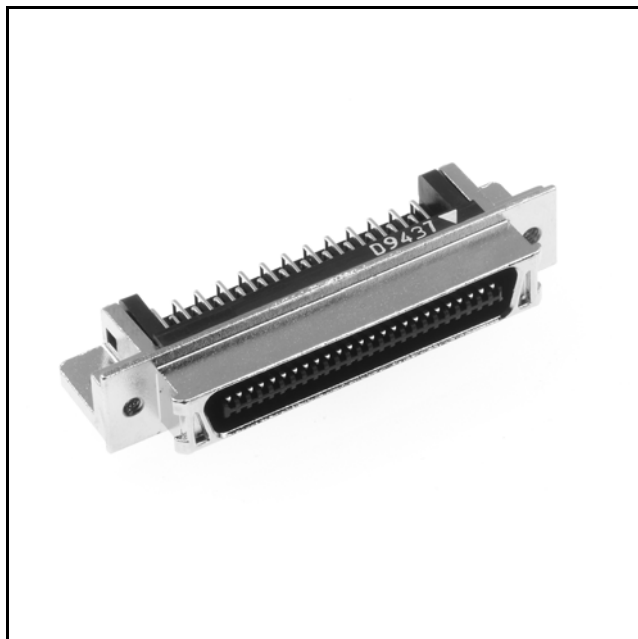


# 3M™ Pak 50 I/O Plug

.050" Straight and Right Angle, Boardmount

P50 Series



- EMI shielded
- 20 to 100 position
- Mates to P50 Series cable mount socket
- RoHS\* compliant

Date Modified: October 2, 2006

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Sheet 1 of 7

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## Physical

### Insulation

Material: Glass Filled Nylon  
Flammability: UL 94V-0  
Color: Black

### Contact

Material: Phosphor Bronze

### Plating

Underplating: Nickel  
Wiping Area: 10 μ" [ 0.25 μm ] Gold  
Solder Tails: Gold Flash

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## Electrical

**Current Rating:** 0.5 A  
**Insulation Resistance:** 10<sup>3</sup> MΩ min. at 500 VDC  
**Withstanding Voltage:** 650 VAC for 1 minute

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## Environmental

**Temperature Rating:** -55°C to +85°C  
**Process Rating:** 260°C (per J-STD-020C)

\*"RoHS compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated in writing by 3M, this information represents 3M's knowledge and belief based on information provided by third party suppliers to 3M.

