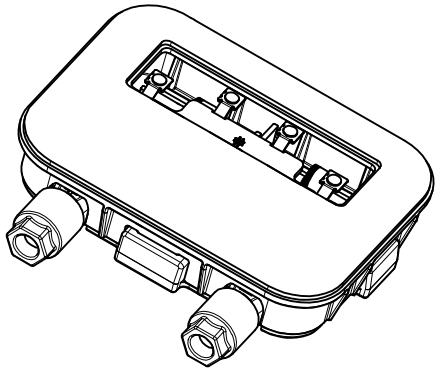
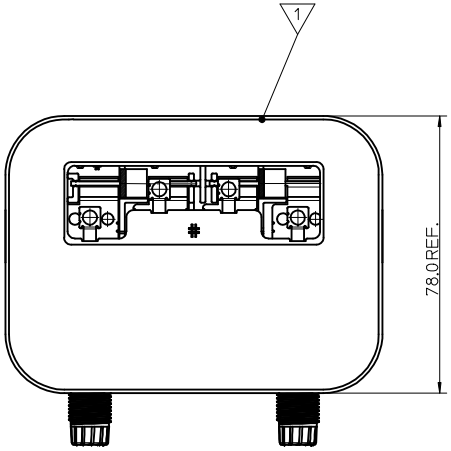
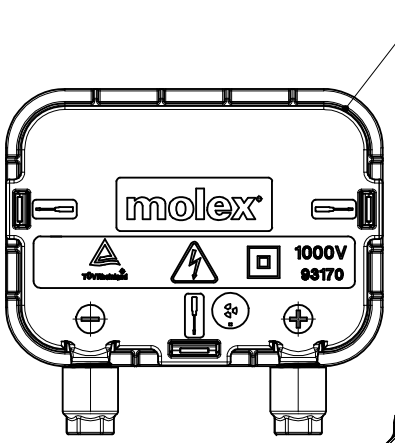
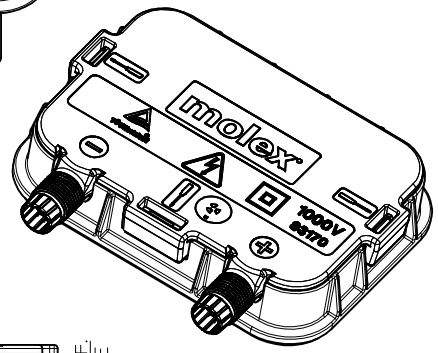
ITEM	DESCRIPTION	QTY	SHEETS
1	PANEL ASSEMBLY	1	2,3,5 & 6
2	COVER ASSEMBLY	1	4,5 & 6

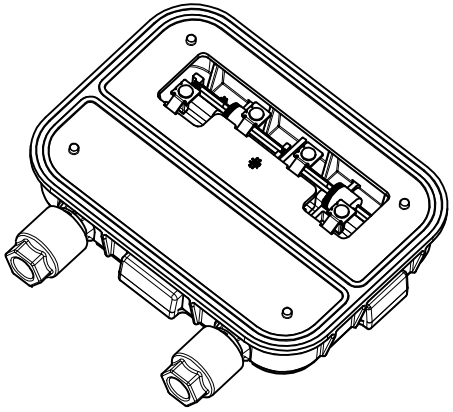


TAPE VERSION

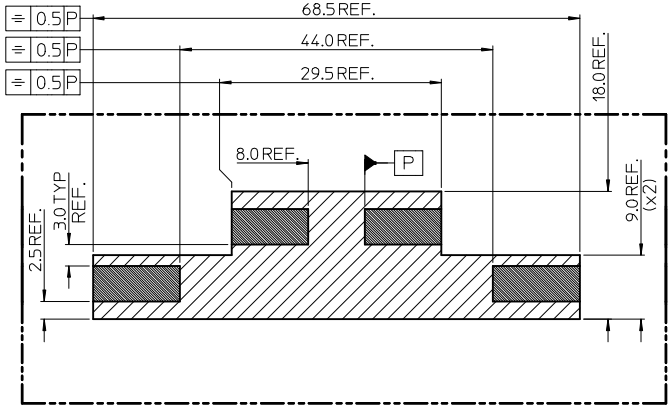




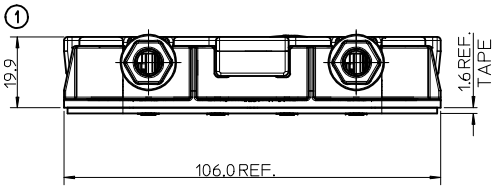




SILICONE VERSION



SUGGESTION FOR LAMINATE CUT-OUT
& RIBBON POSITIONS
(CUSTOMER CAN DECIDE BASED ON CAPABILITY)



NOTES:

