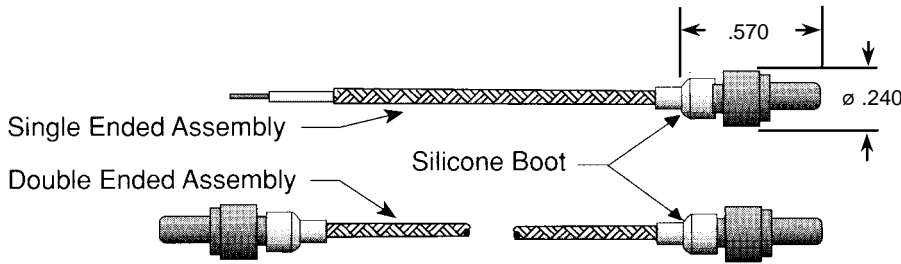


Single Ended Cable Assembly	Double Ended Cable Assembly	Cable Type
P/N 178-8172	P/N 178-8160	.050 Etched FEP
P/N 178-8423	P/N 178-8424	.060 Silicone Coated FEP

NOTE: 1. Mates with all non-threaded Pee-Wee series receptacles and receptacle cable assemblies. (see pages 20 & 21)
2. For cable length and ordering information, see page 28

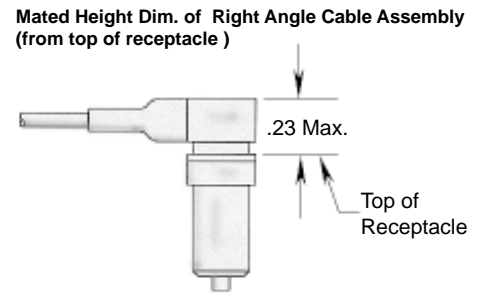
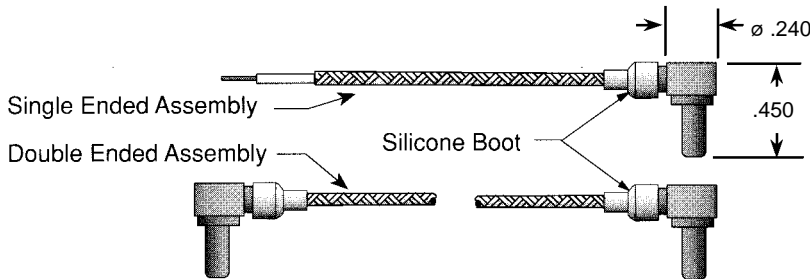


Single Pin NOMEX Covered Plug Cable Assemblies	Mating See Note 1
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Single Ended Cable Assembly	Double Ended Cable Assembly	Cable Type
P/N 178-8174	P/N 178-8177	.050 Etched FEP W/NOMEX
P/N 178-8427	P/N 178-8428	.060 Silicone Coated FEP W/ NOMEX

Single Pin NOMEX Covered Right Angle Plug Cable Assemblies	Mating See Note 1
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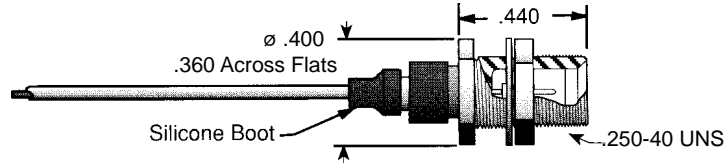


Single Ended Cable Assembly	Double Ended Cable Assembly	Cable Type
P/N 178-8167	P/N 178-8163	.050 Etched FEP W/NOMEX
P/N 178-8429	P/N 178-8430	.060 Silicone Coated FEP W/ NOMEX

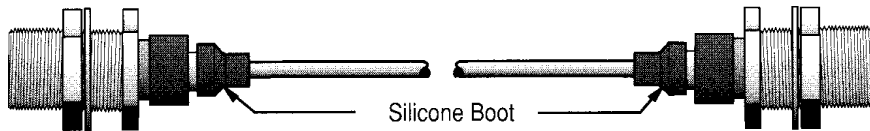
NOTE: 1. Mates with all non-threaded Pee-Wee series receptacles and receptacle cable assemblies. (see pages 20 & 21)
 2. For cable length and ordering information, see page 28



