

Parts List					
ITEM NO.	QTY.	DESCRIPTION	MATERIAL	SIZE	WEIGHT
1	16	FIBER FERRULE	DDK	.150 x .661 x .667	0.002
2	16	CONNECTOR BOX	DDK	.200 x .793 x 1.067	0.004
3	16	LATCH CONNECTOR	DDK	.20 x .65 x 1.10	0.002
4	127	SCINTILLATOR EXTRUSION	DOW PS663	-	1.520
5	6	Pb SEGMENT NARROW EDGE	PURE LEAD	.078 x 5.91 x 48.38	8.23
6	1	WEAVE	PIEDMOND PLASTICS	#FR25A	3.197
7	1	3M EPOXY	3M EPOXY	#2216A/B	0.001
8	2	SKIN01	PIEDMOND PLASTICS	#FR25A	1.119
9	1	EPOXY-OPTICAL	MILLER STEVENSON CHEMICAL	#EPON815C & EPICURE3243	0.000
10	1	FIBER 127 LH, FLAT NEAR FIBER	WLS FIBER	1.2mm DIA	0.132
11	1	FIBER 127 LH, FLAT NEAR FIBER	WLS FIBER	1.2mm DIA	0.134
12	2	EDGE SPACER, BOTTOM	TOTAL PLASTICS, PVC RIGID FOAM	.71 [18mm] x 2.63 x 50.11	2.657
13	1	EDGE SPACER, VERTICAL	TOTAL PLASTICS, PVC RIGID FOAM	.71 [18mm] x 4.28 x 52.13	2.551
14	1	EDGE SPACER, VERTICAL	TOTAL PLASTICS, PVC RIGID FOAM	.71 [18mm] x 4.28 x 52.13	2.551
15	1	COMB LH, U&V PLANES	TOTAL PLASTICS, PVC RIGID FOAM	1.25 x 2.63 x 49.39	5.642
16	1	COMB RH, U&V PLANES	TOTAL PLASTICS, PVC RIGID FOAM	1.25 x 2.63 x 49.39	4.120
17	1	COMB, CENTER	TOTAL PLASTICS, PVC RIGID FOAM	.71 [18mm] x 5.44 x 10.25	0.642
18	2	CONNECTOR BACK STRIP	ALUM	-	0.230
19	4	BAGGIE	AMERICOVER	TS10FR, DARK BLUE, 0.012" THK	0.465

NOTE: DO NOT SCALE DRAWING!  
ALL TOLERANCES UNLESS OTHERWISE SPECIFIED ARE

DIMENSIONS ARE IN:  
 □ INCHES [mm] □ mm [IN]  
 x.xxx [x.x] ± .010 [.3]  
 x.xxxx [x.xxx] ± .005 [.13]  
 x.xxxxx [x.xxxx] ± .0005 [.013]  
 xx/xx ± 1/32  
 x' ± 1"

UNIVERSITY OF ROCHESTER  
 DEPT. OF PHYSICS AND ASTRONOMY  
 SIDNEY W. BARNES RESEARCH LABORATORY

TITLE  
 U PLANE ASS'Y

THIRD ANGLE PROJECTION

DRAWN	RSF	DATE	2/15/07
CHECKED	RSF	DATE	2/15/07
APPROVED	RSF	DATE	2/15/07

SCALE 1:8 SHEET 1 OF 13

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SCALE	1:8	SHEET	1 OF 13
FILE	70008	REV	-

WEIGHT: 221 LBS

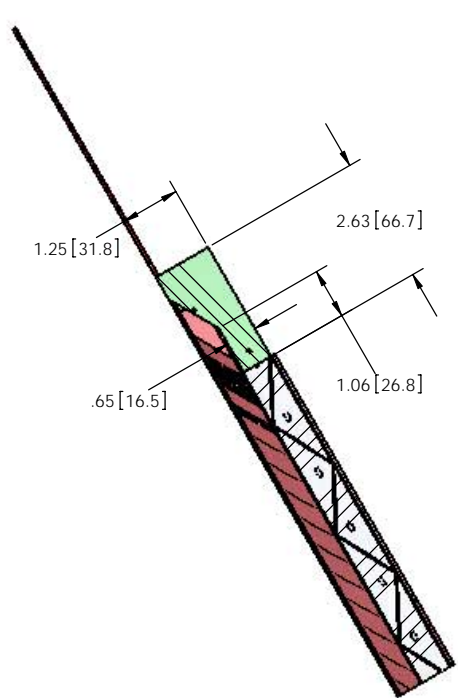
FILE: 70008 U PLANE MODULE ASSY 127

4

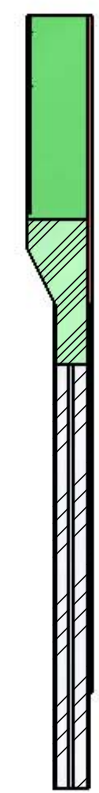
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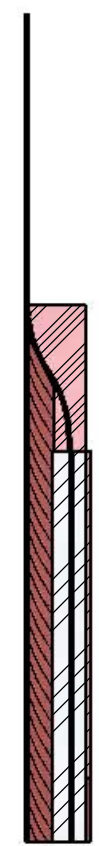
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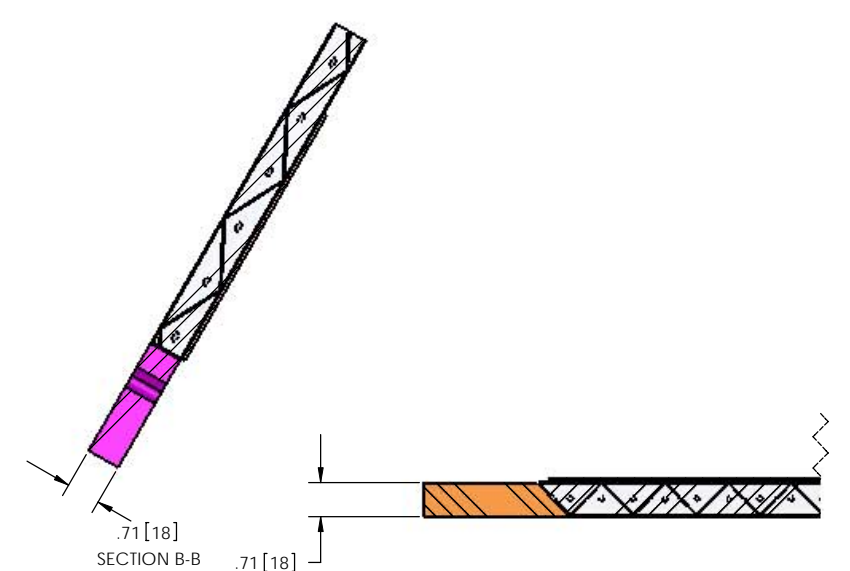
SECTION C-C



SECTION D-D



SECTION E-E



SECTION A-A

SECTION B-B

NOTE: DO NOT SCALE DRAWING !  
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DIMENSIONS ARE IN:  
 □ INCHES [mm] □ mm [IN]

x.xx [x.x] ± .010 [.3]  
 x.xxx [x.xxx] ± .005 [.13]  
 x.xxxx [x.xxxx] ± .0005 [.013]  
 xx/xx ± 1/32  
 x' ± 1"

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TITLE U PLANE ASS'Y			
THIRD ANGLE PROJECTION 	DRAWN RSF	DATE 2/15/07	
	CHECKED RSF	DATE 2/15/07	
	APPROVED RSF	DATE 2/15/07	

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SCALE	DWG. NO.	REV.
1:2	70008	—
SHEET 2 OF 13		