1. HOUSING MATERIAL: PPO, COLOUR BLACK
2. TERMINAL MATERIALS: COPPER ALLOY
3. TERMINAL PLATING: Ag AND Ni
4. IP RATING: 65
5. WITHSTAND VOLTAGE: 1000V
6. CURRENT RATING: 9A
7. TEMPERATURE RANGE: -40°C TO 85°C
8. FOR CURRENT & VOLTAGE RATINGS SEE PRODUCT SPECIFICATION: PS-93170-001
9. SEE SHEET 6 FOR PART NUMBER DETAILS

INSPECTION NUMBERS RESERVED FOR SHEET 1: 1-50
LAST INSPECTION NUMBER USED: 1

UPDATED
EC NO: E2010-0121
DRWN:SMCGREEVY 2009/11/03
CHKD: 2009/11/03
APPR:EFOLAN 2009/11/03
DESCRIPTION
REV

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.10	± ---
1 PLACE	± 0.2	± ---
ANGULAR ± 2 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

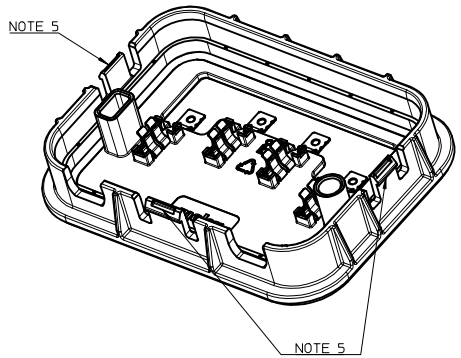
		DATE
DRAWN BY	MSHANAHAN	2008/7/11
CHECKED BY	SMCGREEVY	2008/7/11
APPROVED BY	EFOLAN	2008/7/11

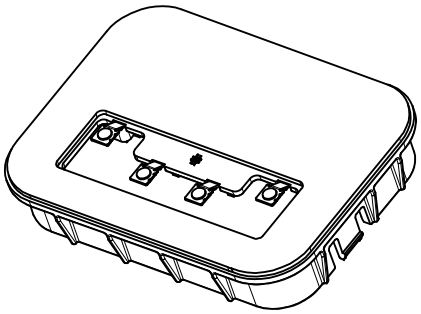
TITLE: JUNCTION BOX FOR P.V. SOLAR PANEL

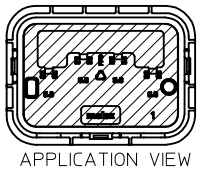
MOLEX INCORPORATED

MATERIAL NO.: SEE SHEET 6
DOCUMENT NO.: SD-93170-001
SHEET NO.: 1 OF 7
SIZE: A2

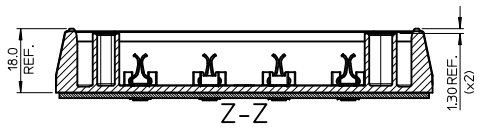
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



