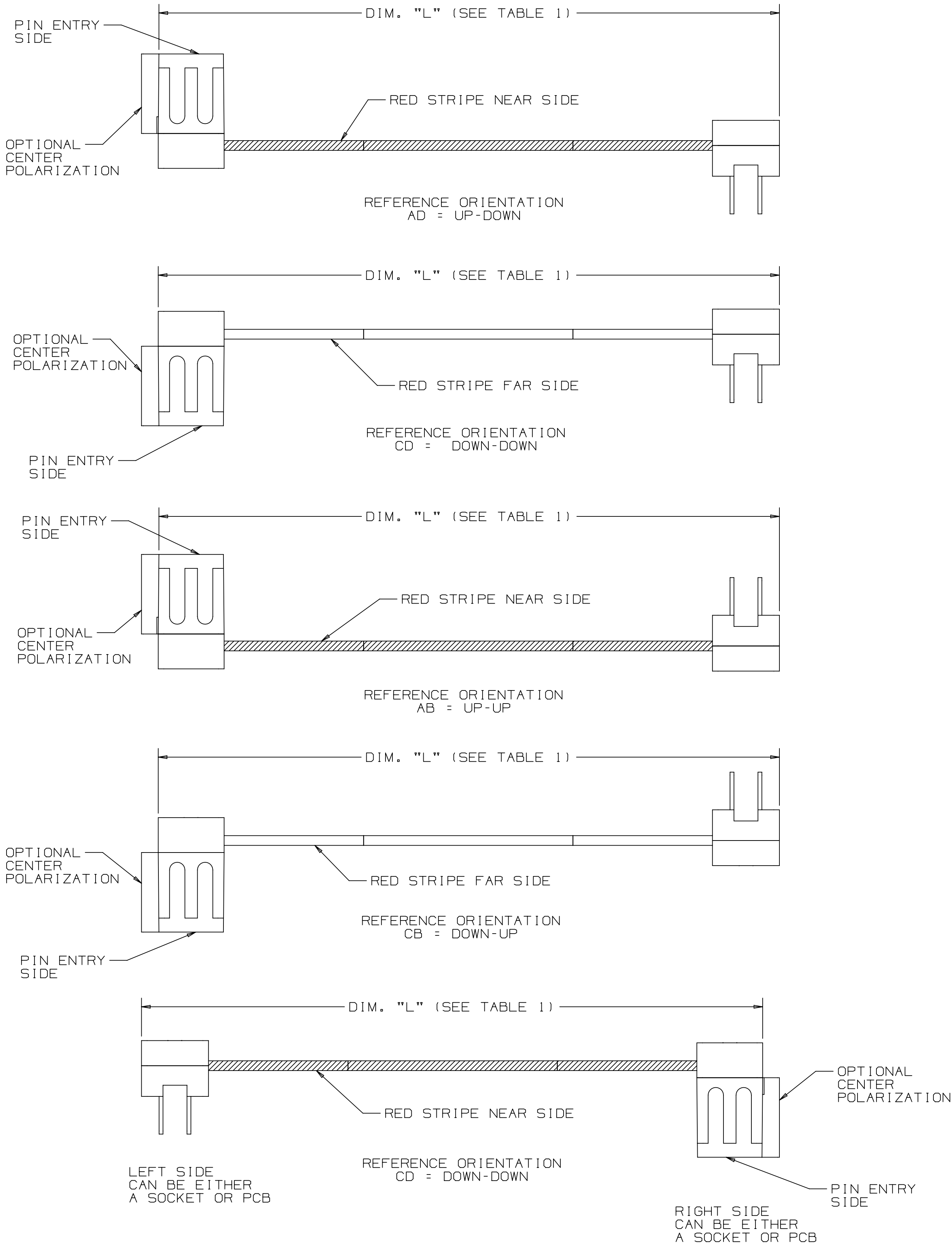


3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR



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MOLDED SOCKET:

- * PART OF COMPLETE CABLE ASSEMBLY
- * MATES WITH INDUSTRY STANDARD .025" SQUARE CONTACTS ON .100" BY .100" CENTERS
- * ONE PIECE, MOLDED-ON CONSTRUCTION WITH INTEGRAL STRAIN RELIEF
- * HIGH AND LOW PROFILES AVAILABLE, BOTH ACCOMMODATE TYPICAL HEADER LATCHES (SHORT AND LONG)
- * SLOTTED ENDS ALLOW MATING TO CONTINUOUS ROW HEADERS
- * INDUSTRY STANDARD POLARIZATION
- * MOLDED-ON POLARITY KEYS AVAILABLE ON SELECTED CONNECTOR SIZES
- * CLOSED END CONSTRUCTION
- * MODULAR TOOLING ALLOWS CUSTOMIZED DESIGNS

MOLDED PCB:

- * PART OF COMPLETE CABLE ASSEMBLY
- * MATES WITH INDUSTRY STANDARD .100 INCH X .100 INCH BOARD PATTERN
- * ONE PIECE, MOLDED-ON CONSTRUCTION WITH INTEGRAL STRAIN RELIEF
- * STANDARD AND RETENTION CONTACTS AVAILABLE
- * LOW PROFILE PERMITS CLOSE PC BOARD SPACING
- * CLOSED END CONSTRUCTION