4

3

2

B

B

A

A

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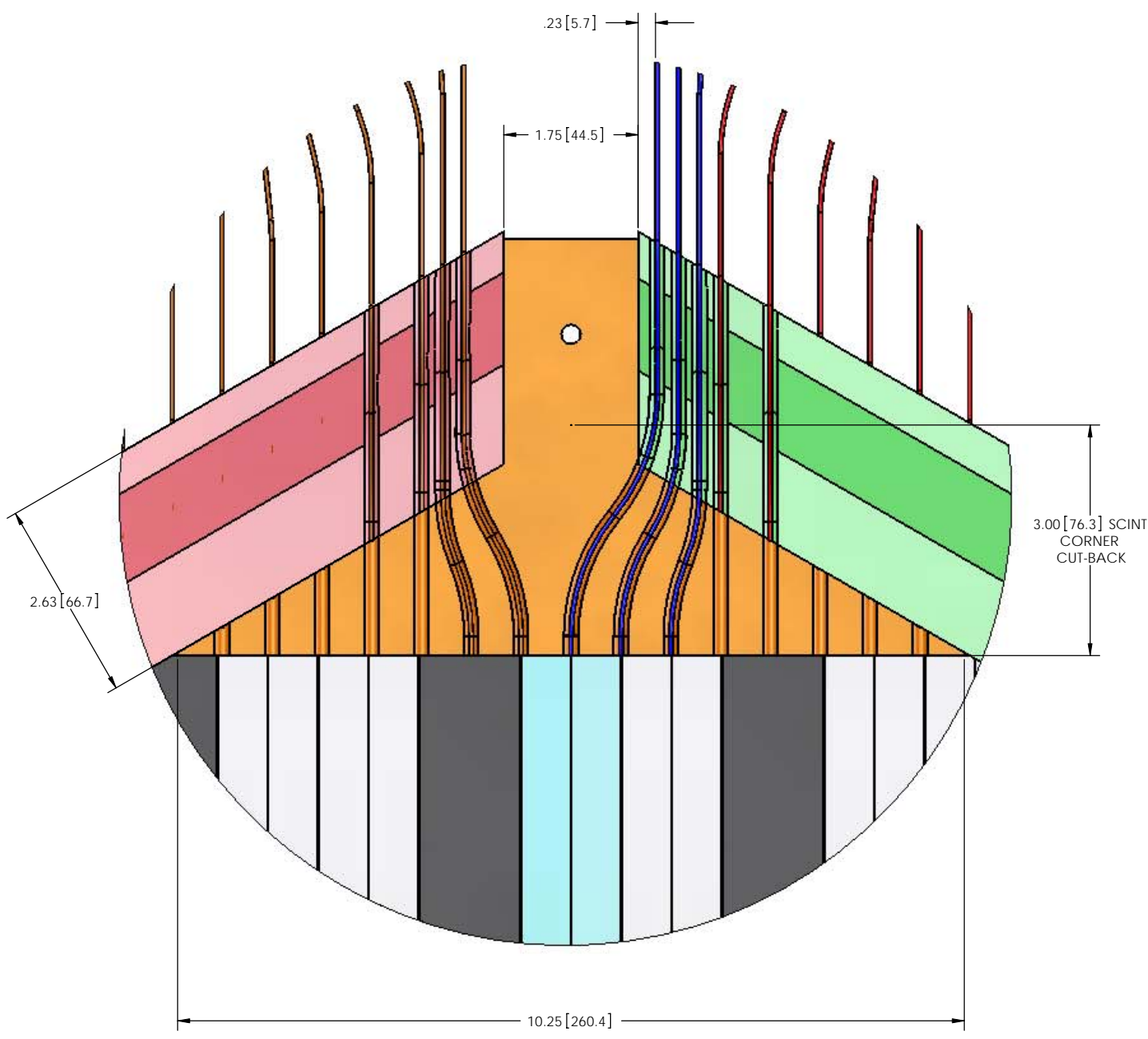
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B

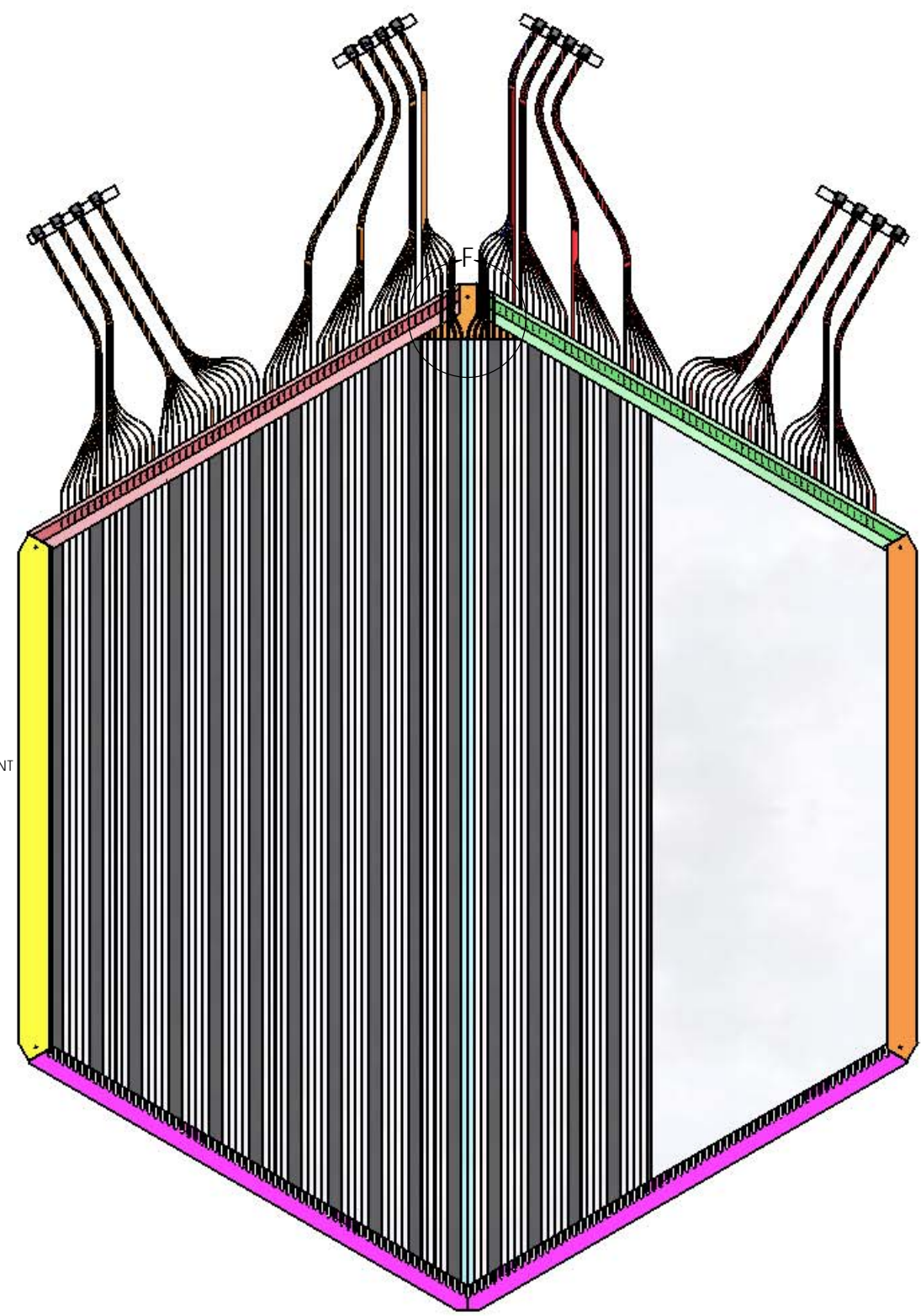
B

A

A



DETAIL F  
SCALE 1 : 1



BACK (DOWNSTREAM SIDE)  
BAGGIES REMOVED FOR CLARITY

NOTE: DO NOT SCALE DRAWING !  
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 □ INCHES [mm]   □ mm [IN]

x.xxx [x.x] ± .010 [.3]  
 x.xxxx [x.xxx] ± .005 [.13]  
 x.xxxxx [x.xxxx] ± .0005 [.013]  
 x/x ± 1/32  
 x' ± 1"

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DWG NO	70008	REV	
SCALE	1:8	SHEET	3 OF 13