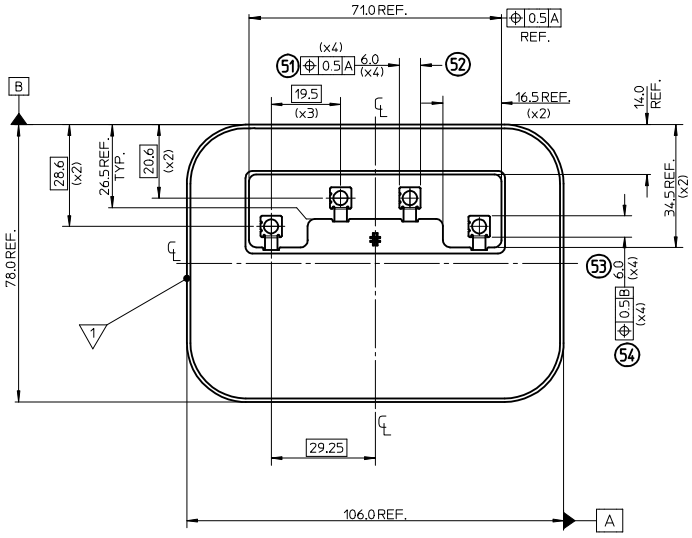


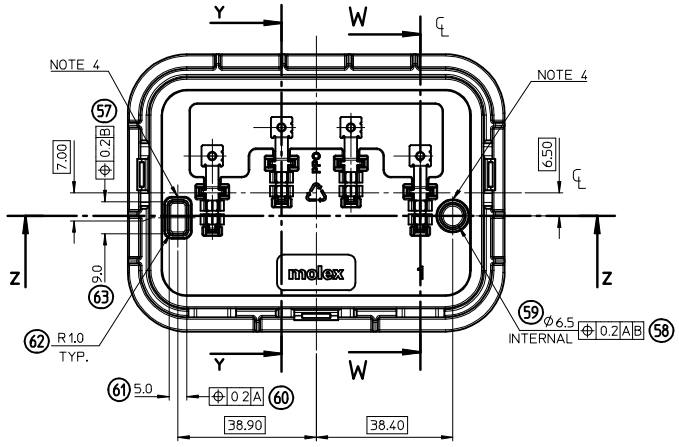


APPLICATION VIEW
NOTE 3

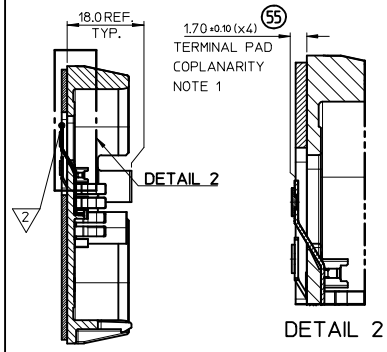


Z-Z



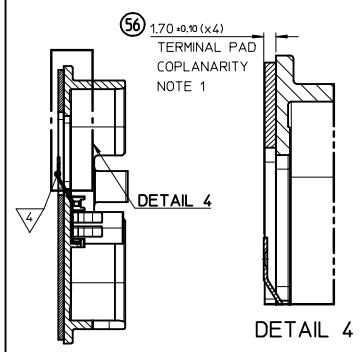


SOLAR J.B. TAPE VERSION
(WITH SOLDER CHARGE)



DETAIL 2
Y-Y

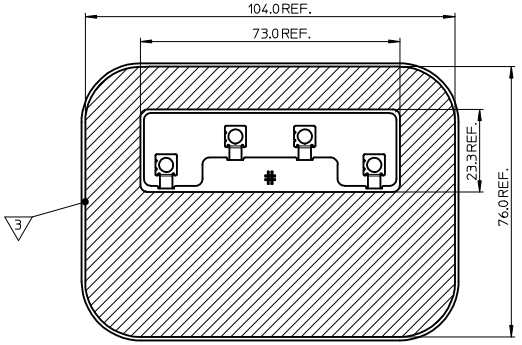
SOLAR J.B. TAPE VERSION
(WITHOUT SOLDER CHARGE)



DETAIL 4
W-W

ITEM	DESCRIPTION	QTY
1	HOUSING	1
2	PANEL TERM W/ SLDR CHARGE	4
3	DOUBLE-SIDED TAPE	1

ITEM	DESCRIPTION	QTY
1	HOUSING	1
4	PANEL TERM PLATED	4
3	DOUBLE-SIDED TAPE	1



DETAIL OF DOUBLE SIDED TAPE
NOTE 2

NOTES:

1. PANEL ASSEMBLY TERMINALS COME WITH OR WITHOUT SOLDER (SEE SHEET 6 FOR OPTIONS).
   ALL TERMINALS MEASURED BY DISTANCE FROM TERMINAL PAD TO HOUSING.
   TERMINAL PAD SHOULD BE BELOW LEVEL OF DOUBLE SIDED TAPE.
   SOLDER CHARGE PRE-TREATED WITH FLUX.
2. DOUBLE-SIDED TAPE FOR ADHESION TO PANEL. WINDOW FOR TERMINALS WILL BE CLOSED WITH EXISTING CARRIER TAPE.
3. APPLY 10-15N/cm2 (15-22psi) PRESSURE TO ENSURE CORRECT ADHESION. PRESSURE TO BE APPLIED TO INNER SURFACE OF PANEL HOUSING (SEE HATCHED AREA IN APPLICATION VIEW).
4. ALIGNMENT FEATURES FOR GUIDING APPLICATION TOOLING (PRESS TOOL AND SOLDERING TOOL).
5. LATCHES FOR RETENTION OF COVER ASSEMBLY.
6. ALL DIMENSIONS OTHER THAN FOR TAPE, APPLY TO SILICONE VERSIONS ALSO (SEE SHEET 3).
7. SEE SHEET 6 FOR PART NUMBER OPTIONS.

INSPECTION NUMBERS RESERVED FOR SHEET 2: 51-100
LAST INSPECTION NUMBER USED: 63

REV	DESCRIPTION	
C	SEE SHEET 1	2009/11/03
	EC NO: E2010-0121	2009/11/03
	DRWN:SMCGREEVY	2009/11/03
	CHKD:	
	APPR:EFOLAN	

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.10	± ---
1 PLACE	± 0.2	± ---
ANGULAR ± 2 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	MM ONLY
SCALE	1:1
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY	MSHANAHAN
DATE	2008/7/11
CHECKED BY	SMCGREEVY
DATE	2008/7/11
APPROVED BY	EFOLAN
DATE	2008/7/11
MATERIAL NO.	SEE SHEET 6
SIZE	A2