# 3M™ Pak 50 I/O Plug

.050" Straight and Right Angle, Boardmount

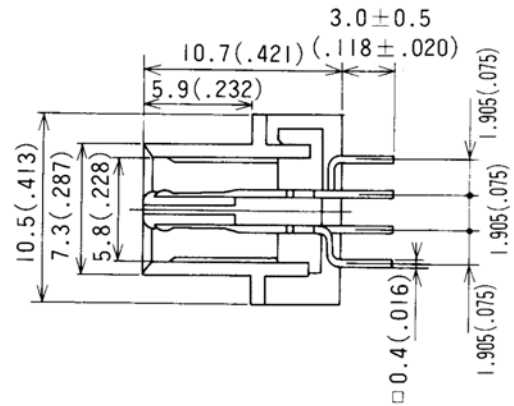
P50 Series

## Straight Plug

Product Table / Dimensions

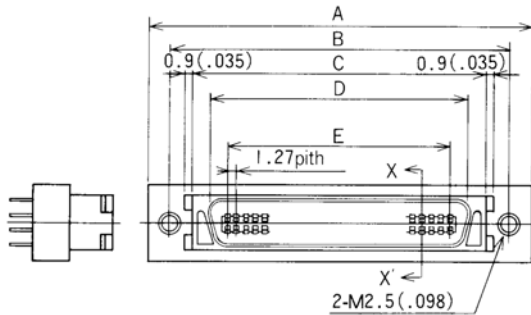
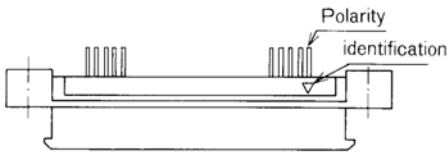
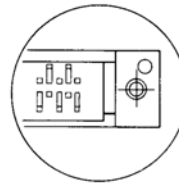
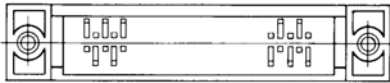
Contact Quantity	A	B	C	D	E
20	33.40 [1.315]	27.40 [1.079]	21.60 [0.850]	16.73 [0.659]	11.43 [0.450]
28	38.48 [1.515]	32.48 [1.279]	26.68 [1.050]	21.81 [0.859]	16.51 [0.650]
34	42.29 [1.665]	36.29 [1.429]	30.49 [1.200]	25.62 [1.009]	20.32 [0.800]
50	52.45 [2.065]	46.45 [1.829]	40.65 [1.600]	35.78 [1.409]	30.48 [1.200]
60	58.80 [2.315]	52.80 [2.079]	47.00 [1.850]	42.13 [1.659]	36.83 [1.450]
68	63.88 [2.515]	57.88 [2.279]	52.08 [2.050]	47.21 [1.859]	41.91 [1.650]
80	71.50 [2.815]	65.50 [2.579]	59.70 [2.350]	54.83 [2.159]	49.53 [1.950]

X-X' Cross Section



20, 50 pins

28, 34, 60, 80 pins



## Ordering Information

**P50 - XXX - DDP - XXX - EA**

Contact Quantity  
See Table

S1 = Straight  
SR1 = Right Angle

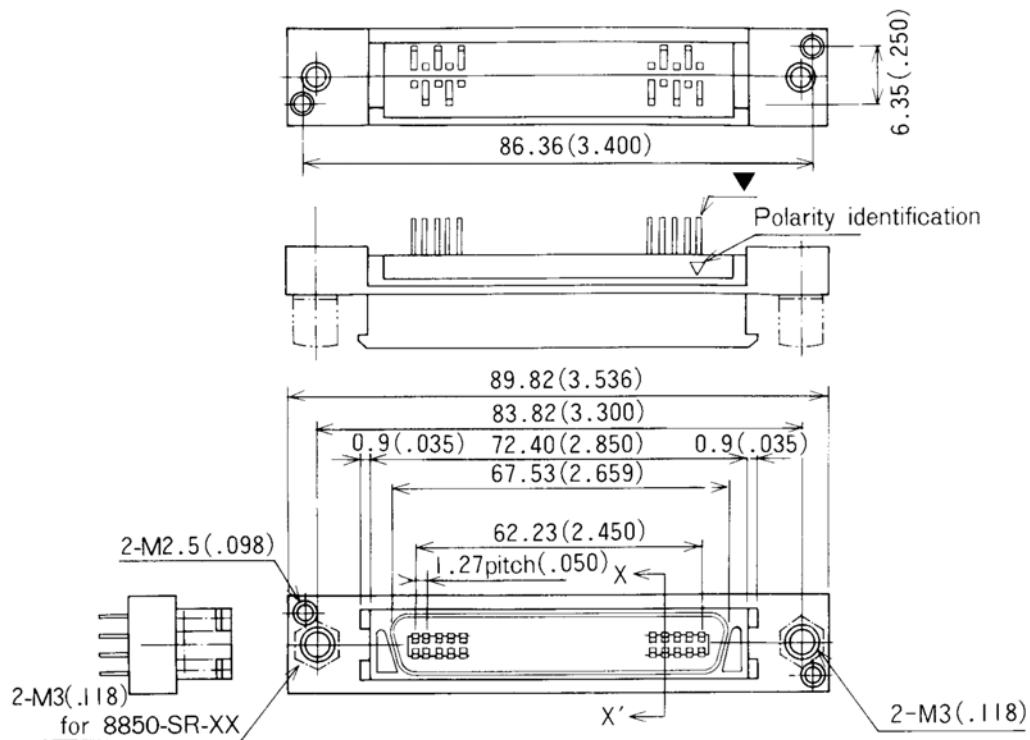
TS-1147-02  
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# 3M™ Pak 50 I/O Plug