WEIGHT: 221 LBS

FILE: 70008 U PLANE MODULE ASSY 127

4

3

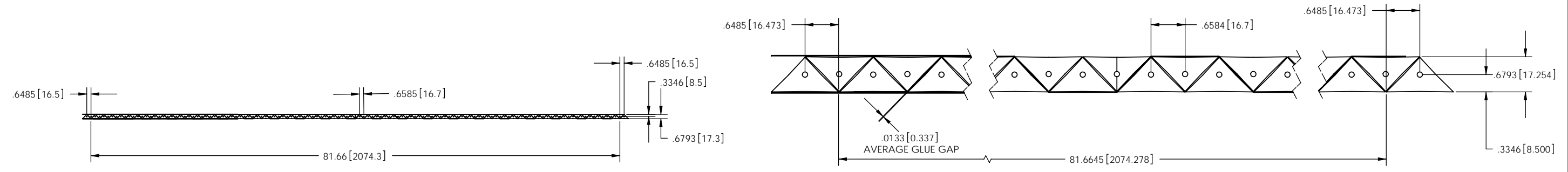
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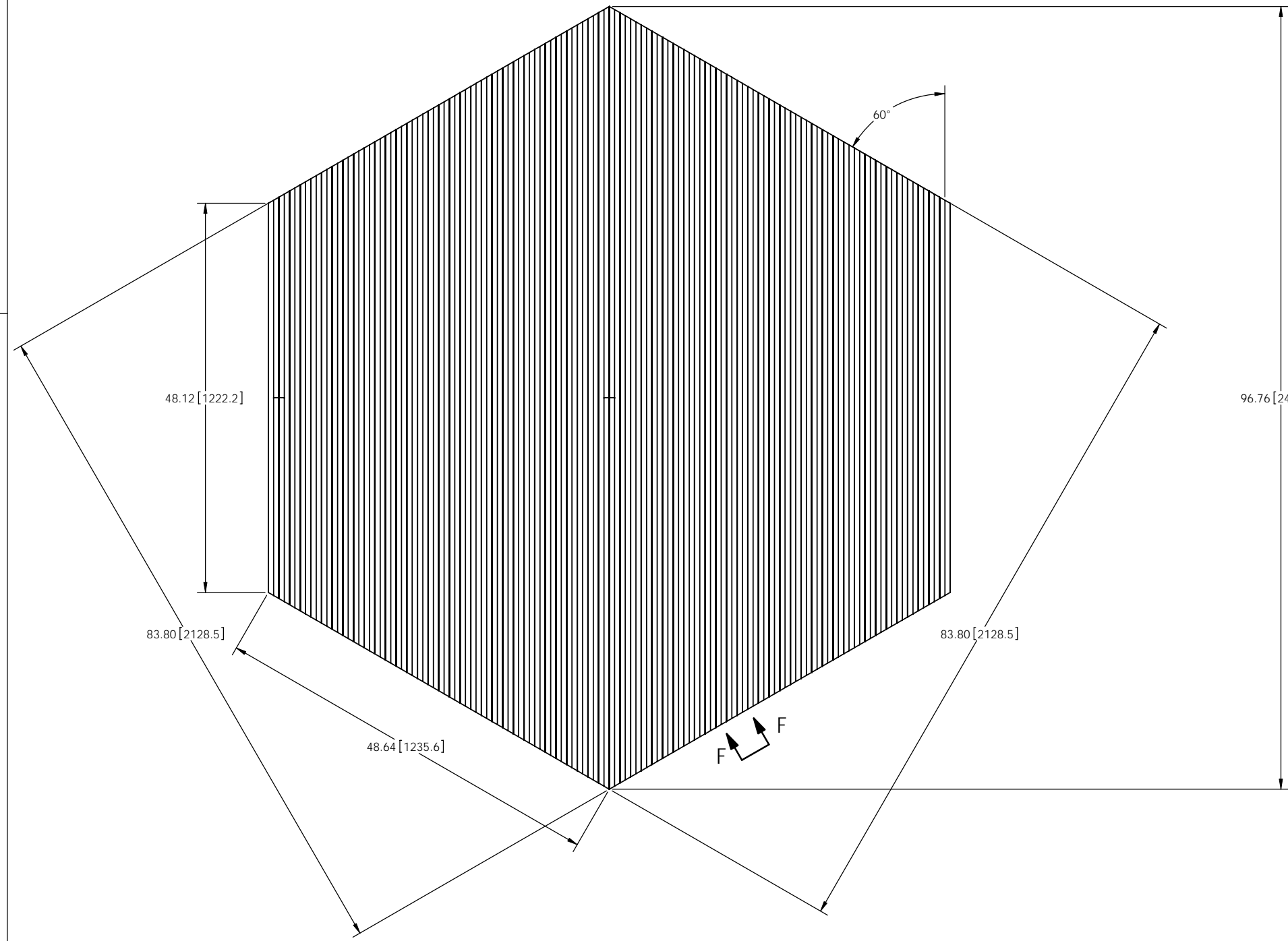
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1



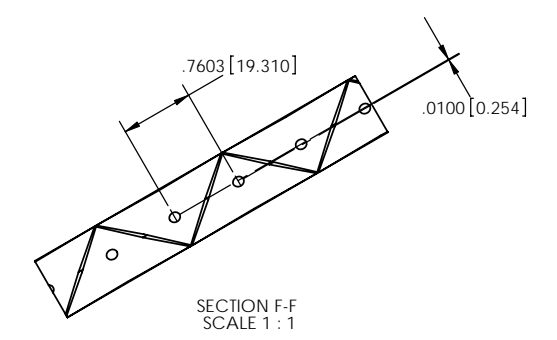
B

B



A

A



127 SCINTILLATOR PLANE,  
WITHOUT APEX CUT BACK  
DIMENSIONS ARE WITHOUT  
LEXAN WEAVE ALLOWANCE

NOTE: DO NOT SCALE DRAWING!  
ALL TOLERANCES UNLESS  
OTHERWISE SPECIFIED ARE

DIMENSIONS ARE IN:  
 □ INCHES [mm]   □ mm [IN]

x.xxx [x.x]   ± .010 [.3]  
 x.xxxx [x.xxx]   ± .005 [.13]  
 x.xxxxx [x.xxxx]   ± .0005 [.013]  
 xx/xx ± 1/32  
 x' ± 1"

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SCALE 1:1	SHEET 4 OF 13	REV —
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WEIGHT: 196 LBS

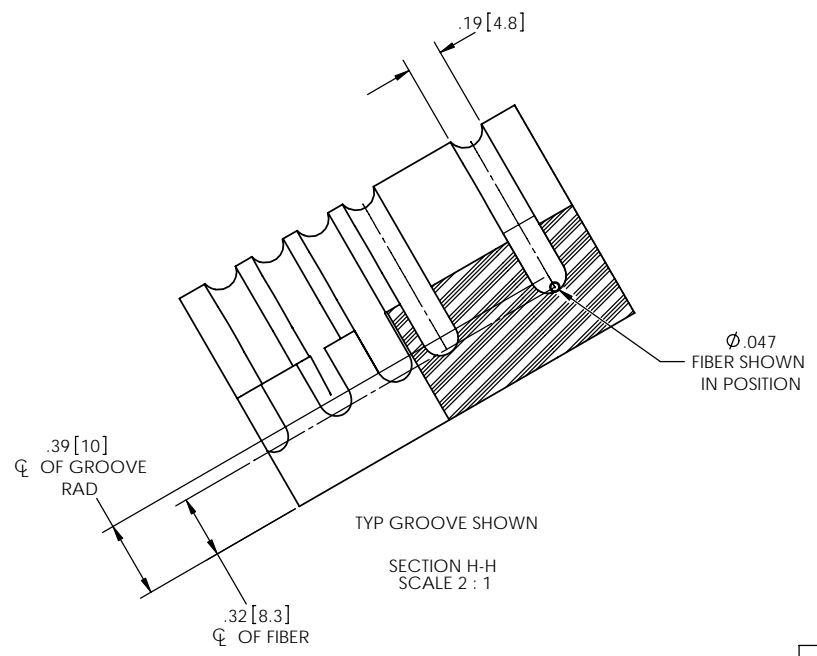
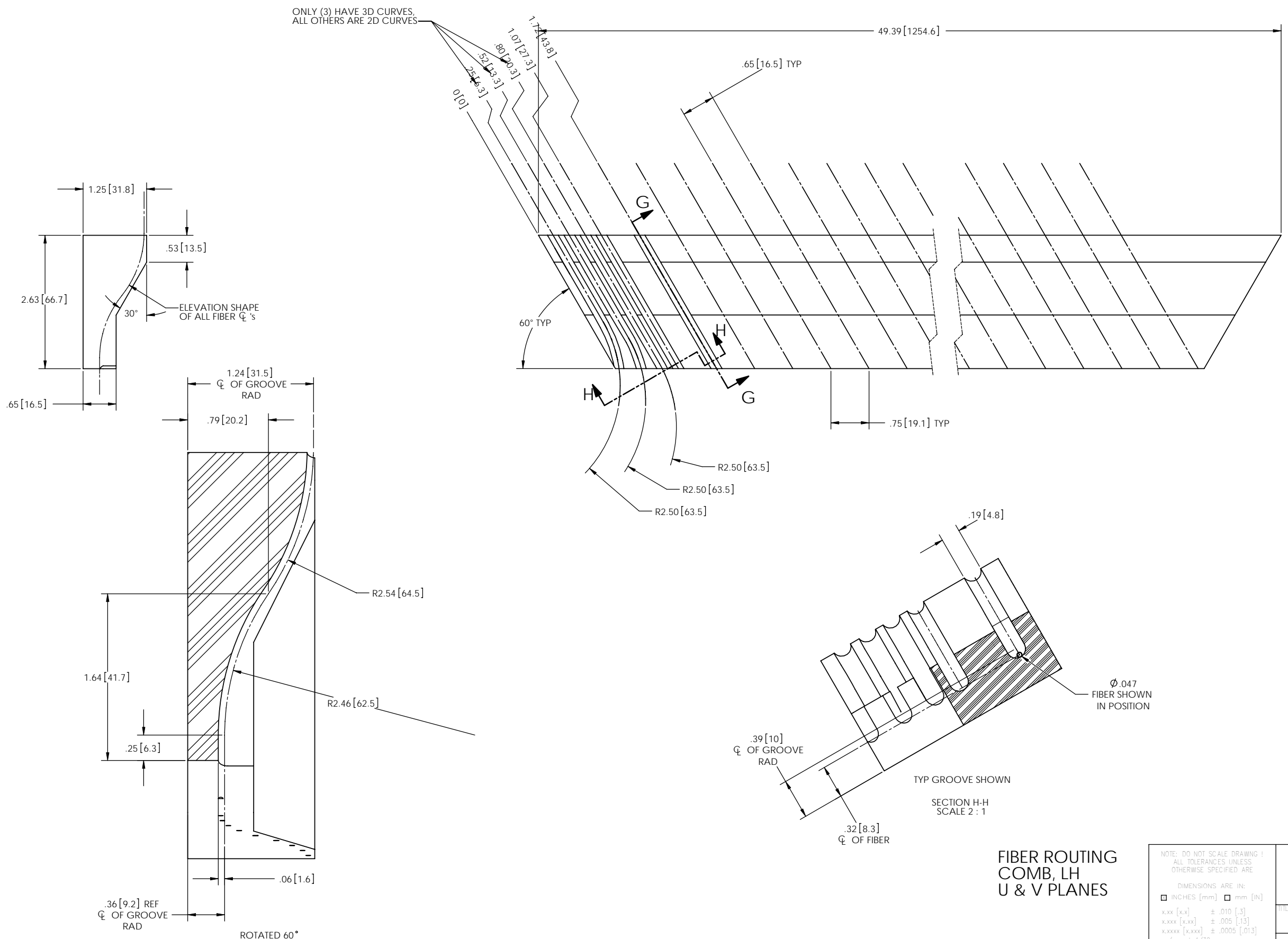
FILE: 70008 U PLANE MODULE ASSY 127