2 PHYSICAL:

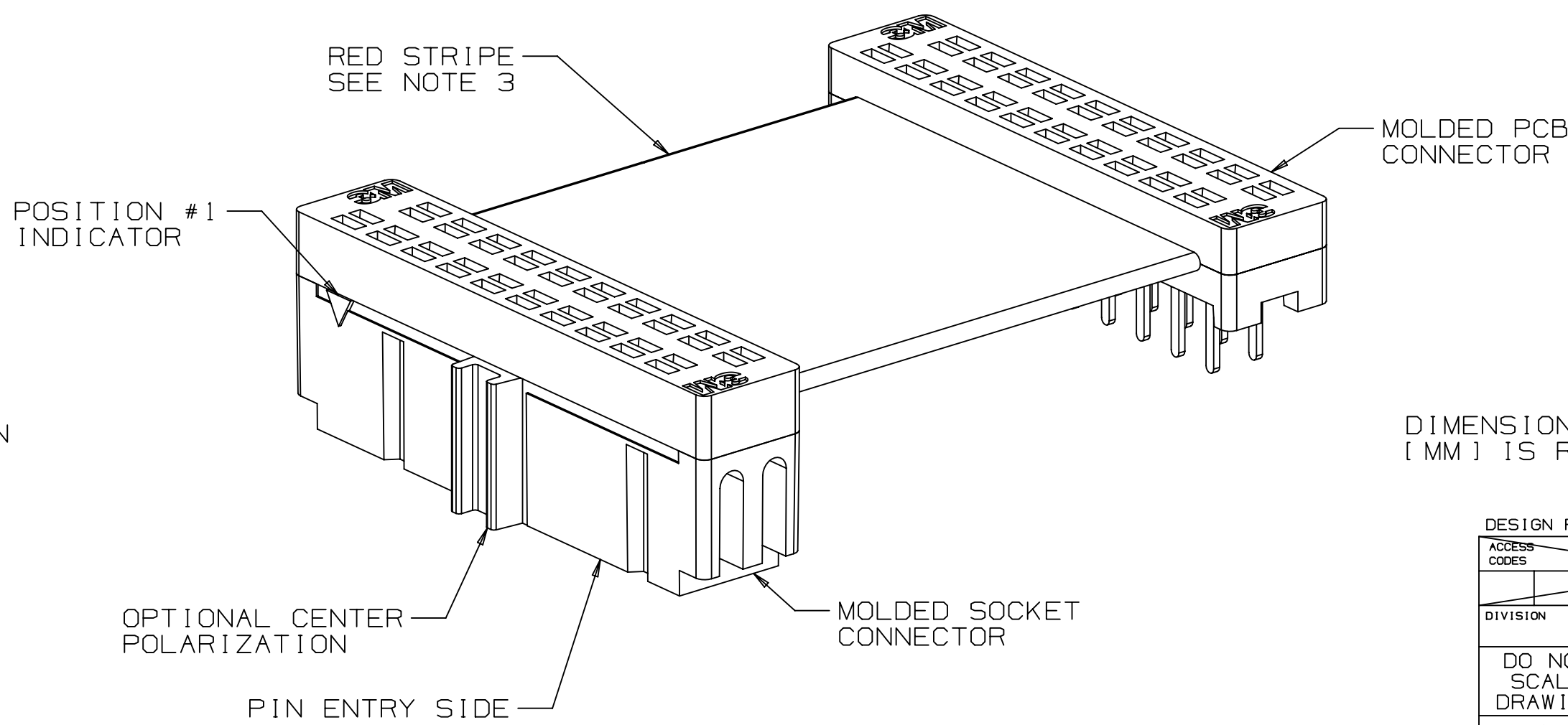
- INSULATOR: GLASS FILLED POLYESTER (PBT)
MATERIAL: UL94V-0
FLAMMABILITY: GREY
COLOR: COPPER ALLOY
CONTACT: COPPER ALLOY
- PLATING SOCKET:
UNDERPLATING & U-SLOT: 50 - 150 μ " [1.27 - 3.81 μ m] NICKEL
WIPING AREA: 30 μ " [0.76 μ m] GOLD AVG
- PLATING PCB:
UNDERPLATING & U-SLOT: 50 - 150 μ " [1.27 - 3.81 μ m] NICKEL
CONTACT TAIL: 300-400 μ " [7.62-10.16 μ m] MATTE TIN
- WIRE ACCOMMODATION: 26 AND 28 AWG SOLID AND STRANDED
COVER/STRAIN RELIEF RETENTION: 5N MIN PER CONTACT
- MARKINGS: 3M LOGO AND ORIENTATION TRIANGLE (SOCKET ONLY)

2 ELECTRICAL:

- CURRENT RATING: 1A
INSULATION RESISTANCE: $>1 \times 10^9 \Omega$ AT 500V_{DC}
WITHSTANDING VOLTAGE: 1000V_{RMS} AT SEA LEVEL
VOLTAGE RATING: 30V

2 ENVIRONMENTAL:

- TEMPERATURE RATING: -55C TO 105°C
NOTE: THE TEMPERATURE RANGE CAN BE LIMITED BY THE SELECTED CABLE.



VIEW SHOWN FOR REFERENCE ONLY
(ORIENTATION CD, DOWN-DOWN)