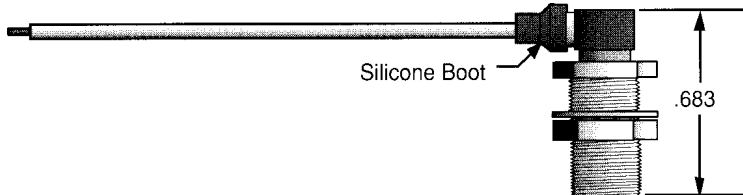
Non-Shielded, Straight, Single Ended Cable Assembly	Mating See Note 1
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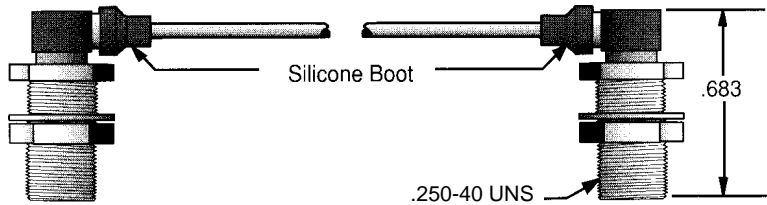
Non-Shielded, Straight, Double Ended Cable Assembly	Mating See Note 1
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Non-Shielded, Right Angle, Single Ended Cable Assembly	Mating See Note 1
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Non-Shielded, Right Angle, Double Ended Cable Assembly	Mating See Note 1
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Straight Single Ended Cable Assembly	Straight Double Ended Cable Assembly	Right Angle Single Ended Cable Assembly	Right Angle Double Ended Cable Assembly	Cable Type	Dia.
P/N 178-9499	P/N 178-9503	P/N 178-9507	P/N 178-9511	Etched FEP	.050
P/N 178-9500	P/N 178-9504	P/N 178-9508	P/N 178-9512	*SC-FEP	.060
P/N 178-9501	P/N 178-9505	P/N 178-9509	P/N 178-9513	Etched FEP W/NOMEX	.050
P/N 178-9502	P/N 178-9506	P/N 178-9510	P/N 178-9514	*SC-FEP-W/NOMEX	.060

*Silicone Coated

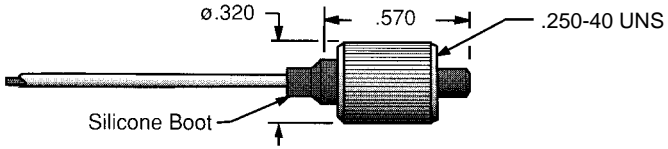
- NOTES: 1. Mates all Pee-Wee series threaded coupling plug cable assemblies. See page 25
 2. All receptacles shown are rear mount types
 3. For cable length and ordering information, see page 28



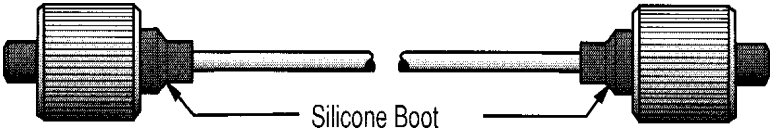
ADVANCED GROUP

Pee-Series Series Single Pin, Threaded Coupling, Plug Cable Assemblies
12 KVDC

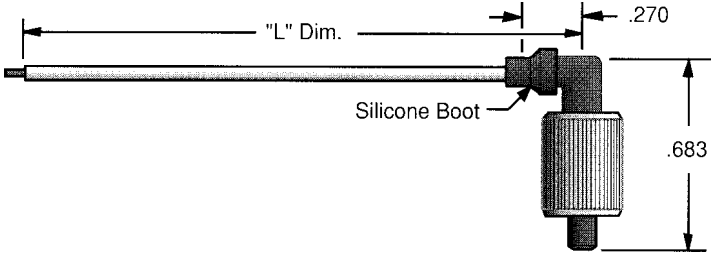
Non-Shielded, Straight, Single Ended Cable Assembly Mating See Note 1