4

3

2

ONLY (3) HAVE 3D CURVES,  
ALL OTHERS ARE 2D CURVES



FIBER ROUTING  
COMB, LH  
U & V PLANES

UPPER COMB LH SHOWN,  
RH IS OPPOSITE - SEE SHT 2

NOTE: DO NOT SCALE DRAWING!  
ALL TOLERANCES UNLESS  
OTHERWISE SPECIFIED ARE

DIMENSIONS ARE IN:  
 □ INCHES [mm]   □ mm [IN]

xxx [x,x] ± .010 [.3]  
 xxx [x,xx] ± .005 [.13]  
 xxxxx [xxxx] ± .0005 [.013]  
 xx/xx ± 1/32  
 x' ± 1"

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TITLE U PLANE ASS'Y			
THIRD ANGLE PROJECTION	DRAWN RSF	DATE 2/15/07	
	CHECKED RSF	DATE 2/15/07	
	APPROVED RSF	DATE 2/15/07	

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DWG NO	70008	REV	
SCALE	1:1	SHEET	5 OF 13

4

3

2

1

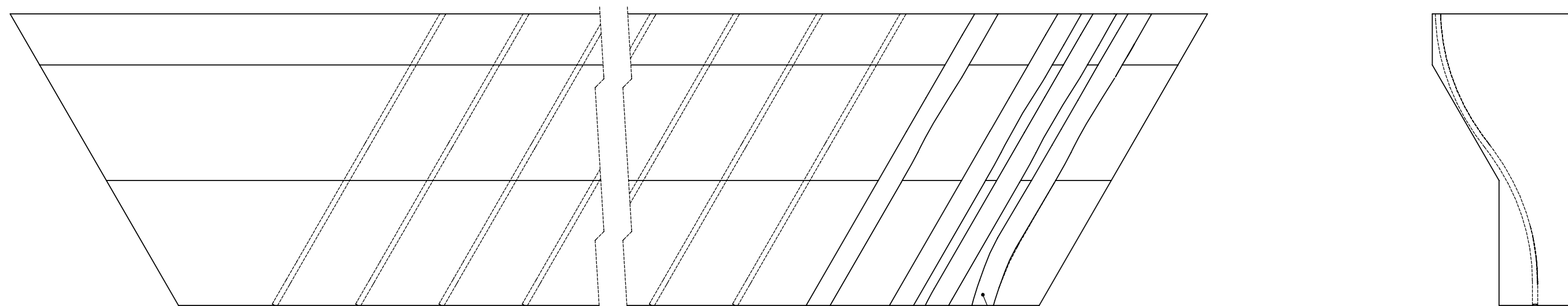
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPRV
-	-	INITIAL ISSUE	-	-

B

B

A

A



ONLY GROOVES #2 & #3 ARE 3D,  
GROOVE #1 IS NOT NEEDED &  
NOT SHOWN

UPPER COMB RH SHOWN  
OPPOSITE OF LH,  
SHOWN ON SHT 1

NOTE: DO NOT SCALE DRAWING !  
ALL TOLERANCES UNLESS  
OTHERWISE SPECIFIED ARE

DIMENSIONS ARE IN:  
 INCHES [mm]    mm [IN]

x.xxx [x,x]   ± .010 [.3]  
 x.xxxx [x,xxx]   ± .005 [.13]  
 x.xxxxx [x,xxxx]   ± .0005 [.013]  
 xx/xx   ± 1/32  
 x'   ± 1"

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TITLE: U PLANE ASS'Y

THIRD ANGLE PROJECTION

DRAWN	RSF	DATE	2/15/07
CHECKED	RSF	DATE	2/15/07
APPROVED	RSF	DATE	2/15/07

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SCALE	2:1	SHEET	6 OF 13
DWG NO	70008		
REV	-		