TITLE
JUNCTION BOX
FOR P.V. SOLAR PANEL

MOLEX INCORPORATED

DOCUMENT NO. SD-93170-001
SHEET NO. 2 OF 7

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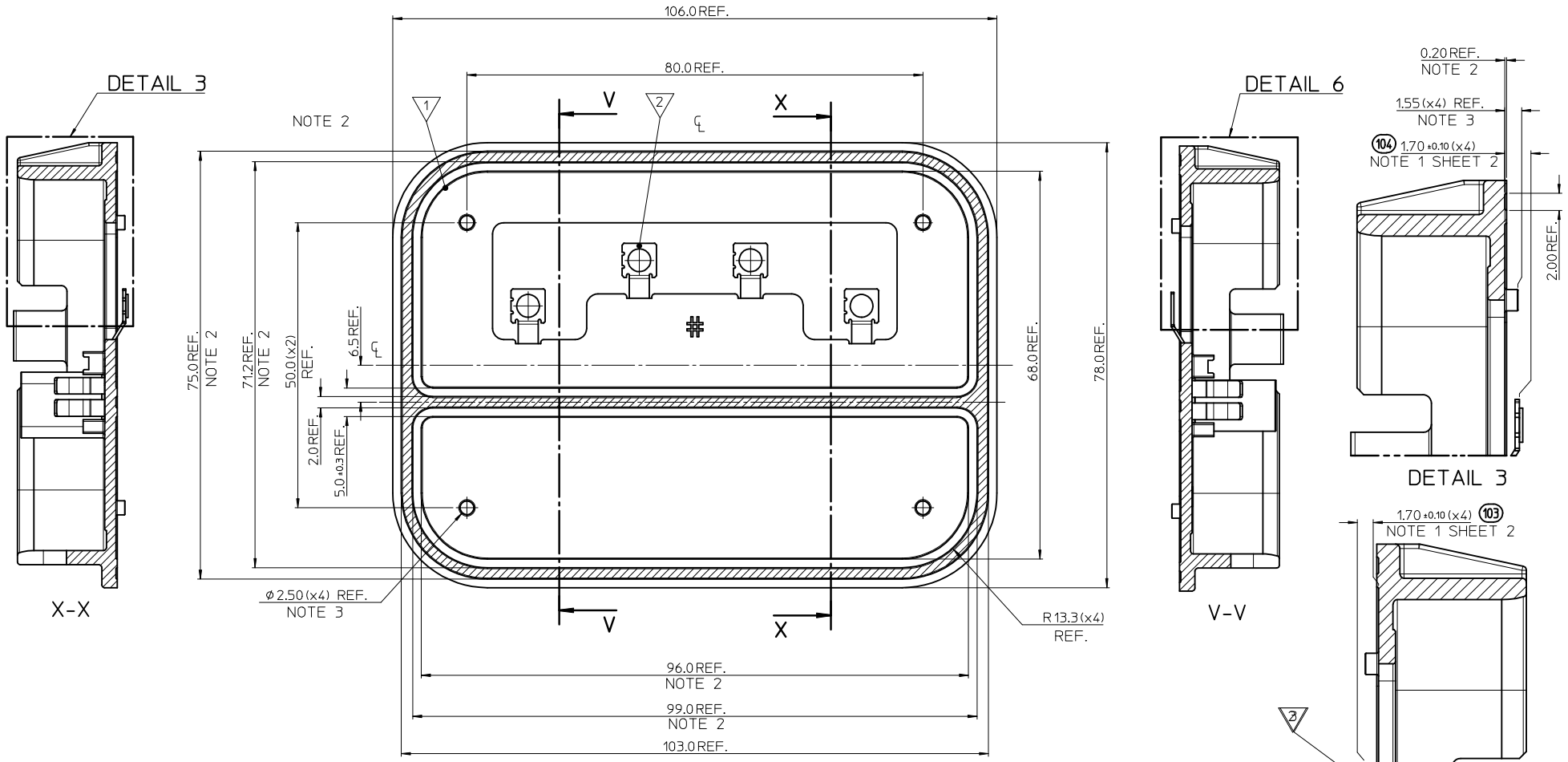


SOLAR J.B SILICONE VERSIONS WITH SOLDER CHARGE			SOLAR J.B SILICONE VERSIONS WITHOUT SOLDER CHARGE		
ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY
1	HOUSING	1	1	HOUSING	1
2	PANEL TERM W/ SLDR CHARGE	4	3	PANEL TERM PLATED	4

NOTES:
1. DIMENSIONS APPLY TO SILICONE VERSIONS OF PANEL ASSEMBLIES ONLY. ALL OTHER DIMENSIONS SEE SHEETS 1 & 2
2. HATCHED AREA SHOWS DETAIL OF GROOVE FOR SILCONE APPLICATION. GROOVE WALLS RAISED 0.2mm FROM BOTTOM SURFACE OF HOUSING TO MAINTAIN PLASTIC THICKNESS OF 2mm.
3. 4x STAND-OFFS TO GIVE SAME TERMINAL HEIGHTS AS FOR TAPE VERSIONS.
4. SEE SHEET 6 FOR PART NUMBER OPTIONS.