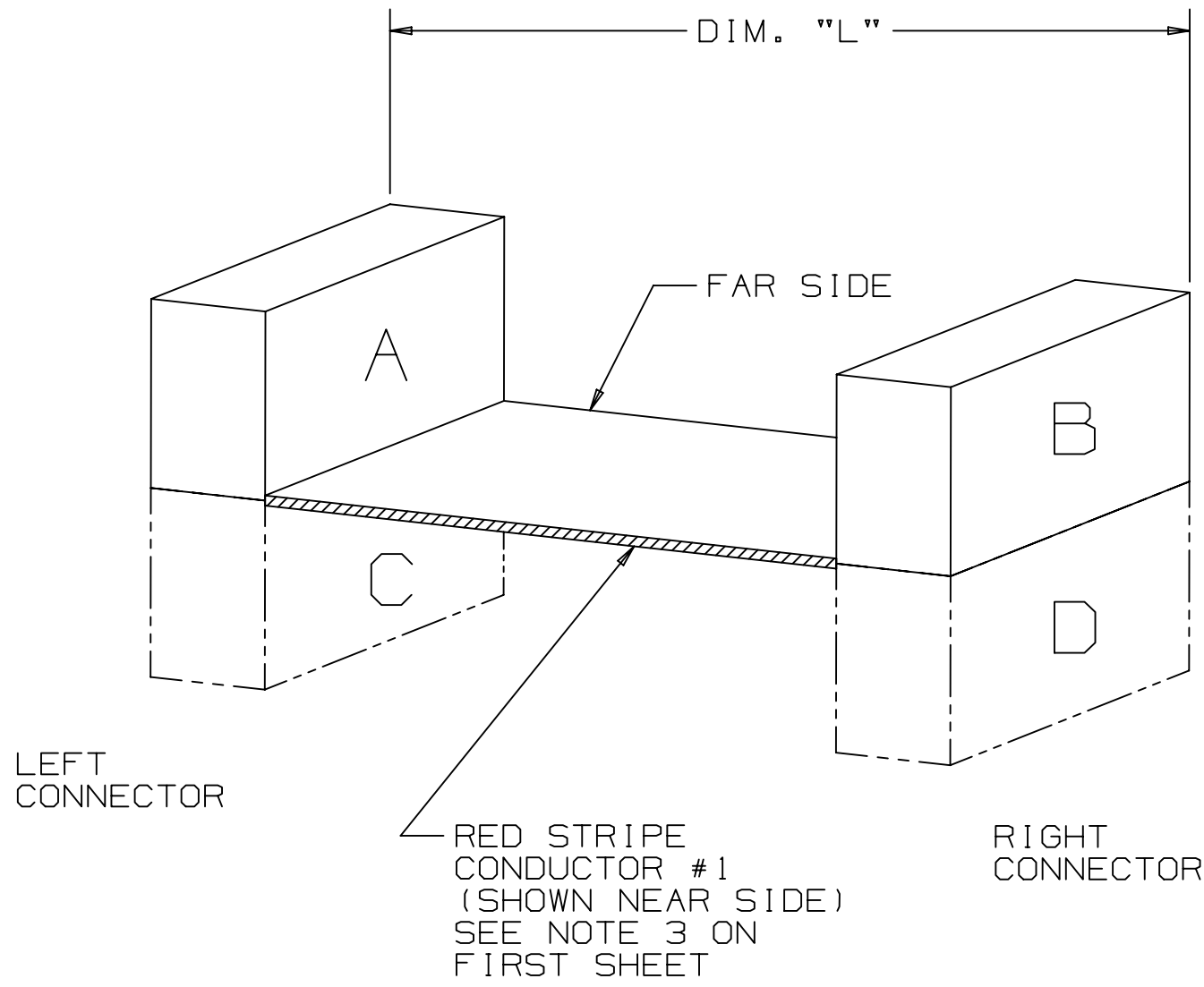
UL FILE NO: E86982

DIMENSIONS: INCHES [MM]
[MM] IS REFERENCE ONLY

DESIGN REFERENCE	NEXT ASSEMBLY
DO NOT SCALE DRAWING	SCALE 4/1
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018
MAX. SURFACE ROUGHNESS	ALL SURFACES
MARKED ONLY	ANGLES
TOLERANCES EXCEPT AS NOTED	INCHES 0.0 ±.1 0.00 ±.01 0.000 ±.005 0.0000 ±.0002
	MILLIMETERS 0 ±.1 0.0 ±.01 0.00 ±.005 0.000 ±.0002

B	108514	JAN 19, 2023	JNC	JC
A	0104943	MAY 27, 2022	LDS	JG
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	L SCHMIDT	DATE MAR 04, 2022	MFG	DATE
CHKD	J GOERTZ	DATE APR 29, 2022	APPL	DATE
3M Center St. Paul, MN 55144				
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TITLE				
MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS				
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
D	78-5100-2754-9	B		
MODEL	1M	DET	ISTS	YES NO SHT 1 OF 5

3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR



NOTE:
1. A FANOUT ASSEMBLY, WITH MULTIPLE CONNECTORS ON ONE END, REQUIRES A DRAWING SUBMITTAL AND REVIEW.
2. SEE ORDERING INFORMATION FOR CONNECTOR ORIENTATION OPTIONS.

ORDERING INFORMATION

1M XX XX - XXX - XXXX - XXX . X - XX - XX - XX - X

CONNECTOR TYPES
(LEFT AND RIGHT)
SOCKET, LOW PROFILE (.41")
10 = WITH MILITARY POLARIZATION SLOTS
16 = WITH CENTER POLARIZATION AND MILITARY POLARIZATION SLOTS
19 = WITH DUAL POLARIZATION AND MILITARY POLARIZATION SLOTS

SOCKET, REGULAR PROFILE (.56")
30 = WITH MILITARY POLARIZATION SLOTS
36 = WITH CENTER POLARIZATION AND MILITARY POLARIZATION SLOTS
39 = WITH DUAL POLARIZATION AND MILITARY POLARIZATION SLOTS

PCB, 2 ROW
A0 = STRAIGHT MATTE Sn SOLDER TAIL
A1 = RETENTION MATTE Sn SOLDER TAIL

NUMBER OF
CABLE
CONDUCTORS

ASSEMBLY LENGTH
TIP-TO-TIP INCHES
(DIM A IN INCHES
EXAMPLE:
001.7 = 1.7" MIN)

CABLE PRODUCT SERIES
SEE LIST BELOW OF
SUITABLE CABLES
(SEE TABLE 3)

MARKING
0 = NO MARKING
1 = LABEL-DATE CODE
2 = INKSTAMP-DATE CODE

LEFT RIGHT
CENTER POLARIZATION ORIENTATION OPTIONS
0 = NONE
1 = INSIDE
2 = OUTSIDE

CONNECTOR ORIENTATION OPTIONS
(LEFT AND RIGHT)
AB = UP-UP
AD = UP-DOWN
CB = DOWN-UP
CD = DOWN-DOWN

LEFT RIGHT
CONNECTOR FEATURE OPTIONS
0 = NO PULL TAB OR KEYING REQUIRED
1 = PULL TAB (SOCKET ONLY, NOT AVAILABLE ON 6 OR 8 CONTACT QUANTITY)
2 = KEYING REQUIRED, SPECIFY POSITION(S)
3 = PULL TAB AND KEYING REQUIRED, SPECIFY POSITION(S)