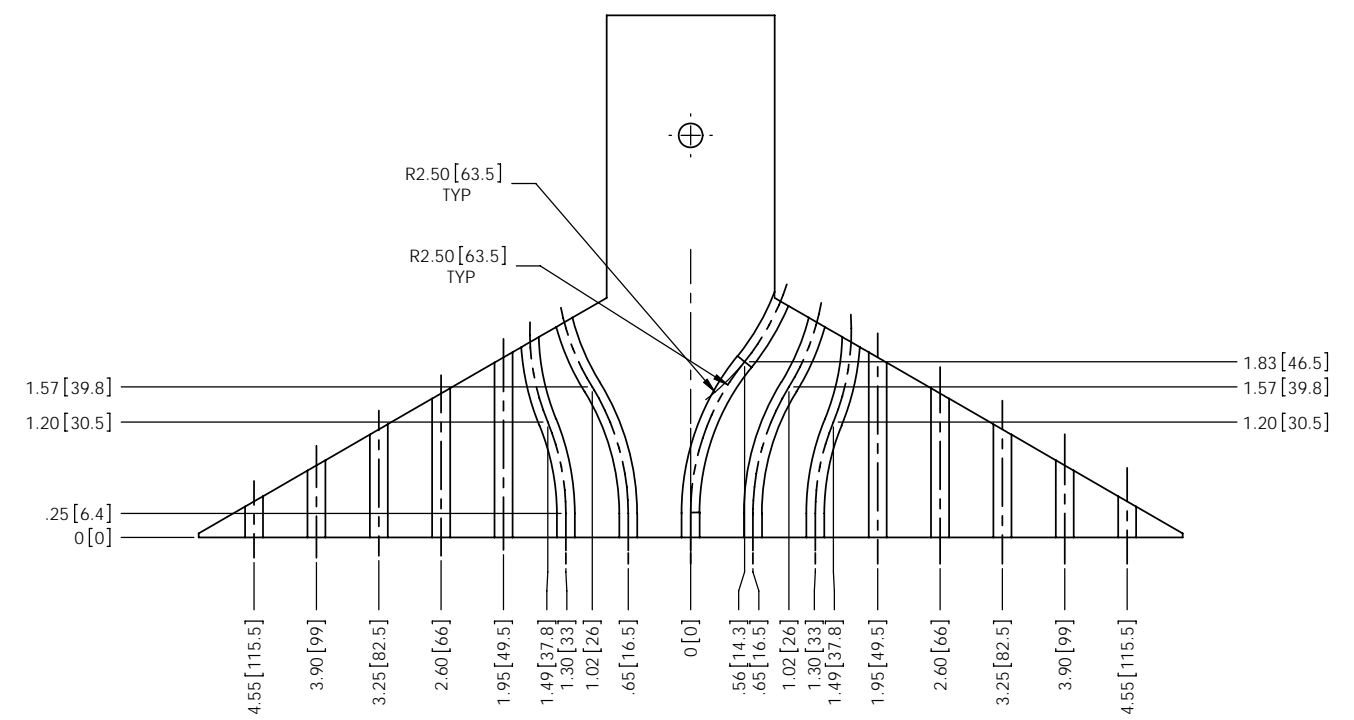
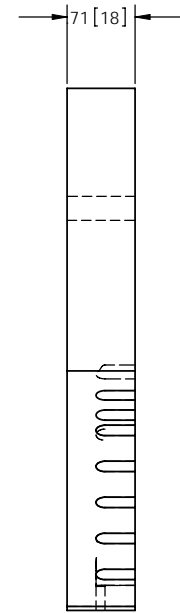
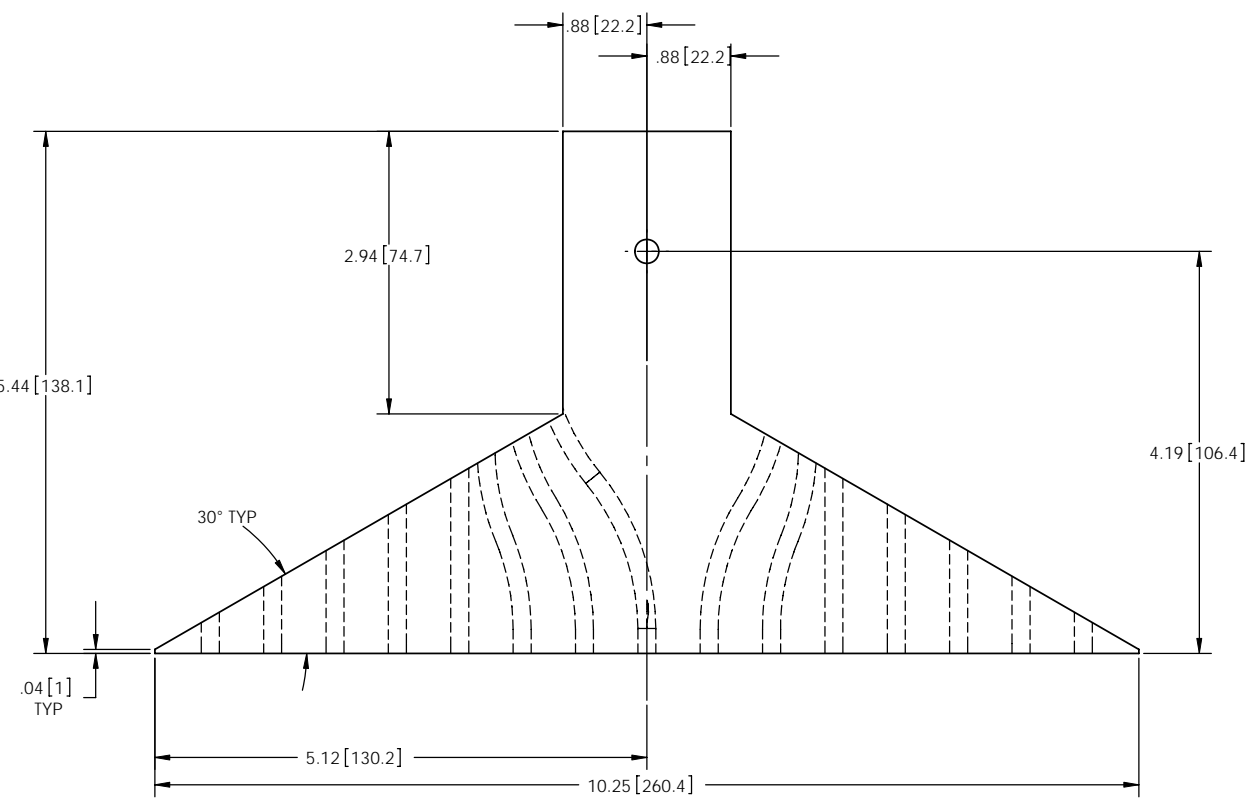
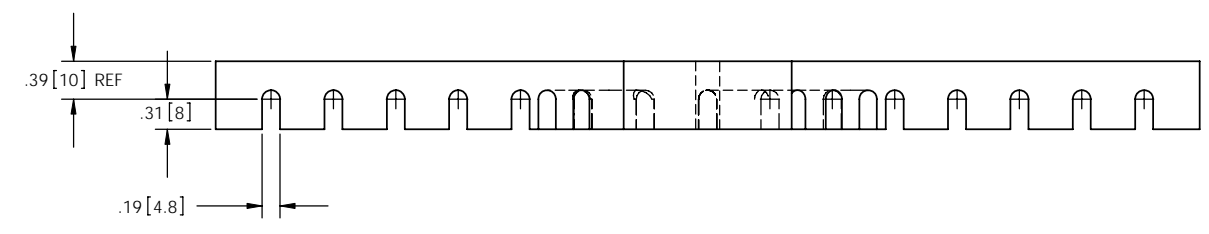
4

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPRV
-	-	INITIAL ISSUE	-	-



CENTER COMB  
ALL CURVED GROOVES  
ARE PLANAR, 2D

NOTE: CENTER COMB IS THE SAME FOR  
U, V, & X PLANES

NOTE: DO NOT SCALE DRAWING !  
ALL TOLERANCES UNLESS  
OTHERWISE SPECIFIED ARE

DIMENSIONS ARE IN:  
 INCHES [mm]    mm [IN]  
xxx [x.x]   ± .010 [.3]  
xxxx [x.xxx]   ± .005 [.13]  
xxxxx [x.xxxx]   ± .0005 [.013]  
xx/xx   ± 1/32  
x'   ± 1"

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TITLE: U PLANE ASS'Y

THIRD ANGLE PROJECTION

DRAWN	RSF	DATE	2/15/07
CHECKED	RSF	DATE	2/15/07
APPROVED	RSF	DATE	2/15/07

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DWG NO	70008	REV	-
SCALE	1:1	SHEET	7 OF 13

WEIGHT: 0.642 LBS

FIG: 70008 U PLANE MODULE ASSY 127

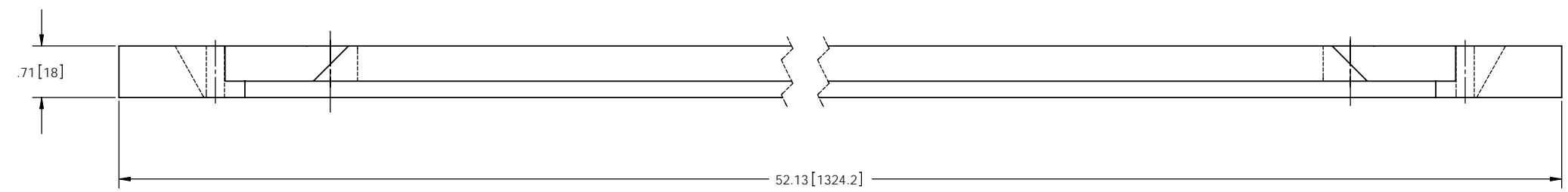
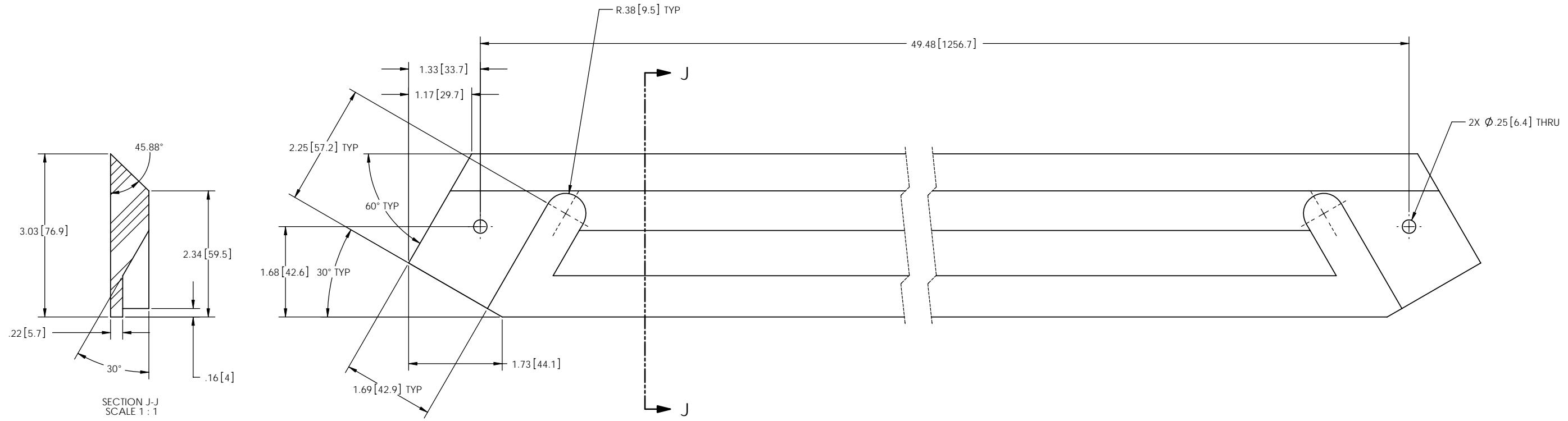
4

