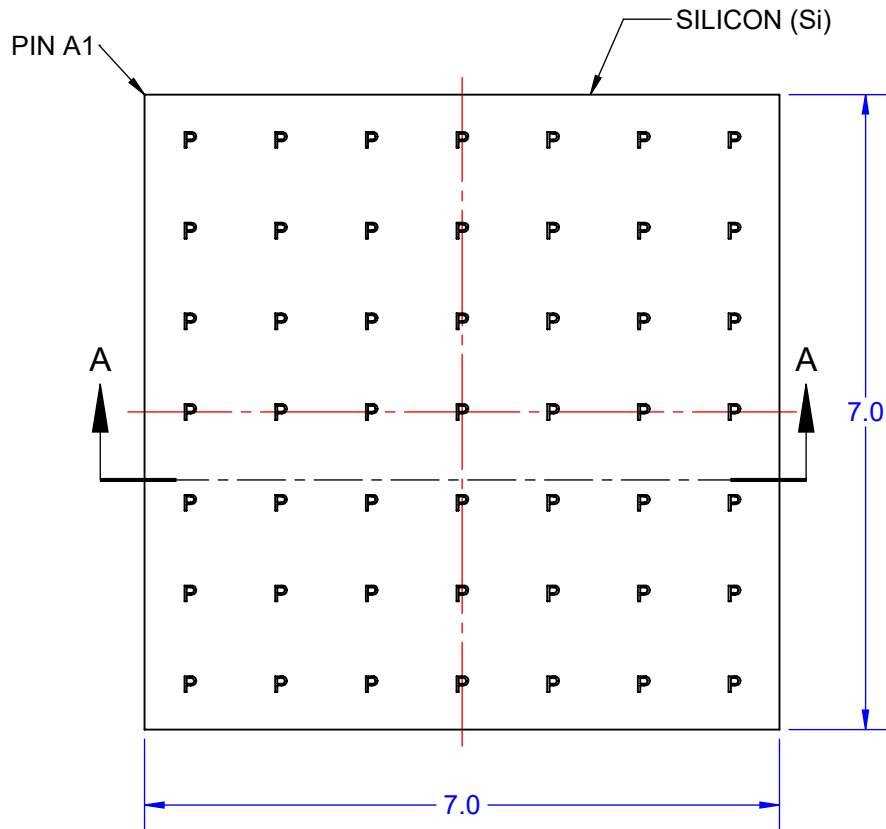
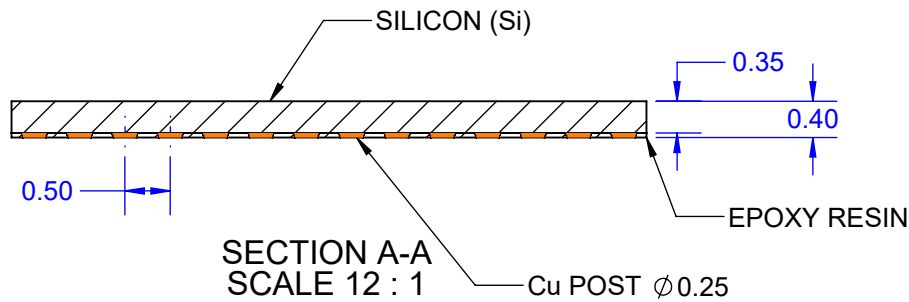
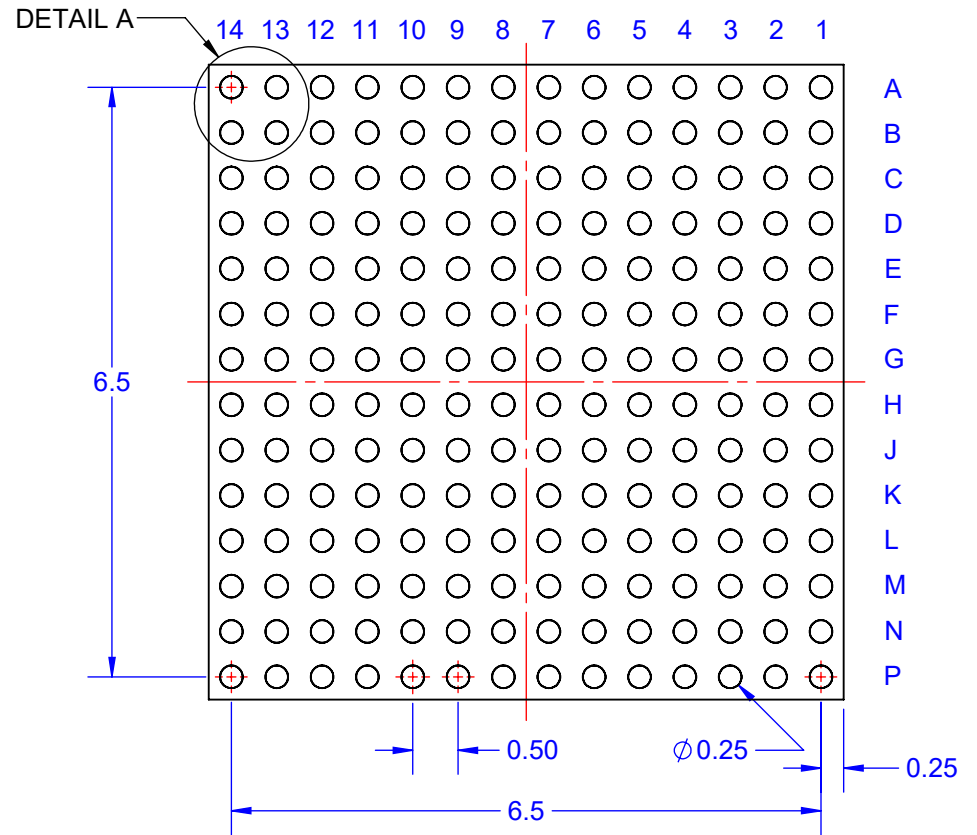