TABLE 1		
DIM L		TOLERANCE
MIN	MAX	
1.7	10.0	±0.3
10.0	20.0	±0.5
20.0	40.0	±0.6
40.0	120.0	±1.0
120.0		±2.0

TABLE 2																	
AVAILABLE OPTIONS																	
CONNECTOR POSITION	6	8	10	12	14	16	20	24	26	30	34	36	40	44	50	60	64
SOCKET	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
PCB	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
ALL CABLES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CABLE CONDUCTORS	6	8	10	12	14	16	20	24	26	30	34	36	40	44	50	60	64

TABLE 3 - SEE NOTE BELOW								
CONNECTOR SPACING	AWG	CABLE SERIES	TECHNICAL DATA SHEET	PITCH	CONDUCTOR TYPE	INSULATION MATERIAL	SPECIAL FEATURE	CABLE TEMPERATURE RATING
.100"	26 AWG	3801	TS-0063	.050"	STRANDED	PVC		-20°C TO +105°C
		3811	TS-0122	.050"	STRANDED	PVC	COLOR CODED	-20°C TO +105°C
		3365	TS-0080	.050"	STRANDED	PVC		-20°C TO +105°C
	28 AWG	HF365	TS-2334	.050"	STRANDED	PO		-40°C TO +105°C
		3355	TS-0317	.050"	STRANDED	TPE		-40°C TO +105°C
		3601	TS-0553	.050"	STRANDED	FEP		-55°C TO +200°C
		3539	TS-0058	.050"	STRANDED	PVC	MEDIUM FLEX	-20°C TO +105°C
		3319	TS-0059	.050"	STRANDED	PVC	HIGH FLEX	-20°C TO +105°C
		3302	TS-0123	.050"	STRANDED	PVC	COLOR CODED	-20°C TO +105°C
		HF539	TS-2565	.050"	STRANDED	PO	MEDIUM FLEX	-40°C TO +105°C
		HF319	TS-2342	.050"	STRANDED	PO	HIGH FLEX	-40°C TO +105°C

NOTE: FOR REFERENCE ONLY. CONFIRM CABLE SPECIFICATION USING CABLE TECHNICAL DATA SHEET

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DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
XXXX	XXXX	DRFT	L SCHMIDT	DATE	MAR 04,2022	MFG DATE
CHKD	J GOERTZ	DATE	APR 29,2022	APPL		DATE
DIVISION	DIVISION CODE	© 3M COPYRIGHT 2023				
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED	3M Center St. Paul, MN 55144			
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	INCHES .0 ±.1 .00 ±.01 .000 ±.005 .0000 ±.0002	MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS			
MAX SURFACE ROUGHNESS	ALL SURFACES	MILLIMETERS 0 ±.0 .00 ±.000	CAGE NUMBER	SIZE	DRAWING NO.	REV.
MARKED ONLY	ANGLES		D	78-5100-2754-9	B	
			MODEL	1M	LISTS	YES NO SHT 2 OF 5