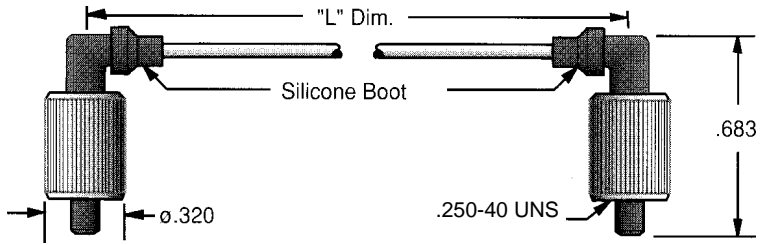
Non-Shielded, Straight, Double Ended Cable Assembly Mating See Note 1



Non-Shielded, Right Angle, Single Ended Cable Assembly Mating See Note 1

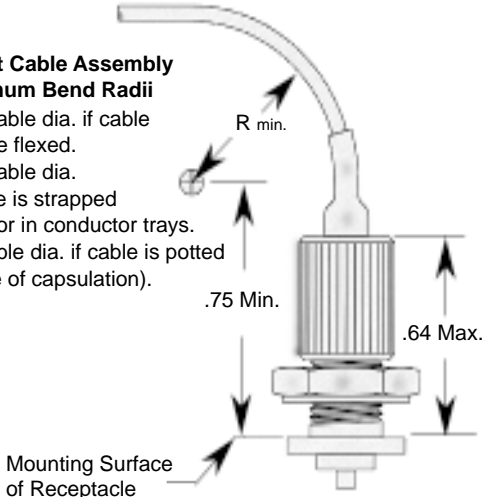


Non-Shielded, Right Angle, Double Ended Cable Assembly Mating See Note 1

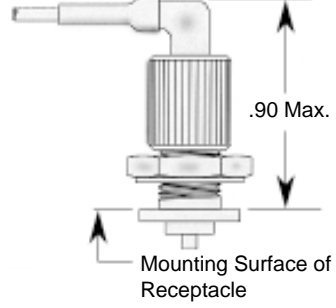


Straight Cable Assembly Minimum Bend Radii

- 20 x cable dia. if cable is to be flexed.
- 10 x cable dia. if cable is strapped down or in conductor trays.
- 8 x cable dia. if cable is potted (inside of capsulation).



Mated Height Dim. of Right Angle Cable Assembly (from receptacle mounting flange)