### TOP VIEW



### PAD VIEW



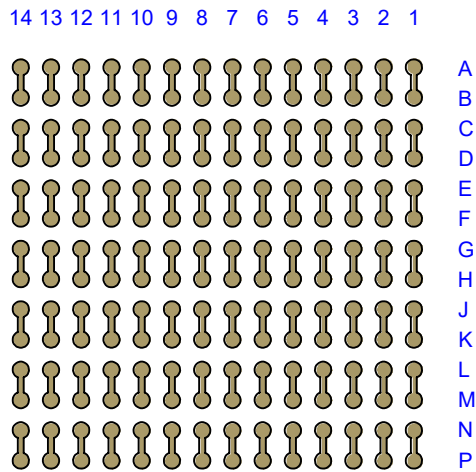
SECTION A-A  
SCALE 12 : 1

- Notes: (Unless Otherwise Specified).  
 1) ALL DIMENSIONS ARE IN MM.  
 2) PAD ALLOY: Cu (50 μm THICK).  
 3) PAD Cu DIAMETER:  $\phi 0.25$   
 4) DIE MATERIAL: Si (SILICON).  
 5) DAISY CHAIN PATTERN (SEE PAGE 2).

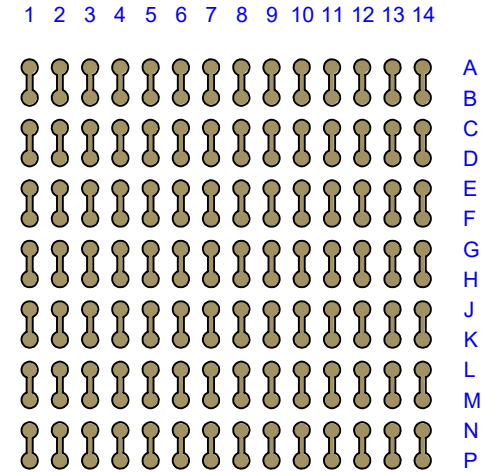
APPROVALS	DATE	<b>TopLine</b> <sup>®</sup>			
DRAWN T. Au	6/26/2021				
ENG M. Hart	6/26/2021	TITLE eWLP196T.5-DC148D 196-PAD P=0.5mm			
MFG		SCALE 12:1	SIZE A	DRAWING NO. 751489	REV A
QA					
CUST		DO NOT SCALE DRAWING			SHEET 1 OF 9
REVISED					