3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR

3M™ MOLDED SOCKET CONNECTOR
871 SERIES

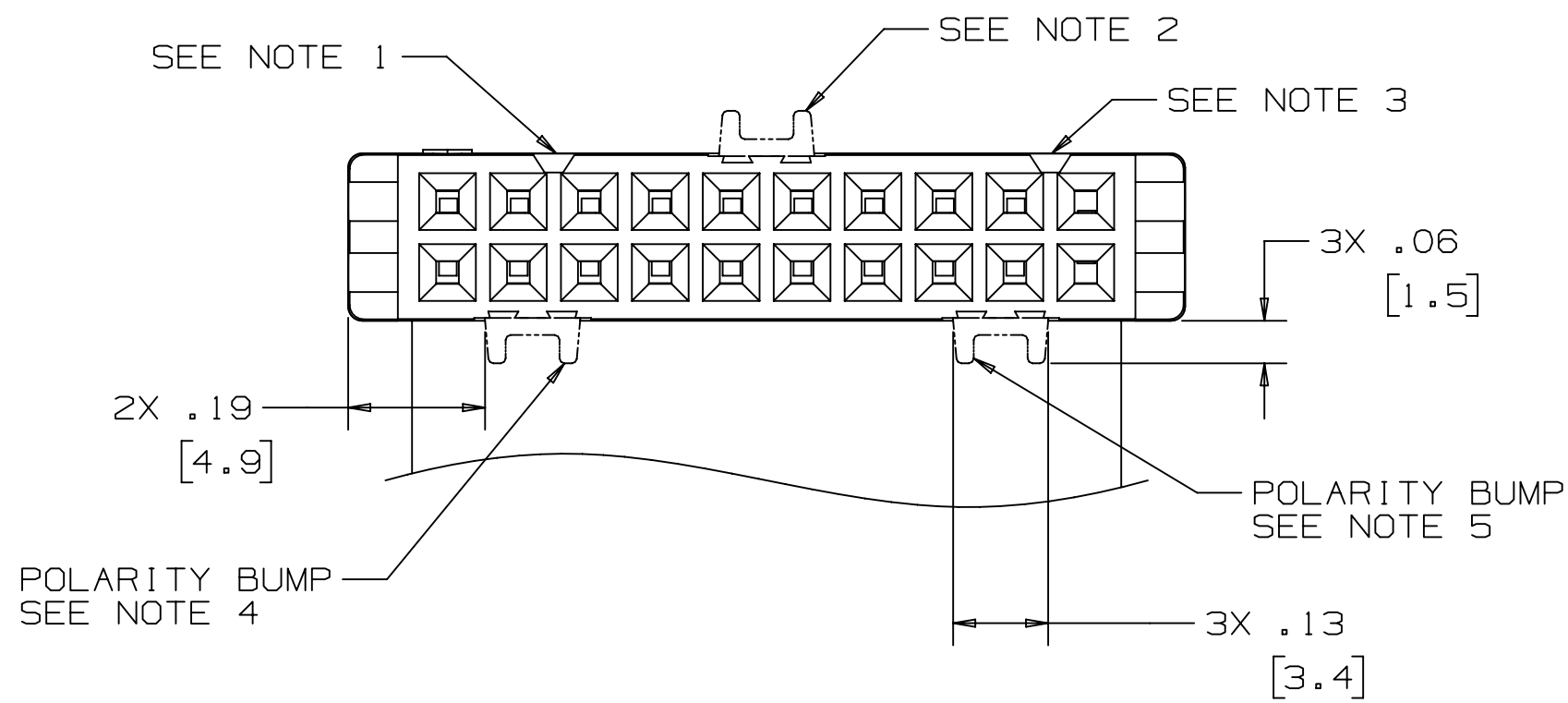
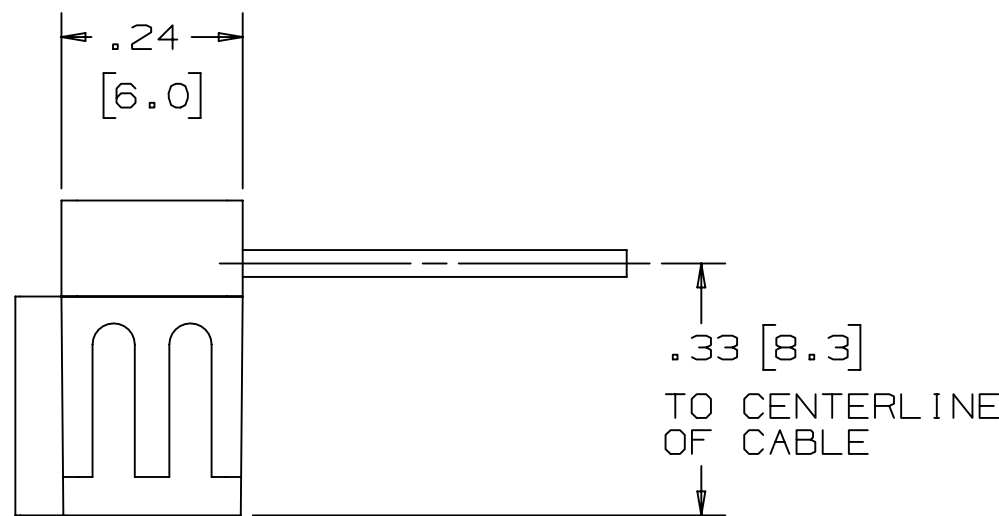