INSPECTION NUMBERS RESERVED FOR SHEET 3: 101-150
DELETED INSPECTION NUMBER: 101,102
LAST INSPECTION NUMBER USED: 104

SEE SHEET 1
EC NO: E2010-0121
DRWN:SMCGREEVY 2009/11/03
CH'KD: 2009/11/03
APPR:EFOLAN 2009/11/03
DESCRIPTION
REV

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.10	± ---
1 PLACE	± 0.2	± ---
ANGULAR ± 2 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	SCALE	DESIGN UNITS
MM ONLY	2:1	METRIC

THIRD ANGLE PROJECTION

DRAWN BY	MSHANAHAN 2008/7/11
CHECKED BY	SMCGREEVY 2008/7/11
APPROVED BY	EFOLAN 2008/7/11
MATERIAL NO.	SEE SHEET 6

TITLE: JUNCTION BOX FOR P.V. SOLAR PANEL

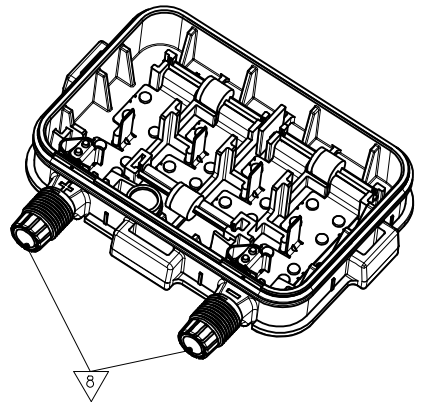
molex MOLEX INCORPORATED

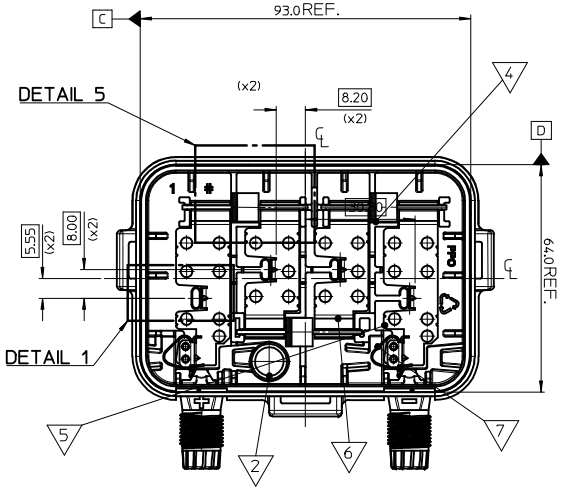
DOCUMENT NO. SD-93170-001

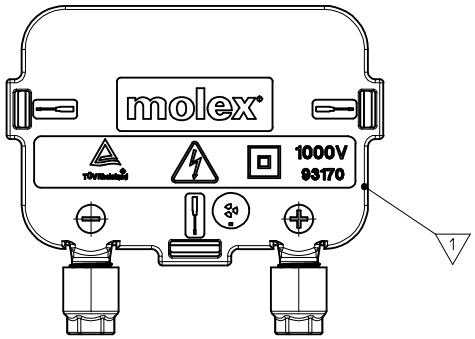
SHEET NO. 3 OF 7

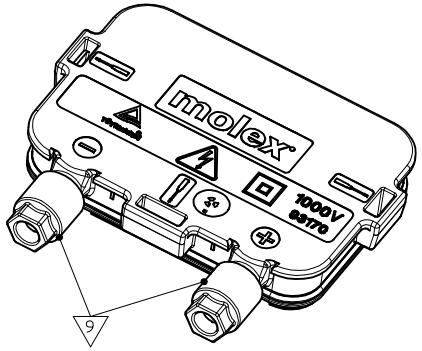
SIZE A2

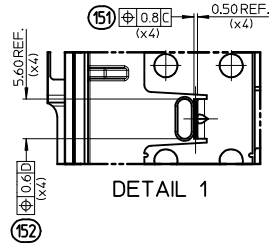
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

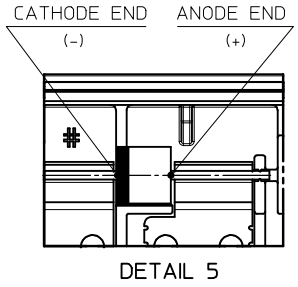


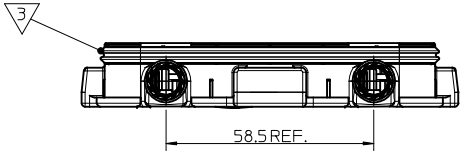












NOTES:
1. SEPARATE COVER ASSEMBLY FROM BASE BY OPENING RETENTION CLIPS WITH SCREWDRIVER.
2. PRESSURE EQUALISATION AND BREATHABILITY VENT.
3. SILICONE SEAL: SHORE HARDNESS: 30A
4. DIODES SOLDERED TO TERMINALS TO GIVE BEST HEAT REMOVAL PERFORMANCE.
5. TERMINALS HEAT STAKED INTO HOUSING. LARGE SURFACE AREA FOR HEAT DISSIPATION.
6. INSERT CABLE BY OPENING CABLE CLAMP WITH LONG-NOSE PLIERS.
7. PARTS SUPPLIED WITH OR WITHOUT CABLES (SEE SHEET 6)
8. PARTS SUPPLIED WITH GROMMETS INSTALLED. FOR JUNCTION BOX ONLY ASSEMBLIES, M12 NUT WILL BE SUPPLIED INSTALED BUT NOT TIGHTENED.
9. FOR PART NUMBER OPTIONS SEE SHEET 6