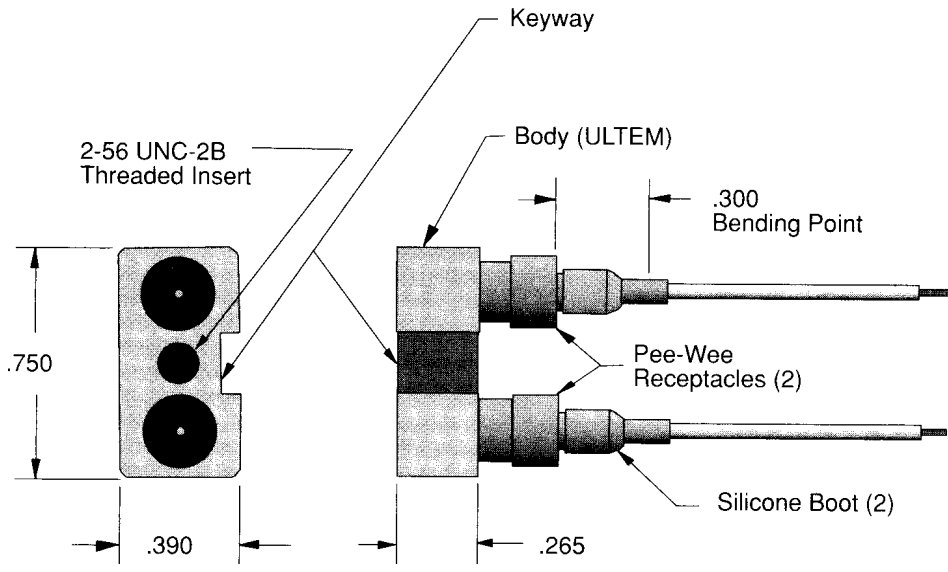


Straight Single Ended Cable Assembly	Straight Double Ended Cable Assembly	Right Angle Single Ended Cable Assembly	Right Angle Double Ended Cable Assembly	Cable Type	Dia.
P/N 178-8398	P/N 178-8402	P/N 178-8734	P/N 178-9347	Etched FEP	.050
P/N 178-8399	P/N 178-8403	P/N 178-9344	P/N 178-9348	*SC-FEP	.060
P/N 178-8400	P/N 178-8404	P/N 178-9345	P/N 178-9349	Etched FEP W/NOMEX	.050
P/N 178-8401	P/N 178-8405	P/N 178-9346	P/N 178-9350	*SC-FEP-W/NOMEX	.060

*Silicone Coated
 NOTES: 1. Mates all Pee-Wee series threaded receptacles and threaded receptacle cable assemblies. See pages 20 and 24
 2. For cable length and ordering information, see page 28



2 Pin Receptacle Cable Assembly	Mating See Note 1
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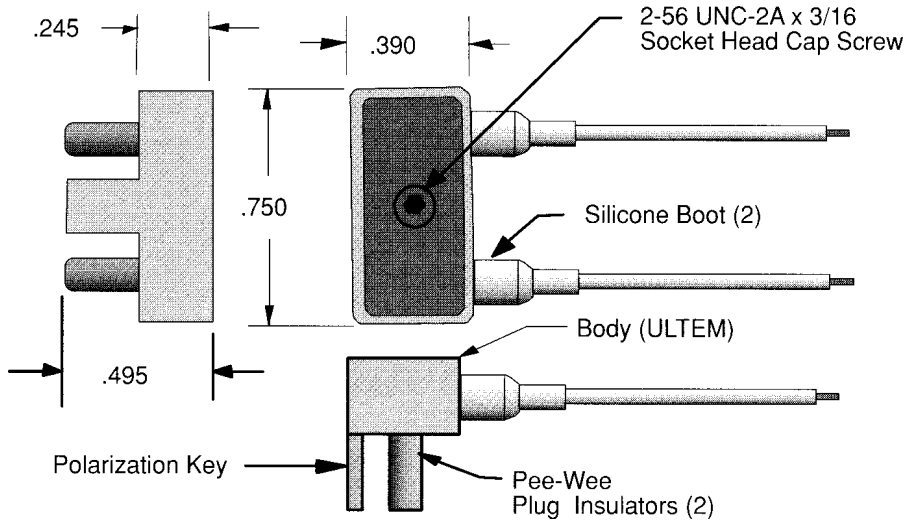
Single Ended Cable Assbly.	Cable Type	Dia.
P/N 178-8443	Etched FEP	.050
P/N 178-8560	*SC-FEP	.060
P/N 178-8561	Etched FEP W/NOMEX	.050
P/N 178-8562	*SC-FEP W/NOMEX	.060

*Silicone Coated

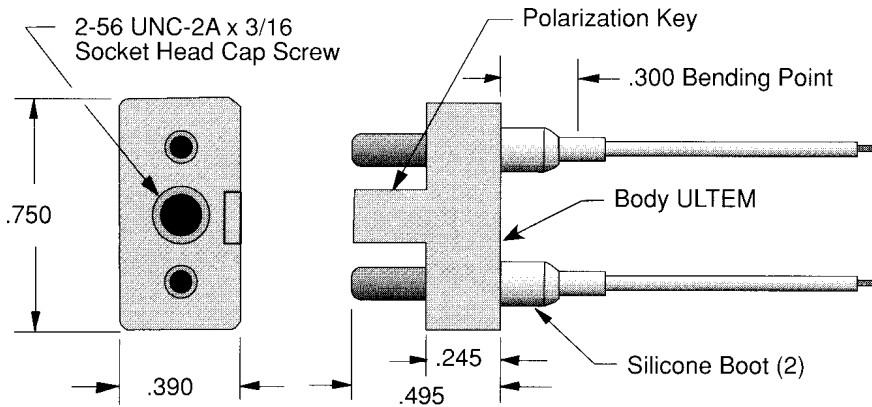
NOTES: 1. Mates with Pee-Wee series two pin plug cable assemblies. See page 27.
2. For cable length and ordering information, see page 28