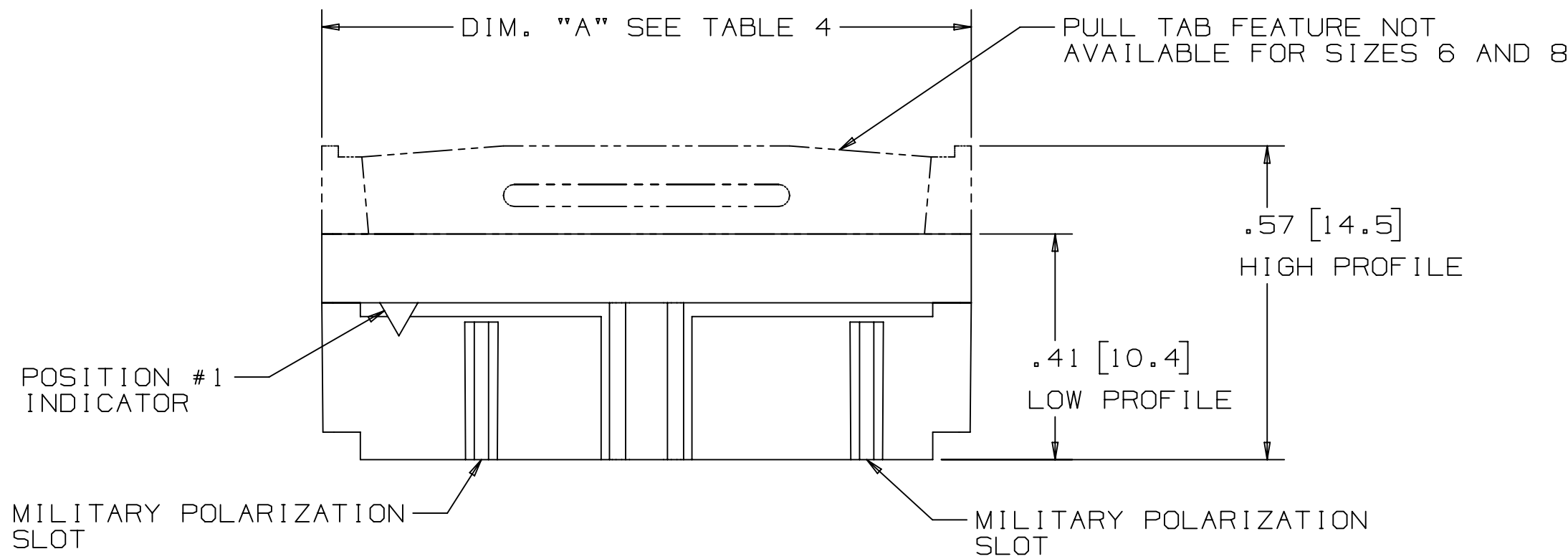
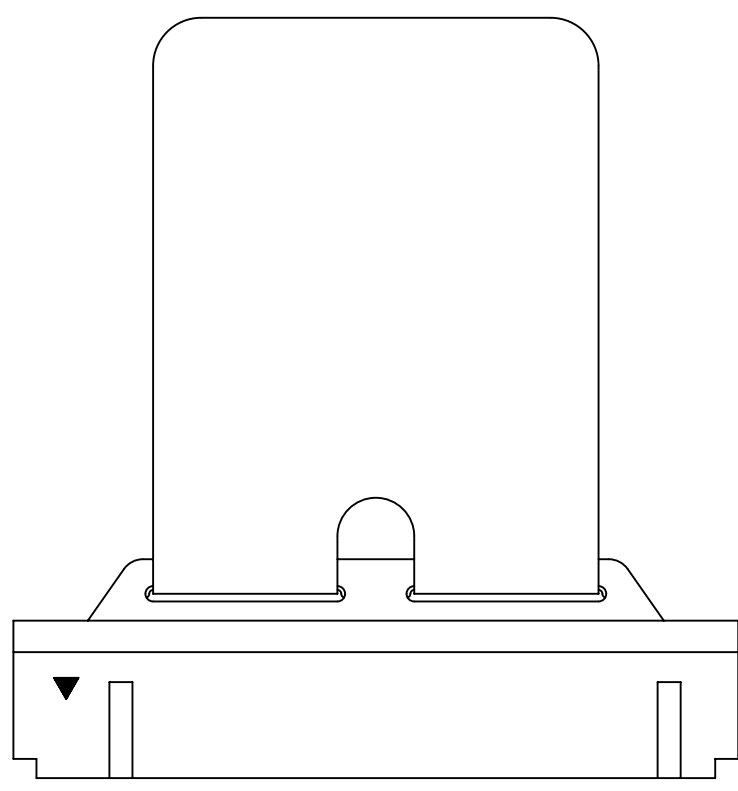
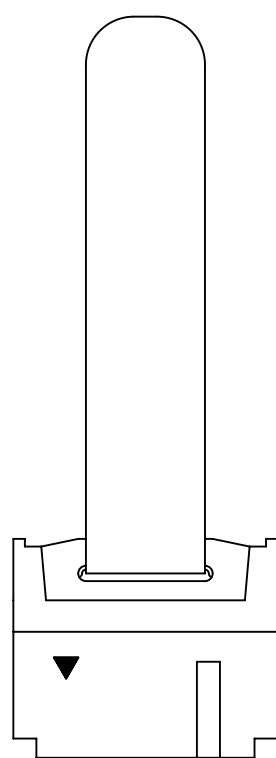
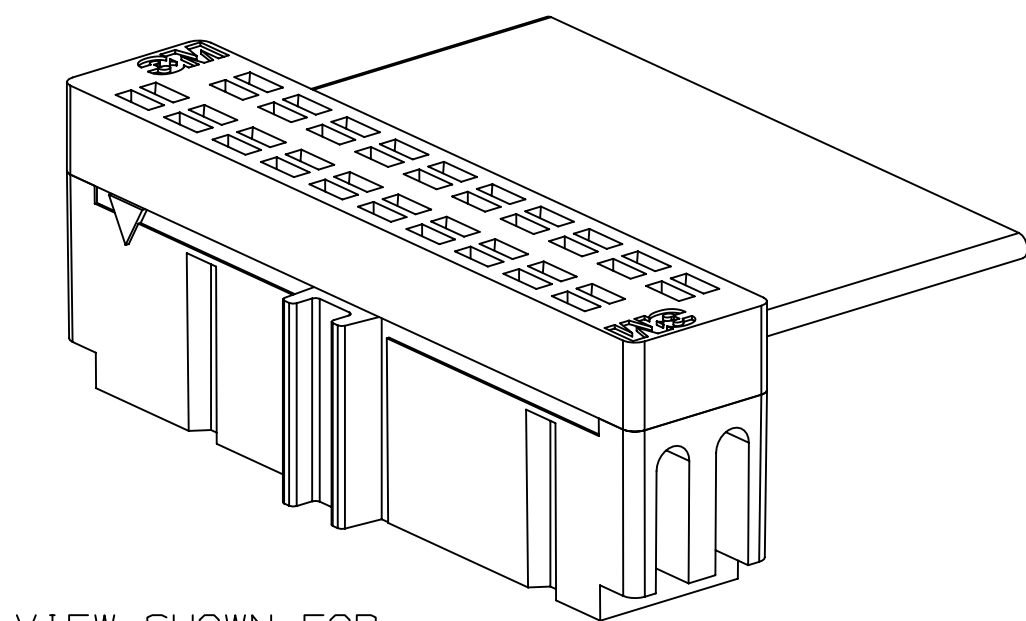