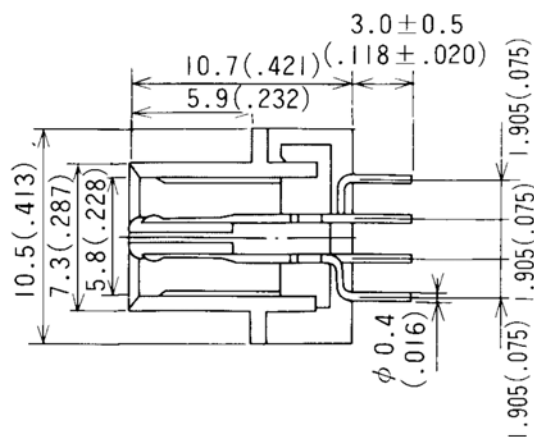
.050" Straight and Right Angle, Boardmount

P50 Series

## Straight Plug, 100 Pins



### X-X' Cross Section



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Sheet 3 of 7

# 3M™ Pak 50 I/O Plug

.050" Straight and Right Angle, Boardmount

P50 Series

## Straight Plug

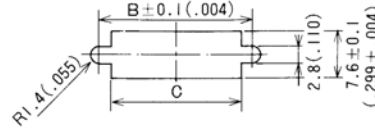
Product Table / Dimensions

Contact Quantity	A	B	C
20	11.43	27.40	24.40
	[0.450]	[1.079]	[0.961]
28	16.51	32.48	29.48
	[0.650]	[1.279]	[1.161]
34	20.32	36.29	33.29
	[0.800]	[1.429]	[1.311]
50	30.48	46.45	43.45
	[1.200]	[1.829]	[1.711]
60	36.83	52.80	49.80
	[1.450]	[2.079]	[1.961]
68	41.91	57.88	54.88
	[1.650]	[2.279]	[2.161]
80	49.53	65.50	62.50
	[1.950]	[2.579]	[2.461]

## Panel Cutout Dimensions

20, 28, 34, 50, 60, 68, 80 pins

Recommended panel thickness : 2.0max(.079)

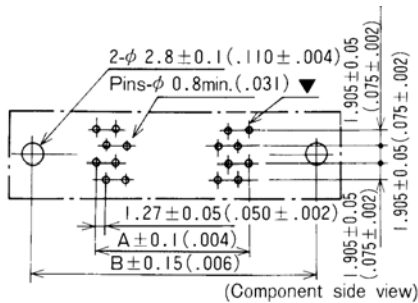


Recommended PCB Thickness: 1.6 \$ 0.19 mm [ 0.063 \$ .007 ]

## Printed Circuit Board Layout

Recommended PCB Thickness: 1.6 \$ 0.19 mm [ 0.063 \$ .007 ]

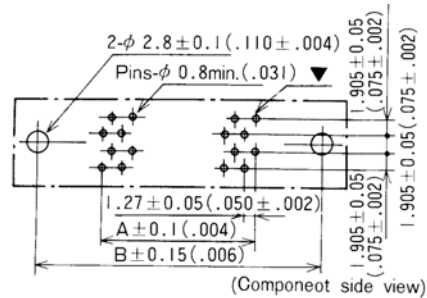
### 34, 50 Pins



## Printed Circuit Board Layout

Recommended PCB Thickness: 1.6 \$ 0.19 mm [ 0.063 \$ .007 ]