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1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPRV
-	-	INITIAL ISSUE	-	-



**SIDE SPACER BAR**  
**QTY: 2 PER PLANE**

NOTE: SIDE SPACER BARS ARE THE SAME FOR  
 U, V, & X PLANES

NOTE: DO NOT SCALE DRAWING !  
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DIMENSIONS ARE IN:  
 □ INCHES [mm] □ mm [IN]

x.xxx [x.x] ± .010 [.3]  
 x.xxxx [x.xxx] ± .005 [.13]  
 x.xxxxx [x.xxxx] ± .0005 [.013]  
 xx/xx ± 1/32  
 x' ± 1"

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TITLE: U PLANE ASS'Y

THIRD ANGLE PROJECTION

DRAWN	RSF	DATE	2/15/07
CHECKED	RSF	DATE	2/15/07
APPROVED	RSF	DATE	2/15/07

SCALE: 1:2 SHEET 8 OF 13

WEIGHT: 2.551 LBS

FIG: 70008 U PLANE MODULE ASSY 127



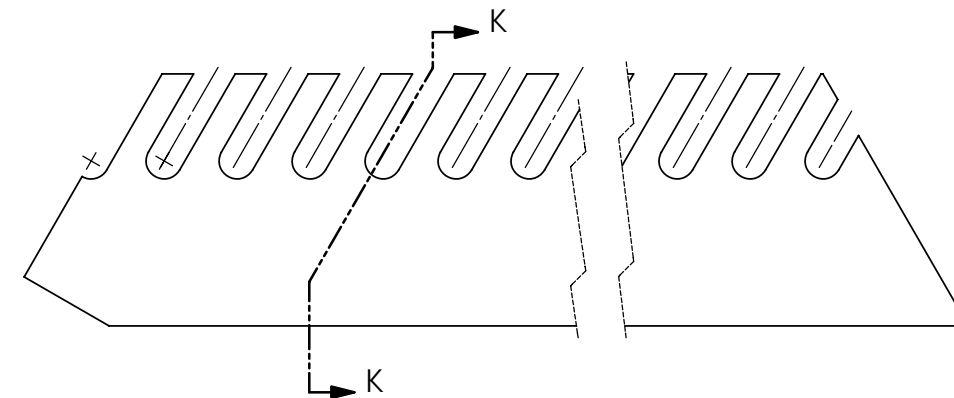
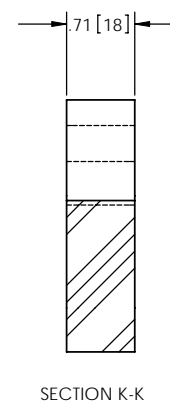
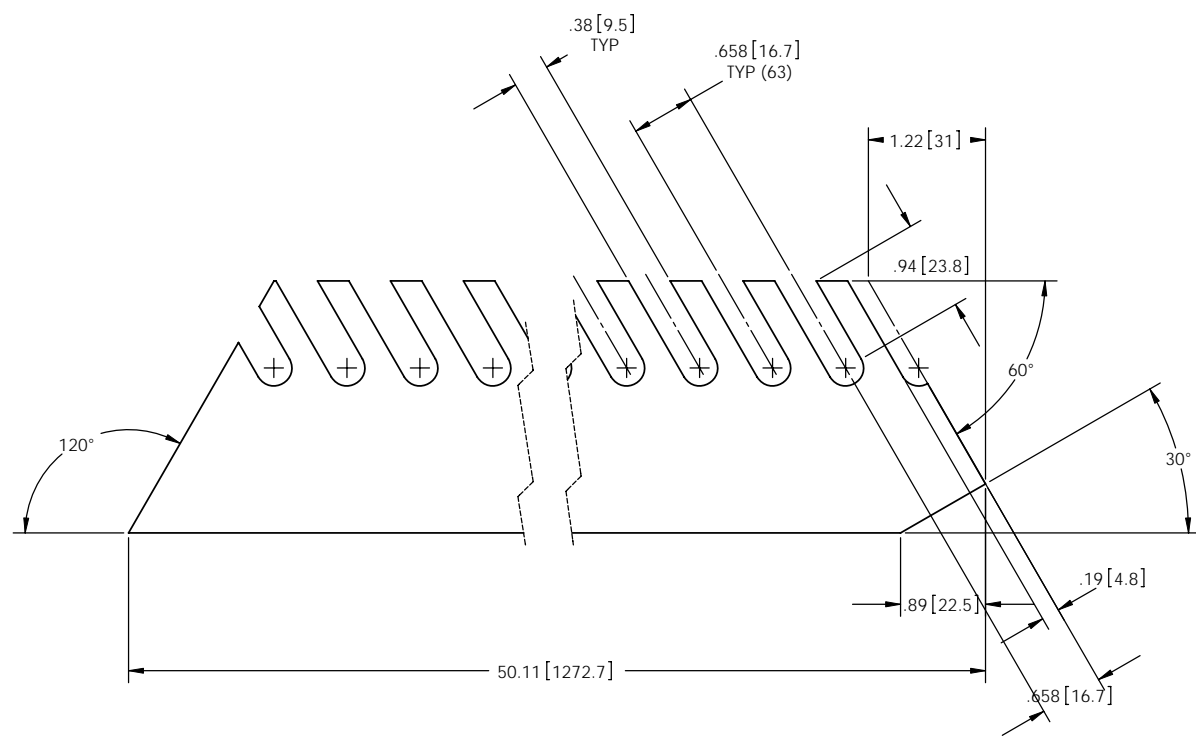
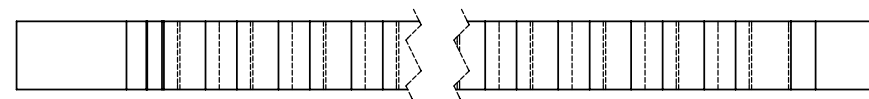
4

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1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPRV
-	-	INITIAL ISSUE	-	-



**BOTTOM COMB**  
**QTY: 2 EA PER PLANE**

NOTE: BOTTOM COMBS ARE THE SAME FOR  
 U, V, & X PLANES

NOTE: DO NOT SCALE DRAWING !  
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DIMENSIONS ARE IN:  
 □ INCHES [mm] □ mm [IN]

x.xxx [x.x] ± .010 [.3]  
 x.xxxx [x.xxx] ± .005 [.13]  
 x.xxxxx [x.xxxx] ± .0005 [.013]  
 xx/xx ± 1/32  
 x' ± 1"

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TITLE: U PLANE ASS'Y

THIRD ANGLE PROJECTION	DRAWN: RSF	DATE: 2/15/07
	CHECKED: RSF	DATE: 2/15/07
	APPROVED: RSF	DATE: 2/15/07

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DWG NO	70008	REV	-
SCALE	1:1	SHEET	9 OF 13