TABLE 4	
CONTACT QTY	DIM A
6	.48 [12.2]
8	.58 [14.7]
10	.68 [17.3]
12	.78 [19.8]
14	.88 [22.4]
16	.98 [24.9]
20	1.18 [30.0]
24	1.38 [35.1]
26	1.48 [37.6]
30	1.68 [42.7]
34	1.88 [47.8]
36	1.98 [50.3]
40	2.18 [55.4]
50	2.68 [68.1]
60	3.18 [80.8]
64	3.38 [85.9]

- NOTES:
1. THIS POLARIZATION SLOT IS NONEXISTENT ON SIZES 6, 8, 10, 12 AND 14.
 2. OPTIONAL CENTER POLARIZATION FEATURE.
 3. THIS POLARIZATION SLOT IS NONEXISTENT ON SIZES 6 AND 8.
 4. DUAL POLARIZATION BUMPS ARE NOTE OFFERED ON SIZES 6, 8, 10 AND 12.
 5. POLARIZATION BUMP AT THIS LOCATION NOT OFFERED ON SIZES 10 AND 12.

PULL TAB FEATURES
VARY WITH CONNECTOR SIZE



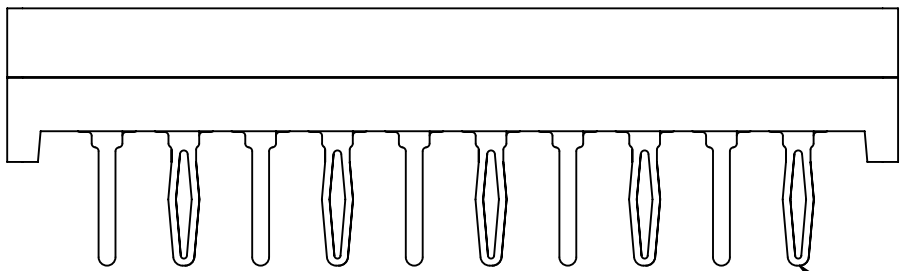
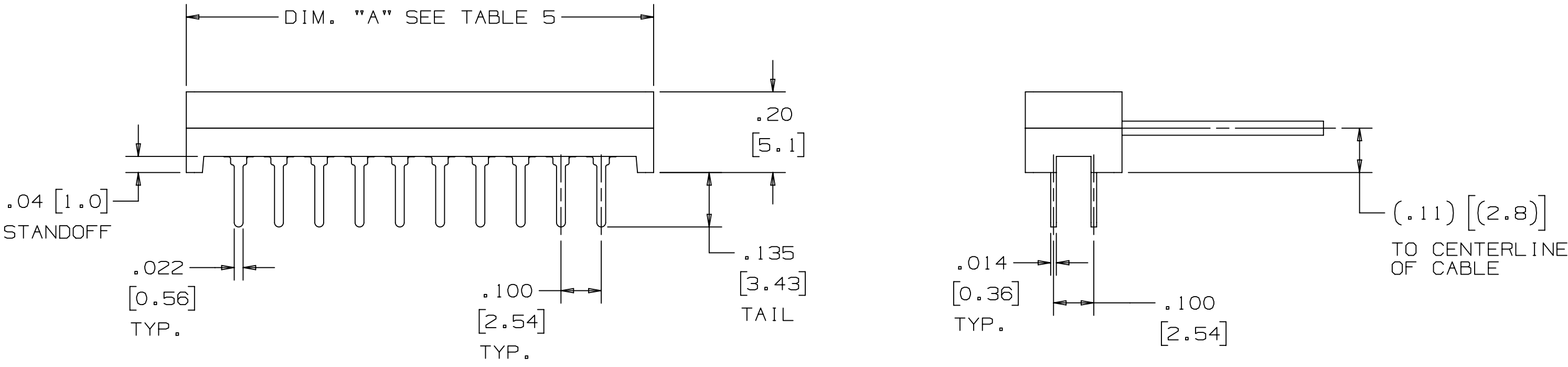
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DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD
XREFS		CODES		DRFT	L. SCHMIDT	DATE	MAR 04, 2022	MFG	DATE
DIVISION		DIVISION CODE		CHKD	J. GOERTZ	DATE	APR 29, 2022	APPL	DATE
DO NOT SCALE DRAWING		SCALE 4/1		TOLERANCES EXCEPT AS NOTED		© 3M COPYRIGHT 2023			
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 2018		MAX. SURFACE ROUGHNESS		This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.			
MARKED ONLY		ANGLES		INCHES		TITLE			
				MILLIMETERS		MOLDED CABLE ASSY			
						.100 WITH SOCKET AND PCB CONNECTORS			
						CAGE NUMBER			
						DRAWING NO.			
						REV.			
						MODEL			
						SHT 3 OF 5			

3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR

3M™ MOLDED 2-ROW PCB CONNECTOR
878 SERIES



RETENTION CONTACTS ORIENTED AS SHOWN—
EVERY OTHER CONTACT WITH THE FIRST AND
SECOND ROW ORDER SHIFTED BY ONE
CONTACT. (ORIENTATION IS NOT BASED ON
DELTA LOCATION AND MAY VARY FROM
CONNECTOR TO CONNECTOR)