2 Pin Right Angle Plug Cable Assembly	Mating See Note 1
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2 Pin Straight Plug Assembly	Mating See Note 1
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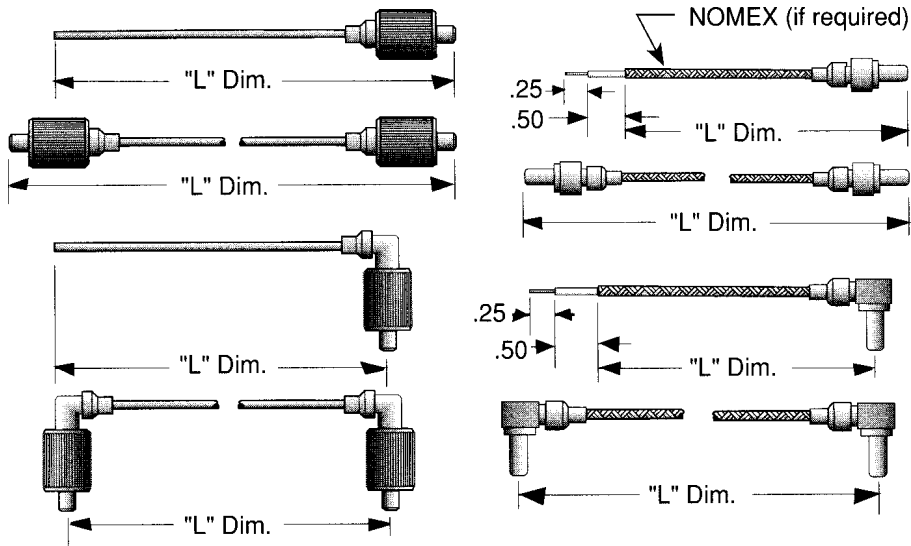
2 Pin Straight Plug Assembly	2 Pin Right Angle Plug Assembly	Cable Type	Dia.
P/N 178-8556	P/N 178-8477	Etched FEP	.050
P/N 178-8557	P/N 178-8553	*SC-FEP	.060
P/N 178-8558	P/N 178-8554	Etched FEP W/NOMEX	.050
P/N 178-8559	P/N 178-8555	*SC-FEP W/NOMEX	.060