INSPECTION NUMBERS RESERVED FOR SHEET 3: 151-200
LAST INSPECTION NUMBER USED: 152

9317040XX

ITEM	DESCRIPTION	QTY	NOTE
1	COVER HOUSING	1	1
2	BREATHABLE VENT	1	2
3	SILICONE SEAL	1	3
4	DIODE	3	4
5	TERMINAL (OUTER)	2	5
6	TERMINAL (CENTRE)	2	6
7	CABLE SPRING CLAMP	2	7
8	SILICONE GROMMET	2	8
9	M12 NUT	2	8

SEE SHEET 1
EC NO: E2010-0121 2009/11/03
DRWN:SMCGREEVY 2009/11/03
CHKD:
APPR:EFOLAN 2009/11/03
DESCRIPTION
REV

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.10	± ---
1 PLACE	± 0.2	± ---
ANGULAR ± 2 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

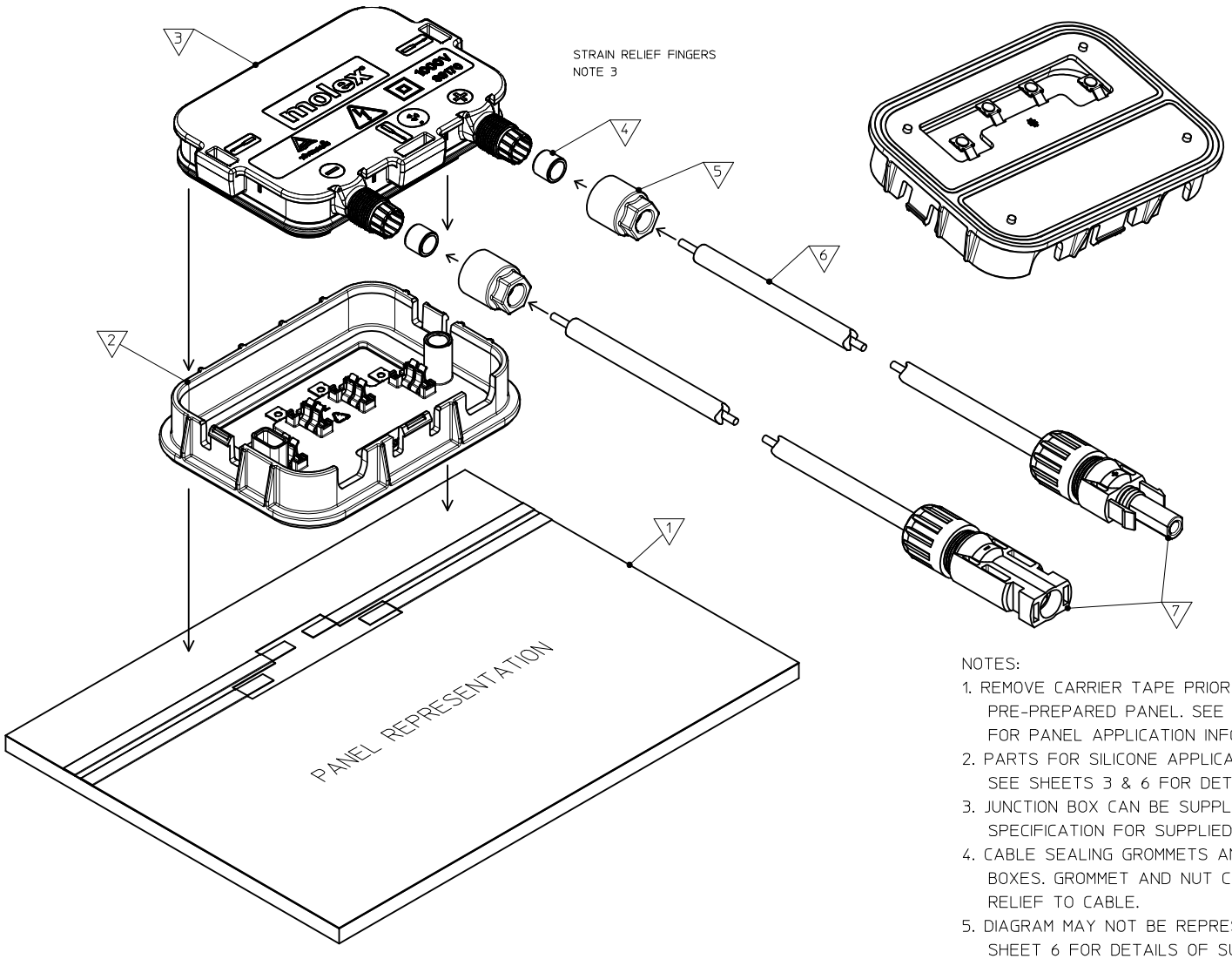
DRAWN BY: MSHANAHAN DATE: 2008/7/11
CHECKED BY: SMCGREEVY DATE: 2008/7/11
APPROVED BY: EFOLAN DATE: 2008/7/11