# DAISY CHAIN PATTERN

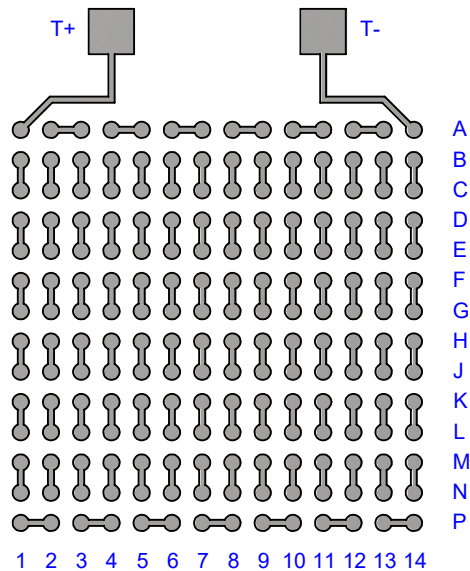
PAD VIEW



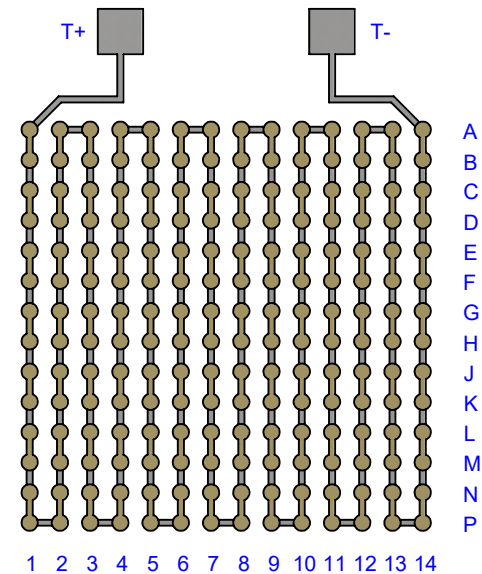
BOTTOM SIDE  
(TOP X-RAY VIEW)



TEST VEHICLE  
BOARD



AFTER MOUNTING  
TO TEST BOARD  
(TOP X-RAY VIEW)