WEIGHT: 2.657 LBS

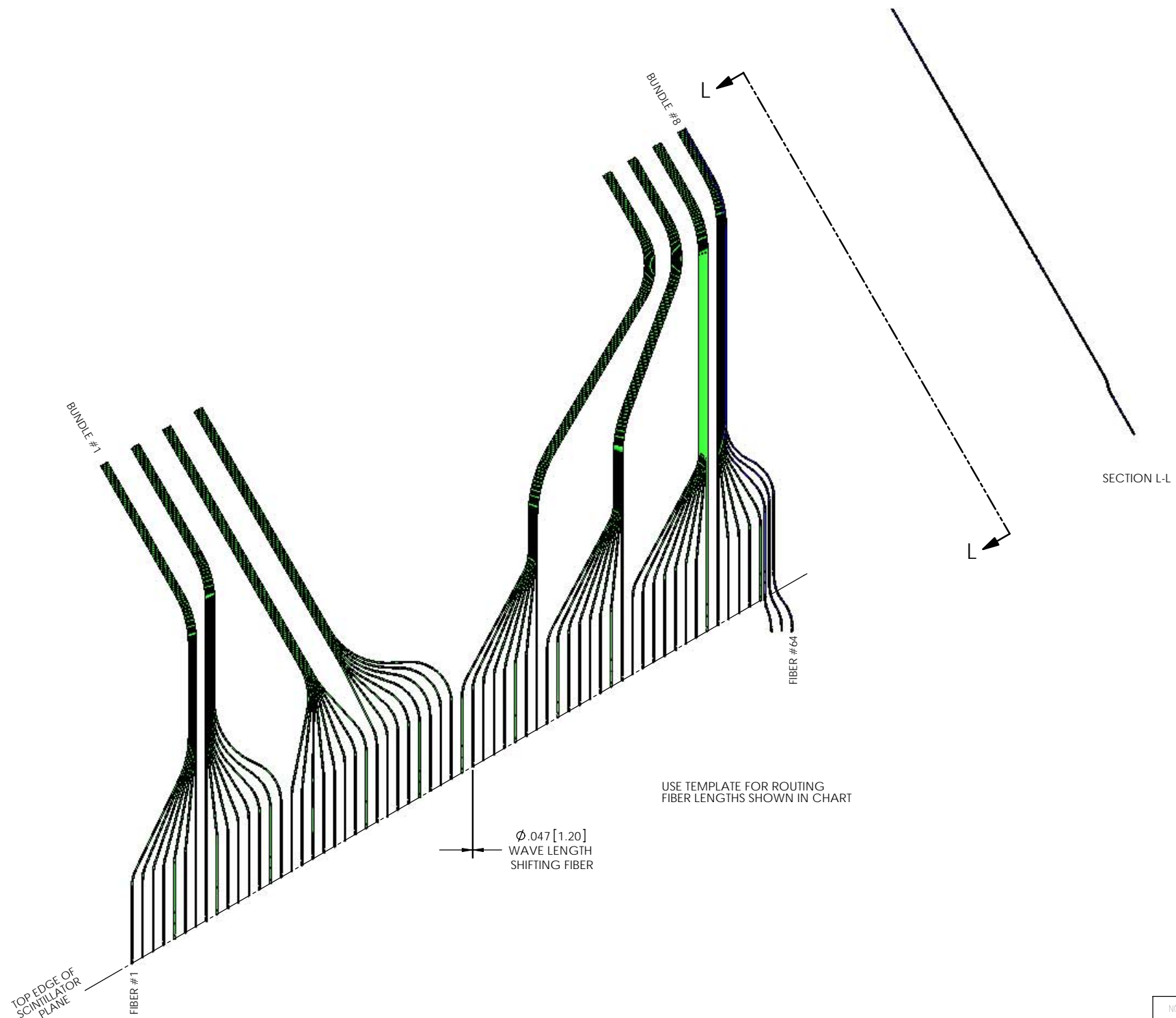
FIG: 70008 U PLANE MODULE ASSY 127

4

3

2

1



USE TEMPLATE FOR ROUTING  
FIBER LENGTHS SHOWN IN CHART

NOTE: DO NOT SCALE DRAWING !  
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 x.xx [x,x]   ± .010 [.3]  
 x.xxx [x,xx]   ± .005 [.13]  
 x.xxxx [x,xxx]   ± .0005 [.013]  
 xx/xx   ± 1/32  
 x'   ± 1"

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TITLE U PLANE ASS'Y		
THIRD ANGLE PROJECTION 	DRAWN RSF	DATE 2/15/07
	CHECKED RSF	DATE 2/15/07
	APPROVED RSF	DATE 2/15/07

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SCALE 1:1	SHEET 10 OF 13	

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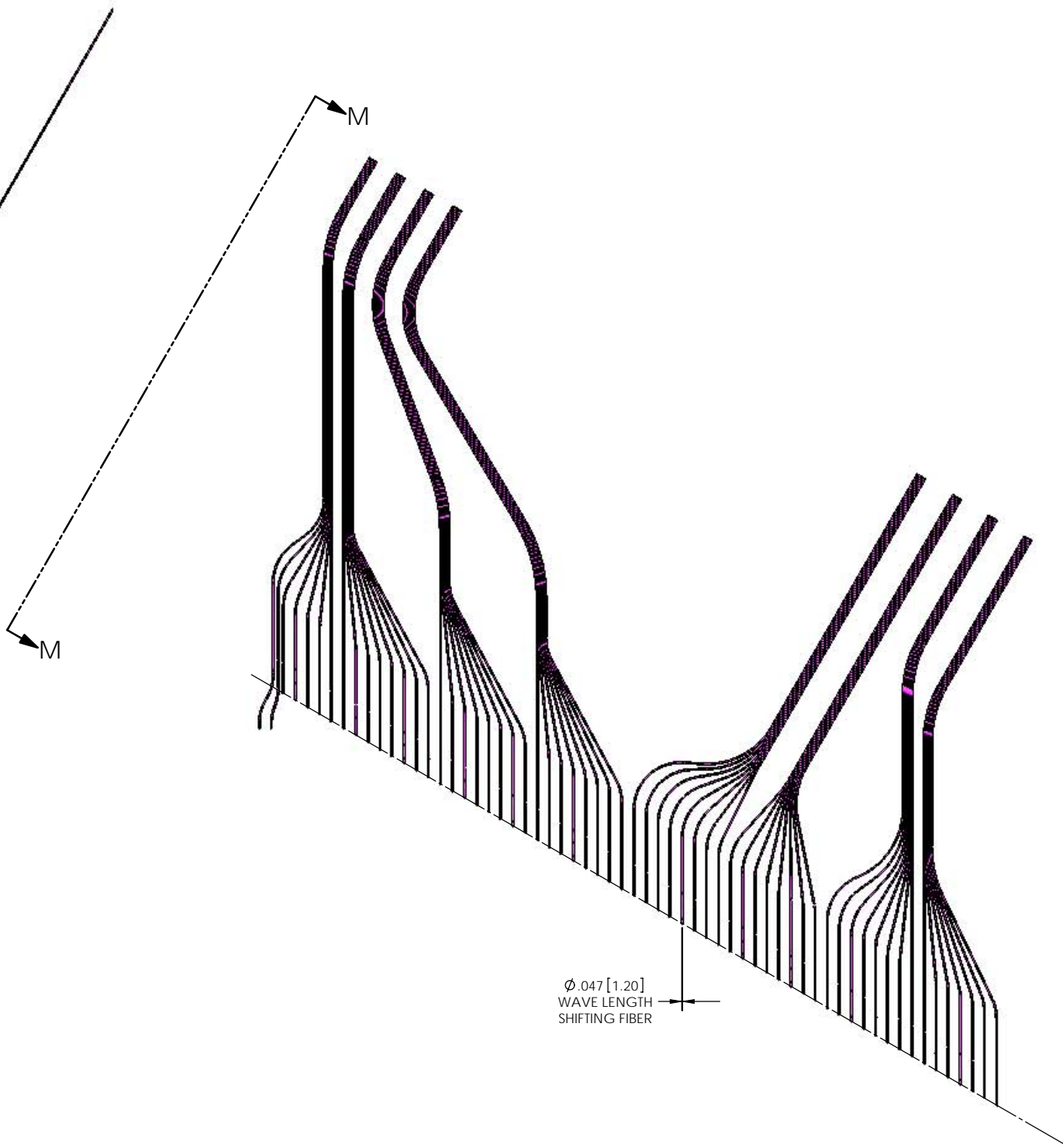
4

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SECTION M-M



$\phi 0.047 [1.20]$   
WAVE LENGTH  
SHIFTING FIBER

NOTE: DO NOT SCALE DRAWING !  
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DIMENSIONS ARE IN:  
 □ INCHES [mm]   □ mm [IN]  
 x.xx [x.x]   ± .010 [.3]  
 x.xxx [x.xxx]   ± .005 [.13]  
 x.xxxx [x.xxxx]   ± .0005 [.013]  
 xx/xx   ± 1/32  
 x'   ± 1"

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TITLE  
U PLANE ASS'Y

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	CHECKED	RSF	DATE	2/15/07
	APPROVED	RSF	DATE	2/15/07

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SIZE	DWG NO	REV
D	70008	—
SCALE	SHEET	OF
1:1	11	13