*Silicone Coated

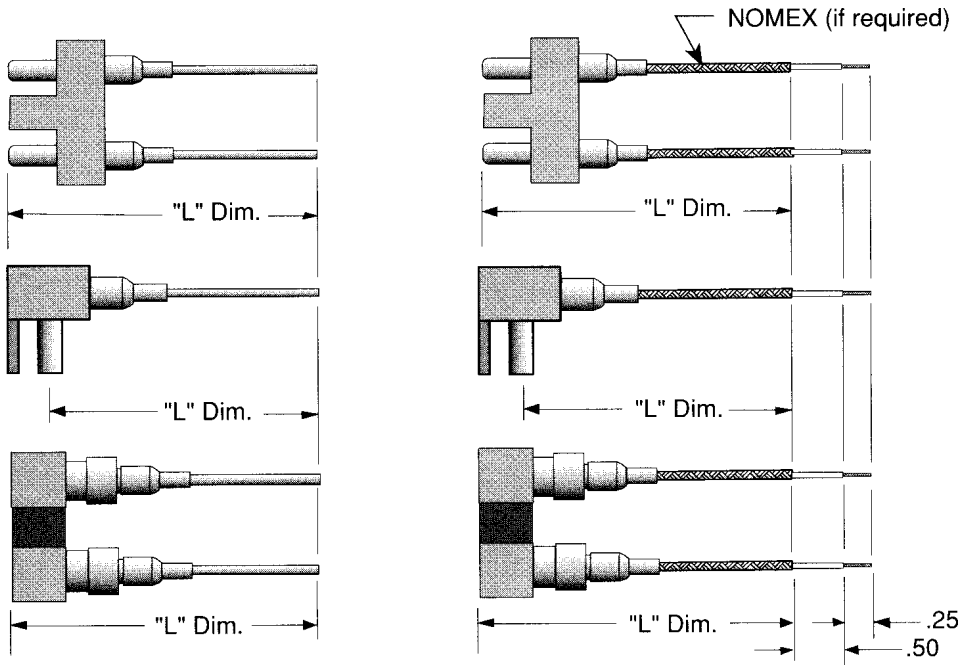
NOTE: 1. Mates with Pee-Wee series two pin receptacle cable assembly. See page 26
2. For cable length and ordering information, see page 28



Single Pin



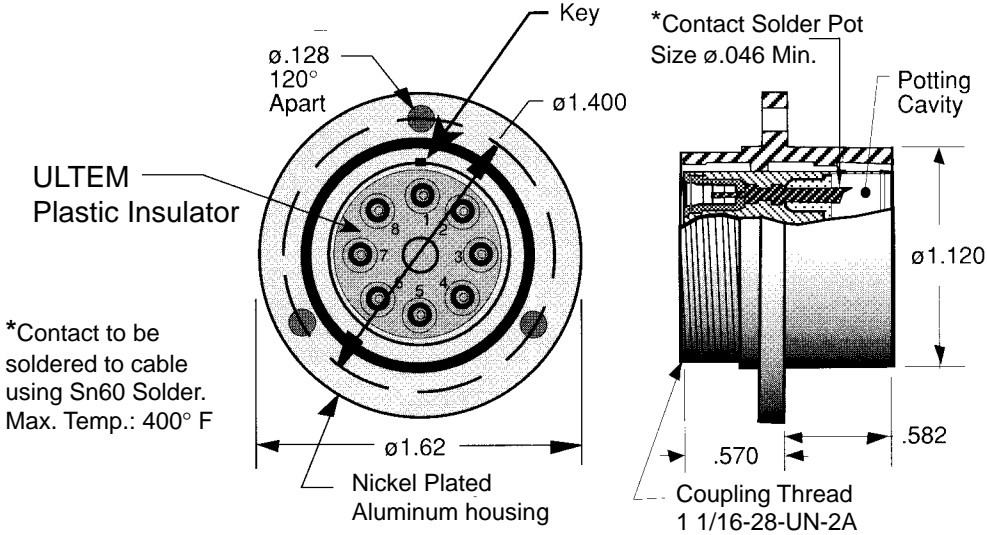
Two Pin



Cable assembly ordering information: Use "F" for feet; "N" for inches.
Examples: 178-8174-10F8N represents an assembly 10 feet, 8 inches long
178-8174-18N represents an assembly 18 inches long
For cable length tolerances, see page 31