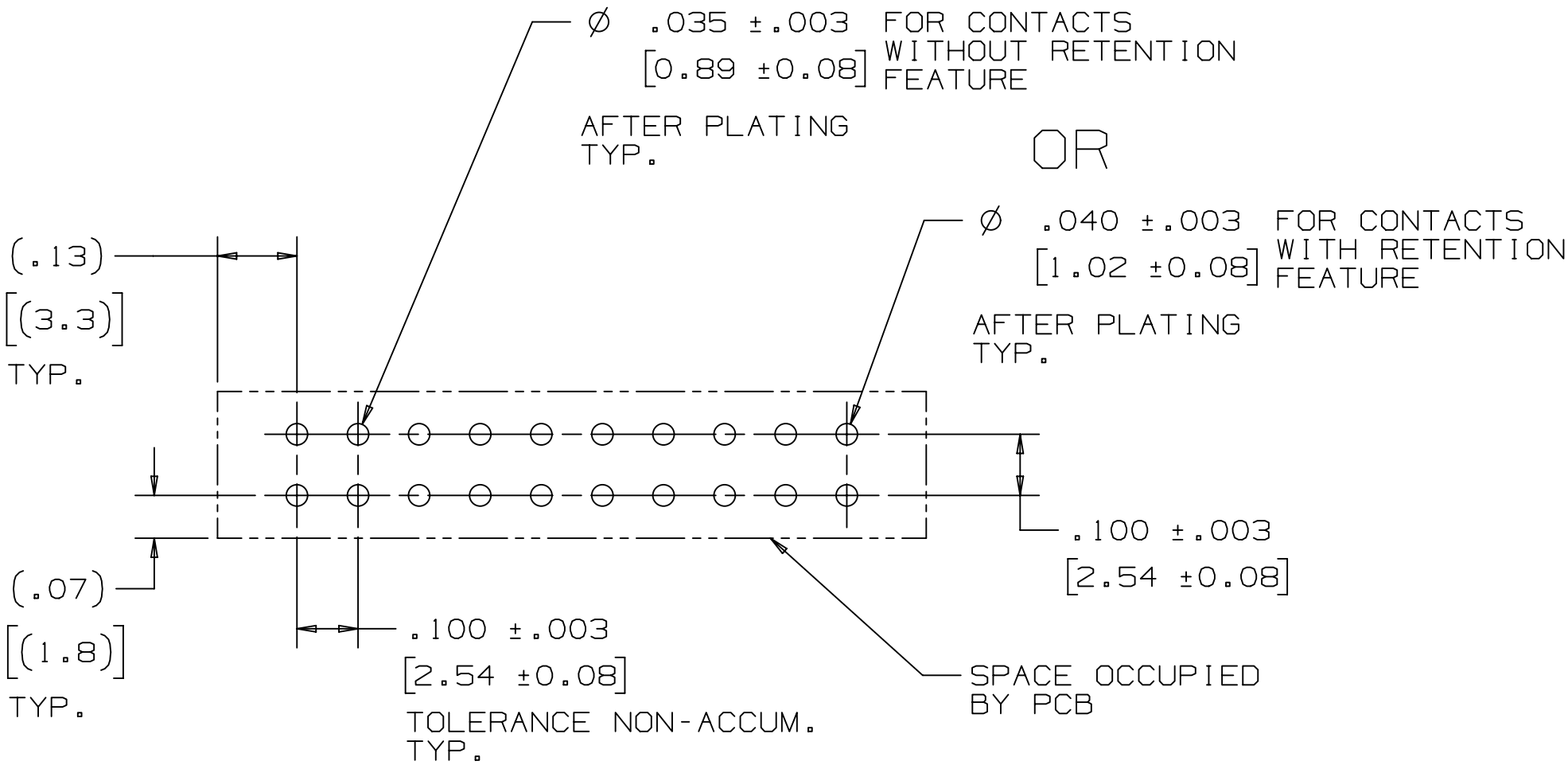
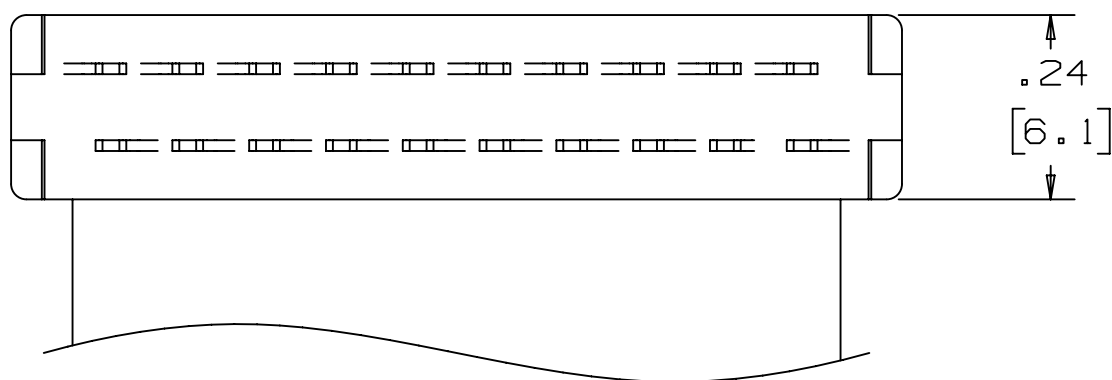
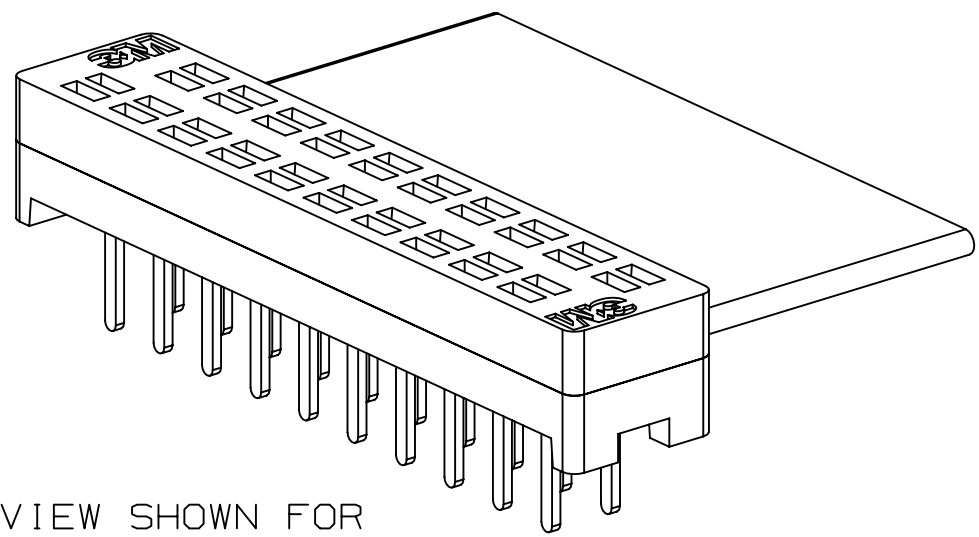


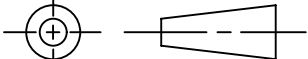
TABLE 5	
CONTACT QTY	DIM. "A"
06	.46 [11.7]
08	.56 [14.2]
10	.66 [16.8]
14	.86 [21.8]
16	.96 [24.4]
20	1.16 [29.5]
24	1.36 [34.5]
26	1.46 [37.1]
30	1.66 [42.1]
34	1.86 [47.2]
36	1.96 [49.8]
40	2.16 [54.9]
44	2.36 [59.9]
50	2.66 [67.6]
60	3.16 [80.3]
64	3.36 [85.3]

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REFERENCE ONLY

DESIGN REFERENCE		NEXT ASSEMBLY		B	108514	JAN 19, 2023		JNC	JC		
ACROSS CODES				A	0104943	REVISED AND REDRAWN MAY 27, 2022		LDS	JG		
				REV		ECO		ISSUE DATE AND DESCRIPTION		DRFT	CHKD
				DRFT		SCHMIDT		MFG DATE MAR 04, 2022		DATE	
				CHKD		J GOERTZ		APPL DATE APR 29, 2022		DATE	
DIVISION				DIVISION CODE							
DO NOT SCALE DRAWING		SCALE 4 1		TOLERANCES EXCEPT AS NOTED		3M		3M Center St. Paul, MN 55144		© 3M COPYRIGHT 2023 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.	
		INCHES .00 ± .01 .000 ± .005 .0000 ± .0002				TITLE		MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS			
THIRD ANGLE PROJECTION		MILLIMETERS 0 ±				CAGE NUMBER		SIZE		DRAWING NO.	
INTERPRET PER ASME Y14.5 - 2018		.00 ± 0.000 ± 0.000 ±				D		78-5100-2754-9		REV.	
MAX SURFACE ROUGHNESS		✓				MODEL		1M		DET. LISTS	
ALL SURFACES		✓								YES ☒ NO	
MARKED ONLY		✓								SHT 4 OF 5	