WEIGHT: 0.135 LBS      FILE: 70008 U PLANE MODULE ASSY 127

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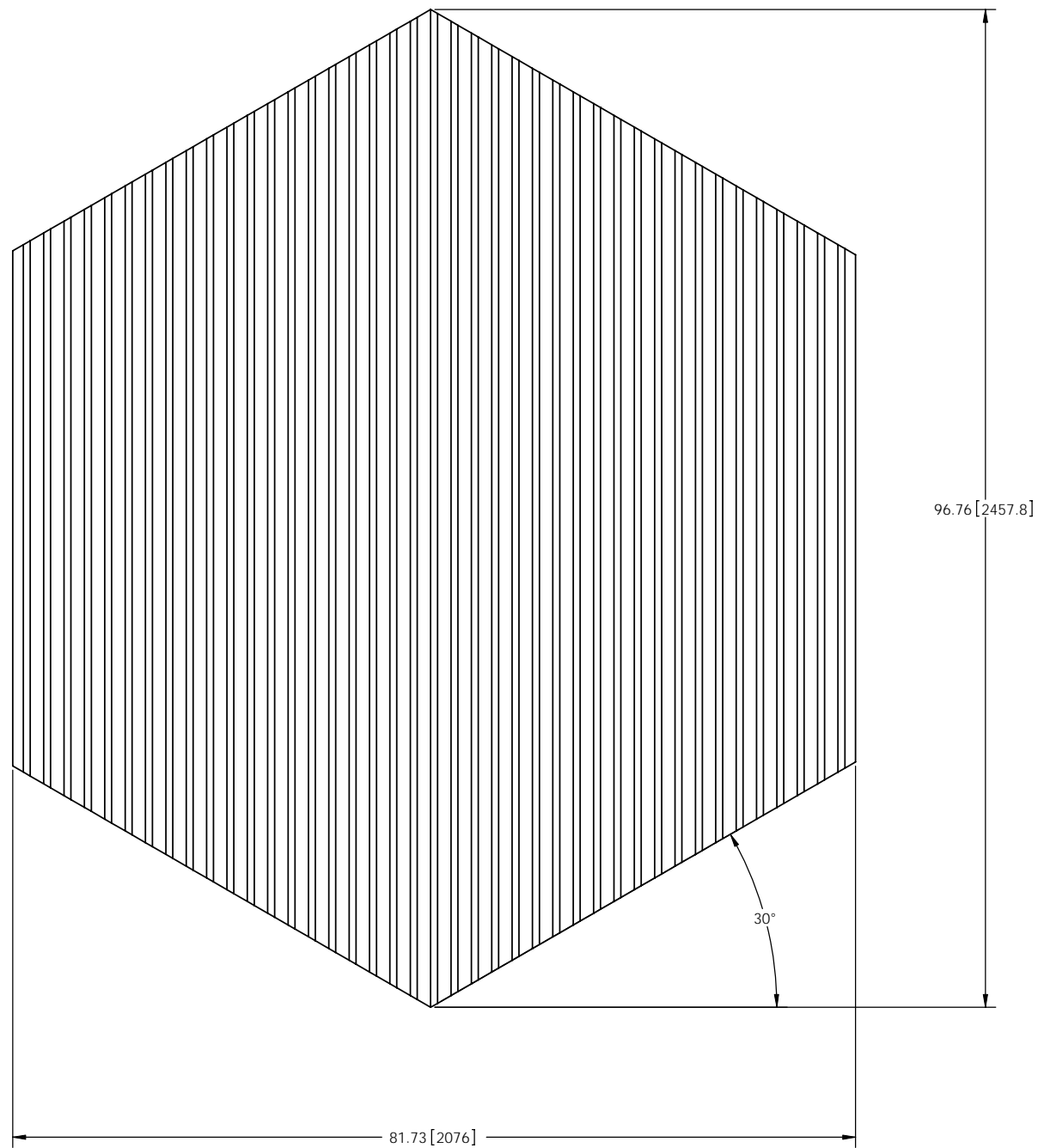
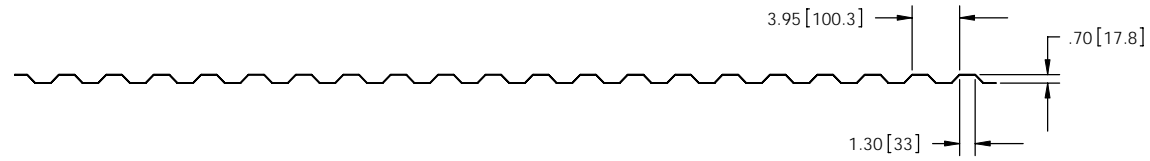
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1



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DIMENSIONS ARE IN:  
 INCHES [mm]    mm [IN]  
 x.xx [x.x]   ± .010 [.3]  
 x.xxx [x.xxx]   ± .005 [.13]  
 x.xxxx [x.xxxx]   ± .0005 [.013]  
 xx/xx   ± 1/32  
 x'   ± 1"

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APPROVED	RSF	DATE	2/15/07

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SCALE	1:1	SHEET	12 OF 13
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WEIGHT: 3.197 LBS      FILE: 70008 U PLANE MODULE ASSY 127

4

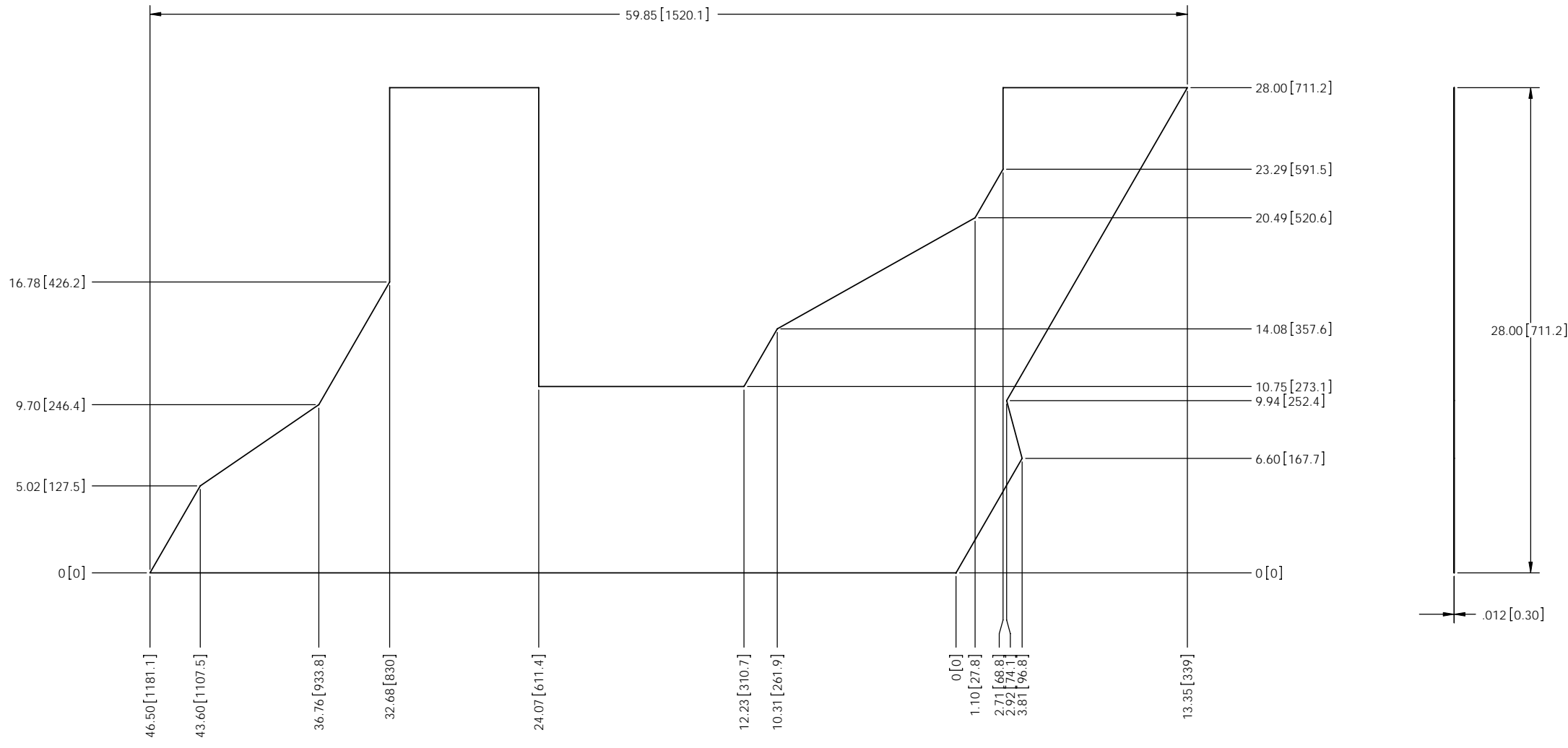
3

2

1

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B



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A

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DIMENSIONS ARE IN:  
 INCHES [mm]    mm [IN]

x.xx [x.x]   ± .010 [.3]  
 x.xxx [x.xx]   ± .005 [.13]  
 x.xxxx [x.xxx]   ± .0005 [.013]  
 xx/xx   ± 1/32  
 x'   ± 1"

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APPROVED	RSF	DATE	2/15/07

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SCALE: 1:1   SHEET: 13 OF 13

WEIGHT: 0.465 LBS   FILE: 70008 U PLANE MODULE ASSY 127