TITLE
JUNCTION BOX FOR P.V. SOLAR PANEL

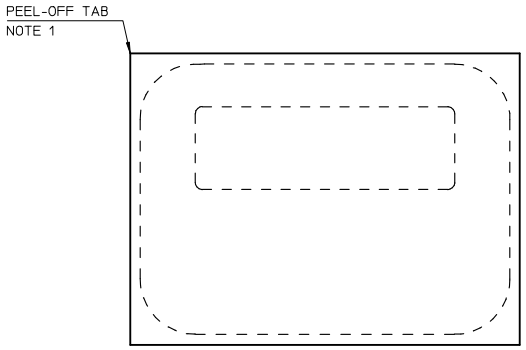
MOLEX INCORPORATED

MATERIAL NO.: SEE SHEET 6
DOCUMENT NO.: SD-93170-001
SHEET NO.: 4 OF 7
SIZE: A2

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



SOLAR JUNCTION BOX			
ITEM	DESCRIPTION	QTY	NOTE
1	SOLAR PANEL REPRESENTATION	1	
2	PANEL ASSEMBLY	1	
3	COVER ASSEMBLY	1	
4	GROMMET	2	4
5	NUT	2	4
6	CABLE	2	3
7	CABLE CONNECTOR REPRESENTATION	2	5



VIEW OF TAPE SHOWING CARRIER TAPE
WITH PEEL-OFF TABS AT CORNERS

NOTES:

1. REMOVE CARRIER TAPE PRIOR TO PRESSING PANEL ASSEMBLY ONTO PRE-PREPARED PANEL. SEE APPLICATION SPECIFICATION AS-93170-001 FOR PANEL APPLICATION INFORMATION.
2. PARTS FOR SILICONE APPLICATION HAVE STANDOFFS AND A GROOVE FOR SILICONE. SEE SHEETS 3 & 6 FOR DETAILS.
3. JUNCTION BOX CAN BE SUPPLIED WITH OR WITHOUT CABLE. SPECIFICATION FOR SUPPLIED CABLE SEE SHEET 6.
4. CABLE SEALING GROMMETS AND LOCKING NUTS ARE SUPPLIED WITH ALL JUNCTION BOXES. GROMMET AND NUT COMBINE WITH HOUSING FINGERS TO PROVIDE STRAIN RELIEF TO CABLE.
5. DIAGRAM MAY NOT BE REPRESENTATIVE OF ACTUAL CABLE CONNECTORS. SEE SHEET 6 FOR DETAILS OF SUPPLIED CONNECTORS.

SEE SHEET 1
EC NO: E20110-0121
DRWN:SMCGREEVY 2009/11/03
CH'KD: 2009/11/03
APPR:EFOLAN 2009/11/03
DESCRIPTION
REV

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.10	± ---
1 PLACE	± 0.2	± ---
ANGULAR ± 2 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY	MSHANAHAN	DATE 2008/7/11
CHECKED BY	SMCGREEVY	DATE 2008/7/11
APPROVED BY	EFOLAN	DATE 2008/7/11

TITLE: JUNCTION BOX FOR P.V. SOLAR PANEL

MOLEX INCORPORATED

MATERIAL NO.: SEE SHEET 6
DOCUMENT NO.: SD-93170-001
SHEET NO.: 5 OF 7
SIZE: A2

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

FULL ASSEMBLY	SILICONE/ TAPE	SOLDER CHARGE (Y/N)	CABLE TYPE	CABLE LENGTH	CONNECTOR TYPE
931705000	SILICONE	N	NONE	N/A	N/A
931705001	SILICONE	Y	NONE	N/A	N/A
931705100	SILICONE	N	LEONI BETAFLAM 12AWG ($4mm^2$)	0.9m	MC4
931705101	SILICONE	Y	LEONI BETAFLAM 12AWG ($4mm^2$)	0.9m	MC4
931705200	SILICONE	N	MC FLEX-SOL 12AWG ($4mm^2$)	1.0m	MC4
931705201	SILICONE	Y	MC FLEX-SOL 12AWG ($4mm^2$)	1.0m	MC4
931705300	SILICONE	N	MC FLEX-SOL XL 12AWG ($4mm^2$)	1.5m	MC4
931705301	SILICONE	Y	MC FLEX-SOL XL 12AWG ($4mm^2$)	1.5m	MC4
931705010	TAPE	N	NONE	N/A	N/A
931705011	TAPE	Y	NONE	N/A	N/A
931705110	TAPE	N	LEONI BETAFLAM 12AWG ($4mm^2$)	0.9m	MC4
931705111	TAPE	Y	LEONI BETAFLAM 12AWG ($4mm^2$)	0.9m	MC4
931705210	TAPE	N	MC FLEX-SOL 12AWG ($4mm^2$)	1.0m	MC4
931705211	TAPE	Y	MC FLEX-SOL 12AWG ($4mm^2$)	1.0m	MC4
931705310	TAPE	N	MC FLEX-SOL XL 12AWG ($4mm^2$)	1.5m	MC4
931705311	TAPE	Y	MC FLEX-SOL XL 12AWG ($4mm^2$)	1.5m	MC4