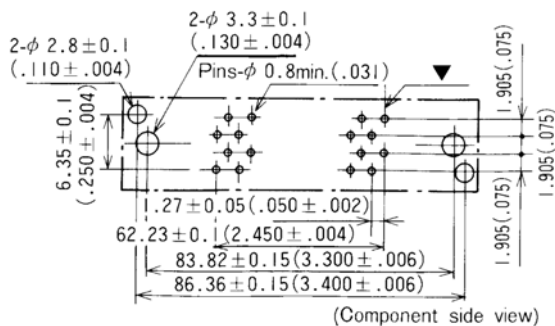
### 20, 28, 60, 68, 80 Pins



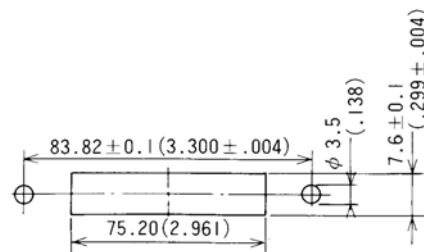
## Panel Cutout Dimensions

Recommended Panel Thickness: 1.6 mm max. [ 0.063 ]

### 100 Pins



### 100 Pins



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# 3M™ Pak 50 I/O Plug

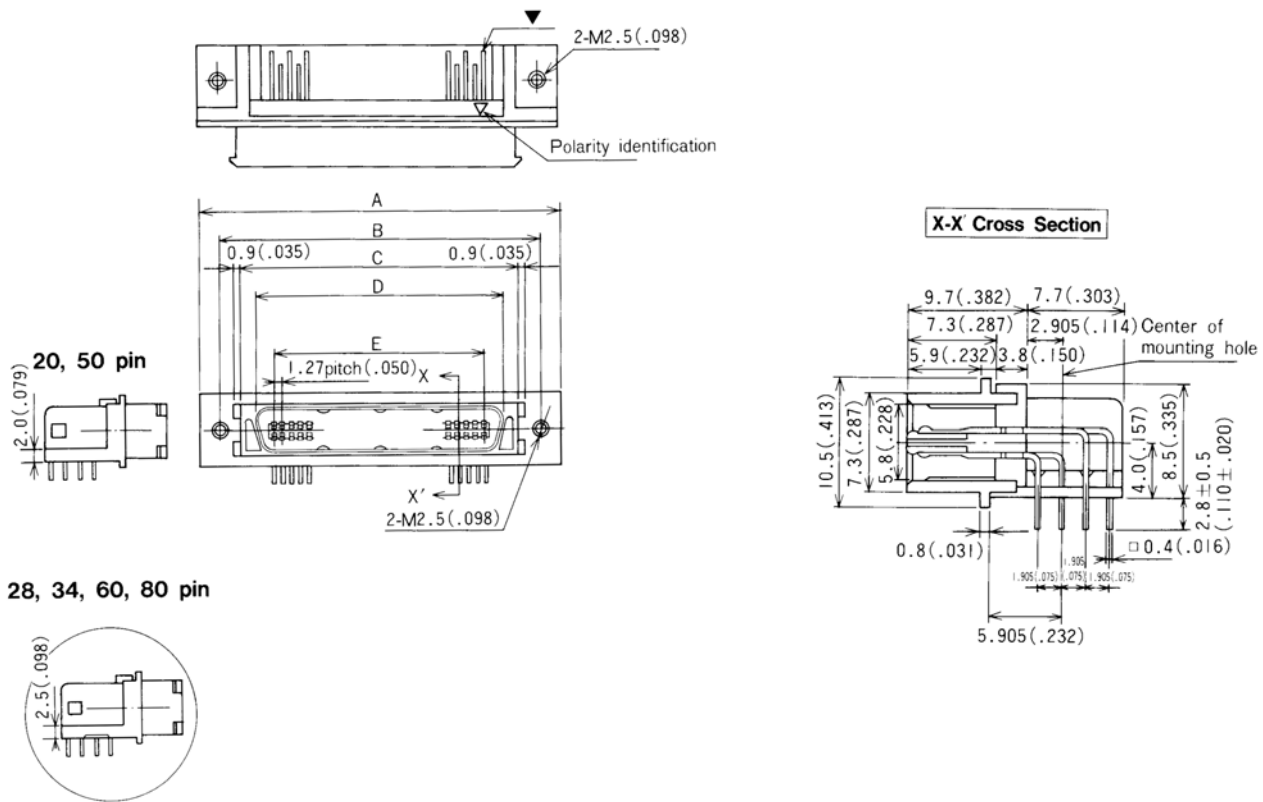
.050" Straight and Right Angle, Boardmount