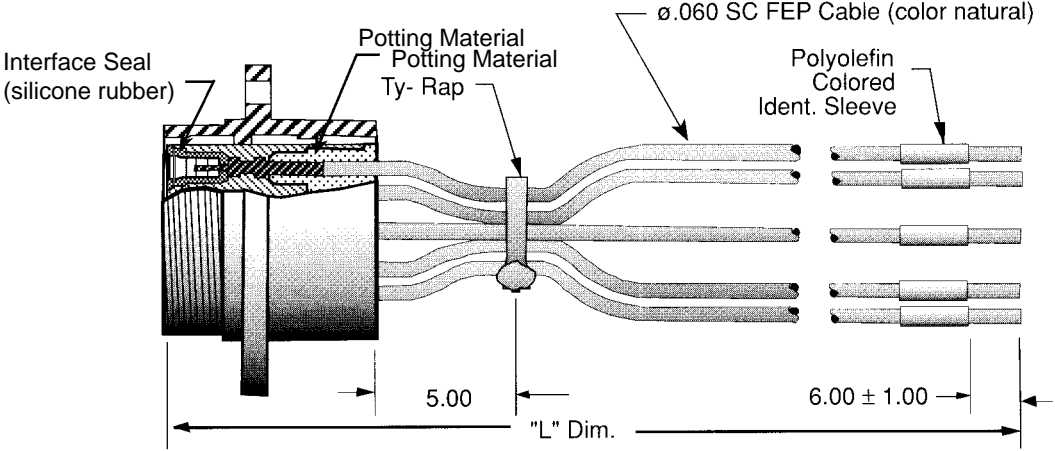


P/N 178-9335 Receptacle	Mating See Note 1
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Ceramic version of receptacle available for high vacuum applications

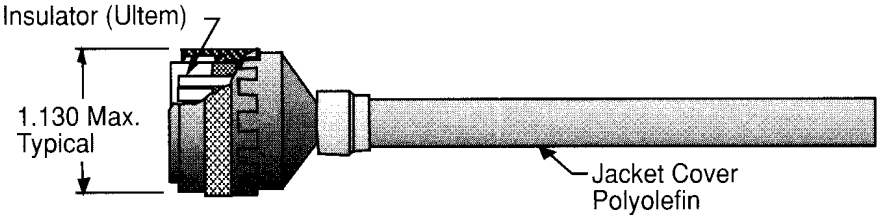
P/N 178-9336 Receptacle Cable Assembly	Mating See Note 1
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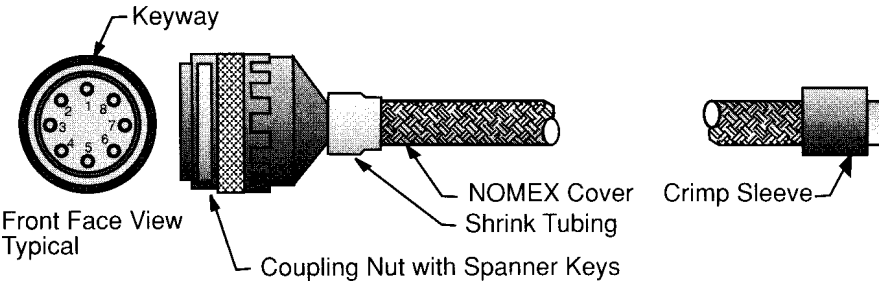
NOTE: 1. Mates all Pee-Wee series 8 pin receptacle cable assemblies. See page 30
 2. For cable length tolerances and ordering information, see page 31