NOTES:
1. PART NUMBERS SHOWN ARE FOR FULL ASSEMBLIES.
2. PACKAGING:
   -PANEL ASSEMBLY: TRAYS
   -COVER ASSEMBLY: IN BOXES
   SEE PACKAGING SPECIFICATION: PK-93170-001
3. ASSEMBLIES WITH CABLES COME WITH 1 POSITIVE AND 1 NEGATIVE CABLE ATTACHED.
4. FOR CABLE OPTIONS NOT SPECIFIED PLEASE CONTACT YOUR MOLEX SALES ENGINEER FOR ASSISTANCE.
5. FOR ASSEMBLY OF CABLES SEE APPLICATION SPECIFICATION AS-93170-001.
6. CABLE OUTER DIAMETER RANGE SUPPORTED: 5.8mm - 7.1mm

SEE SHEET 1
EC NO: E2010-0121 2009/11/03
DRWN:SMCGREEVY 2009/11/03
CH'KD: 2009/11/03
APPR:EFOLAN
DESCRIPTION
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.10	± ---
1 PLACE	± 0.2	± ---
ANGULAR ± 2 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

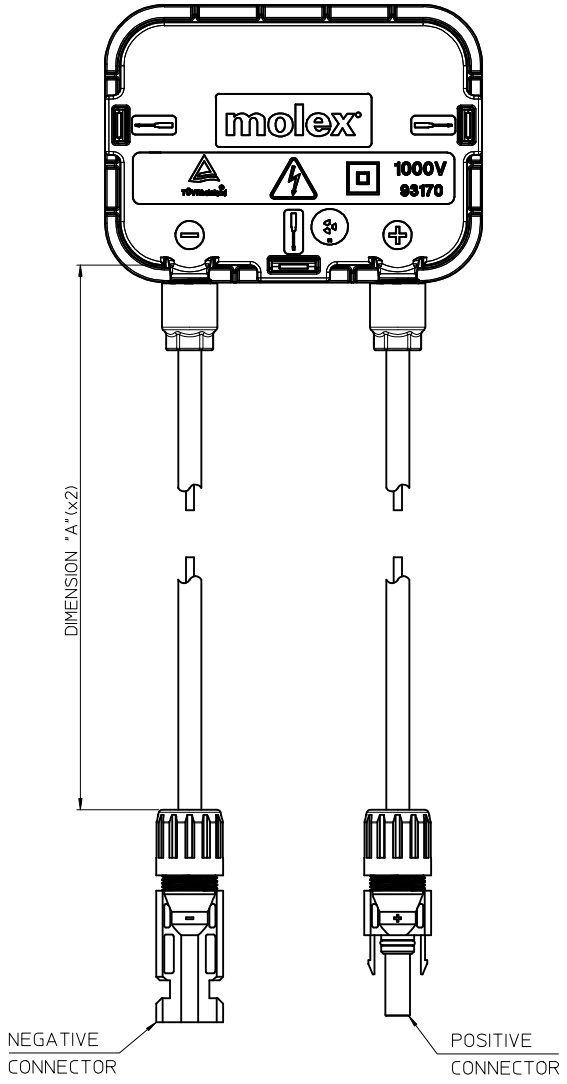
		DATE
DRAWN BY	MSHANAHAN	2008/7/11
CHECKED BY	SMCGREEVY	2008/7/11
APPROVED BY	EFOLAN	2008/7/11

TITLE: JUNCTION BOX FOR P.V. SOLAR PANEL

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-93170-001
SHEET NO.: 6 OF 7
SIZE: A2

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



NOTES:
1. CABLE LENGTH MEASURED FROM BOX TO BACK END OF CONNECTOR.
2. DIMENSION "A" CONTROLLED BY CHOSEN PART NUMBER. SEE SHEET 6 FOR AVAILABLE CABLE/LENGTH OPTIONS.

SEE SHEET 1	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)
EC NO: E2010-0121 2009/11/03	▼=0	mm / INCH
DRWN:SMCGREEVY 2009/11/03	▽=0	4 PLACES ± --- / ± ---
CH'KD: 2009/11/03		3 PLACES ± --- / ± ---
APPR:EFOLAN 2009/11/03		2 PLACES ± 0.10 / ± ---
DESCRIPTION		1 PLACE ± 0.2 / ± ---
REV		ANGULAR ± 2 °
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY	SCALE: 1:1	DESIGN UNITS: METRIC	THIRD ANGLE PROJECTION
DRAWN BY: MSHANAHAN DATE: 2008/7/11	TITLE: JUNCTION BOX FOR P.V. SOLAR PANEL		
CHECKED BY: SMCGREEVY DATE: 2008/7/11			
APPROVED BY: EFOLAN DATE: 2008/7/11	MOLEX INCORPORATED		
MATERIAL NO.: SHEET 6	DOCUMENT NO.: SD-93170-001	SHEET NO.: 7 OF 7	
SIZE: A2	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		