P50 Series

## Right Angle Plug

Product Table / Dimensions

Contact Quantity	A	B	C	D	E
20	33.40	27.40	21.60	16.73	11.43
	[1.315]	[1.079]	[0.850]	[0.659]	[0.450]
28	38.48	32.48	26.68	21.81	16.51
	[1.515]	[1.279]	[1.050]	[0.859]	[0.650]
34	42.29	36.29	30.49	25.62	20.32
	[1.665]	[1.429]	[1.200]	[1.009]	[0.800]
50	52.45	46.45	40.65	35.78	30.48
	[2.065]	[1.829]	[1.600]	[1.409]	[1.200]
60	58.80	52.80	47.00	42.13	36.83
	[2.315]	[2.079]	[1.850]	[1.659]	[1.450]
68	63.88	57.88	52.08	47.21	41.91
	[2.515]	[2.279]	[2.050]	[1.859]	[1.650]
80	71.50	65.50	59.70	54.83	49.53
	[2.815]	[2.579]	[2.350]	[2.159]	[1.950]



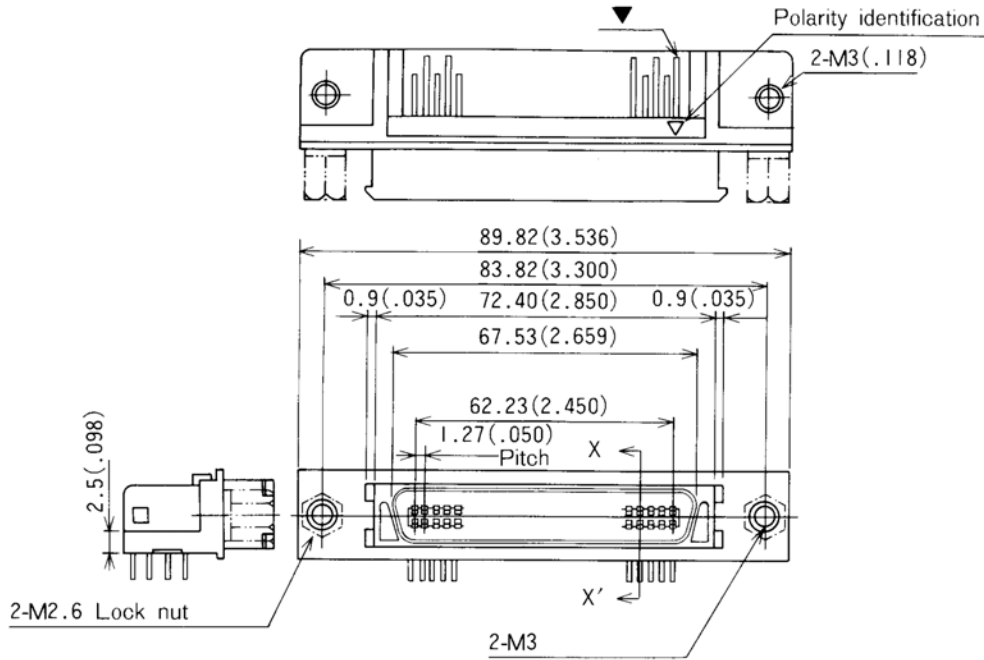
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# 3M™ Pak 50 I/O Plug

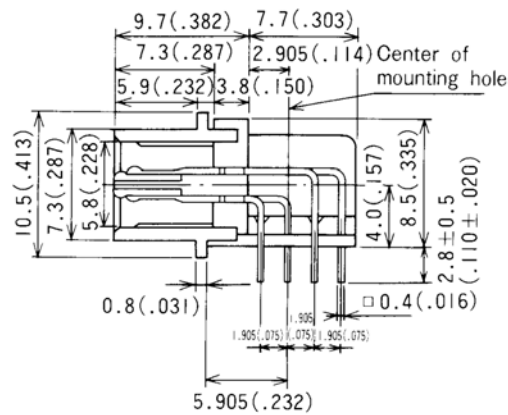
.050" Straight and Right Angle, Boardmount