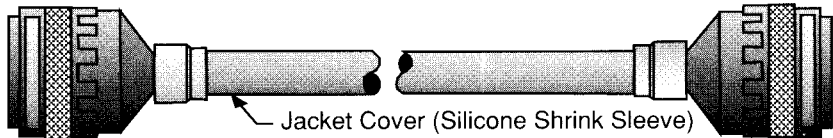
P/N 178-9337 Non-Shielded Cable Assembly	Mating See Note 1
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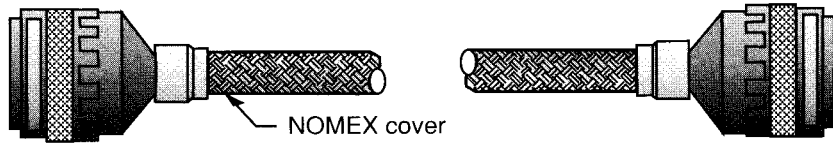
P/N 178-9339 Shielded Cable Assembly	Mating See Note 1
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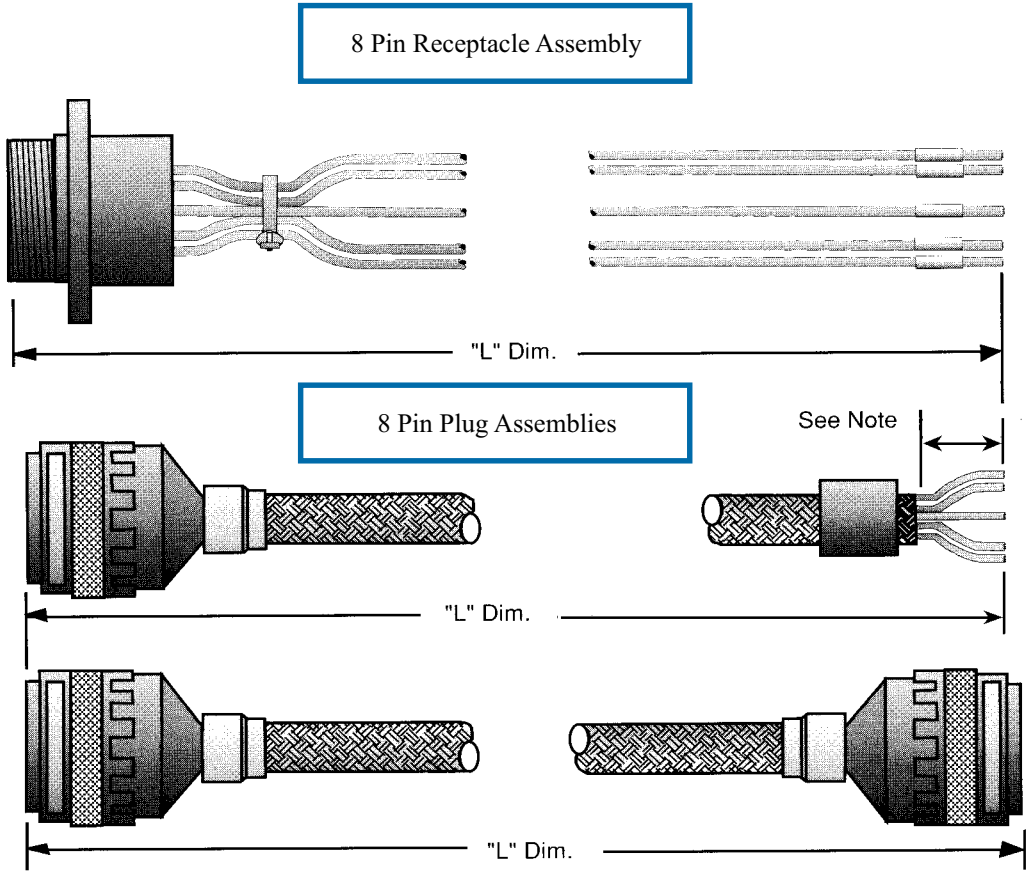
P/N 178-9338 Double Ended, Non-Shielded Cable Assembly	Mating See Note 1
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P/N 178-9340 Double Ended, Shielded Cable Assembly	Mating See Note 1
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NOTES: 1. Mates with Pee-Wee series 8 pin receptacles and 8 pin receptacle cable assemblies. See page 29
 2. For cable length definition and ordering information see page 31
 3. All cable is .050 FEP



Cable Assembly Ordering Information
 Use "F" for feet; "N" for inches

Example: 178-8174-10F8N
 Cable Assembly Type
 10 feet, 8 inches

Example: 178-8174-1 8N
 Cable Assembly Type
 18 inches

Length Tolerance Chart

Length (feet)	Tolerance (inches)
7 1/2 or less	± 1/4
7 1/2 to 12 1/2	± 1
12 1/2 to 22 1/2	± 1 1/2
22 1/2 to 35	± 2
35 to 50	± 3
50 to 70	± 4
70 to 100	± 5

Note: Exposed cable insulation on NOMEX covered single ended cable assembly will be 1/2 inch less the cable length, unless otherwise specified.