P50 Series

Right Angle Plug, 100 Pins



### X-X' Cross Section



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# 3M™ Pak 50 I/O Plug

.050" Straight and Right Angle, Boardmount

P50 Series

## Right Angle

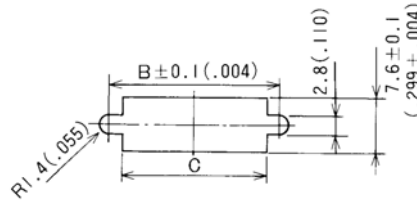
Product Table / Dimensions

Contact Quantity	A	B	C
20	11.43	27.40	24.40
	[0.450]	[1.079]	[0.961]
28	16.51	32.48	29.48
	[0.650]	[1.279]	[1.161]
34	20.32	36.29	33.29
	[0.800]	[1.429]	[1.311]
50	30.48	46.45	43.45
	[1.200]	[1.829]	[1.711]
60	36.83	52.80	49.80
	[1.450]	[2.079]	[1.961]
68	41.91	57.88	54.88
	[1.650]	[2.279]	[2.161]
80	49.53	65.50	62.50
	[1.950]	[2.579]	[2.461]

## Panel Cutout Dimensions

Recommended Panel Thickness: 2.0 mm [ 0.079 ]

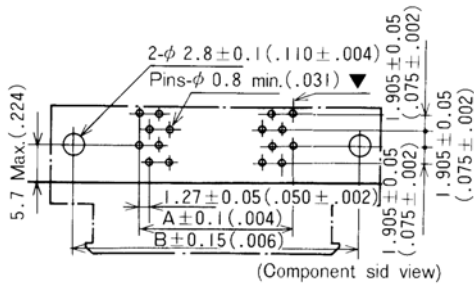
20, 28, 34, 50, 60, 68, 80 Pins



## Printed Circuit Board Layout

Recommended PCB Thickness: 1.6 \$ 0.19 mm [ 0.063 \$ .007 ]

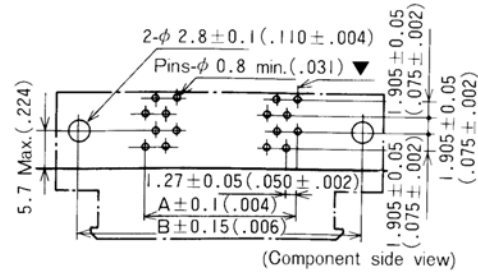
34, 50 Pins



## Printed Circuit Board Layout

Recommended PCB Thickness: 1.6 \$ 0.19 mm [ 0.063 \$ .007 ]

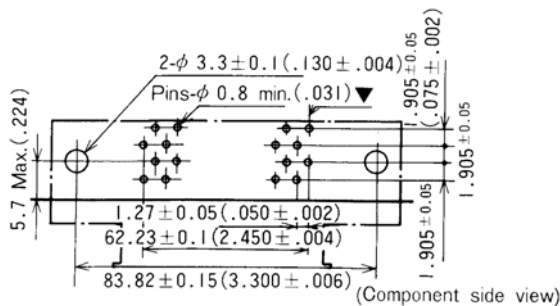
20, 28, 60, 68, 80 Pins



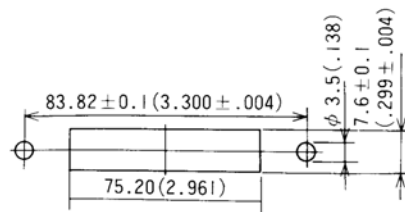
## Panel Cutout Dimensions

Recommended Panel Thickness: 1.6 mm max. [ 0.063 ]

100 Pins



100 Pins



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