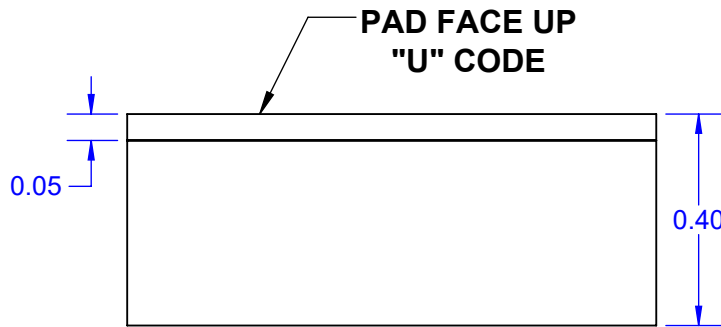
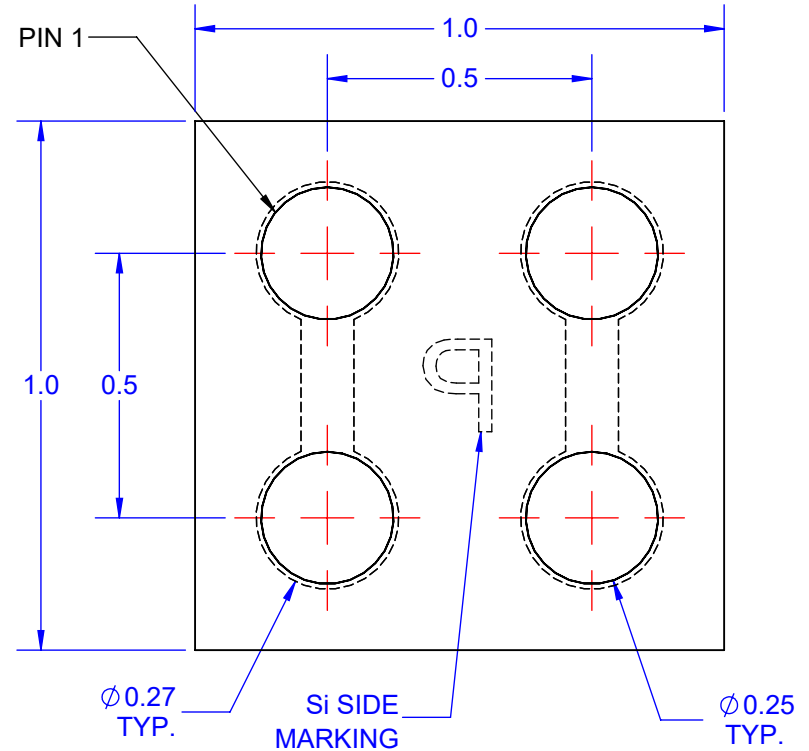
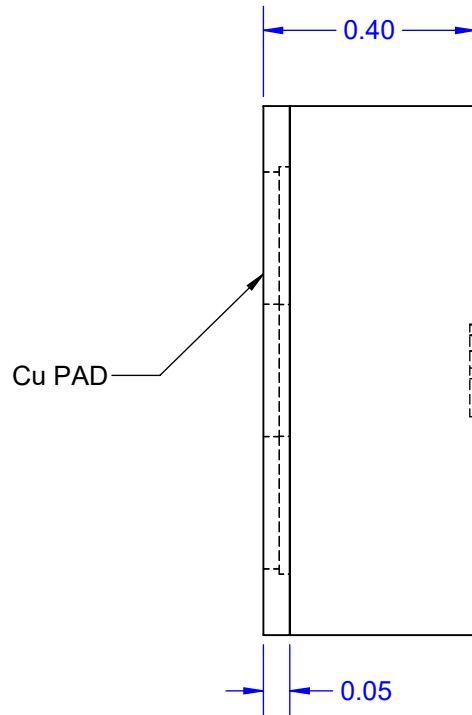
Notes:

- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE.  
DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu PAD DIAMETER 0.25mm (9.8 mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.10mm (3.9 mil).

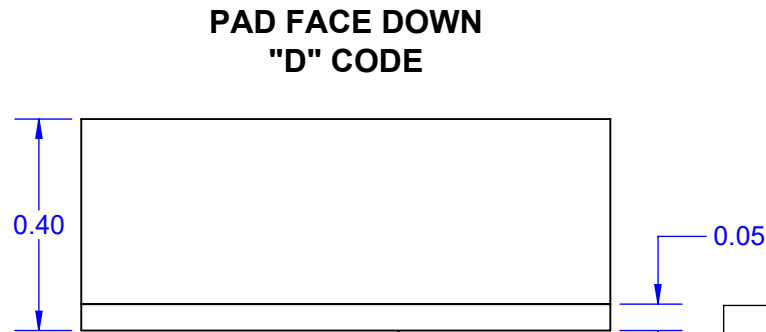
<b>TopLine<sup>®</sup></b>			
TITLE		eWLP196T.5-DC148D 196-PAD P=0.5mm	
SCALE	SIZE	DRAWING NO.	REV
12:1	A	751489	A
DO NOT SCALE DRAWING			SHEET 2 OF 9

# DETAIL A COPPER POST

# COPPER PAD ROUND POST



SIDE VIEW

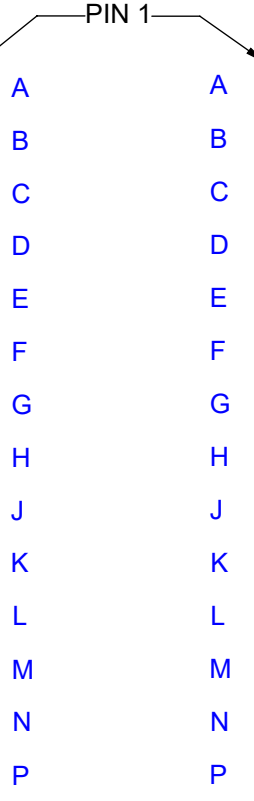
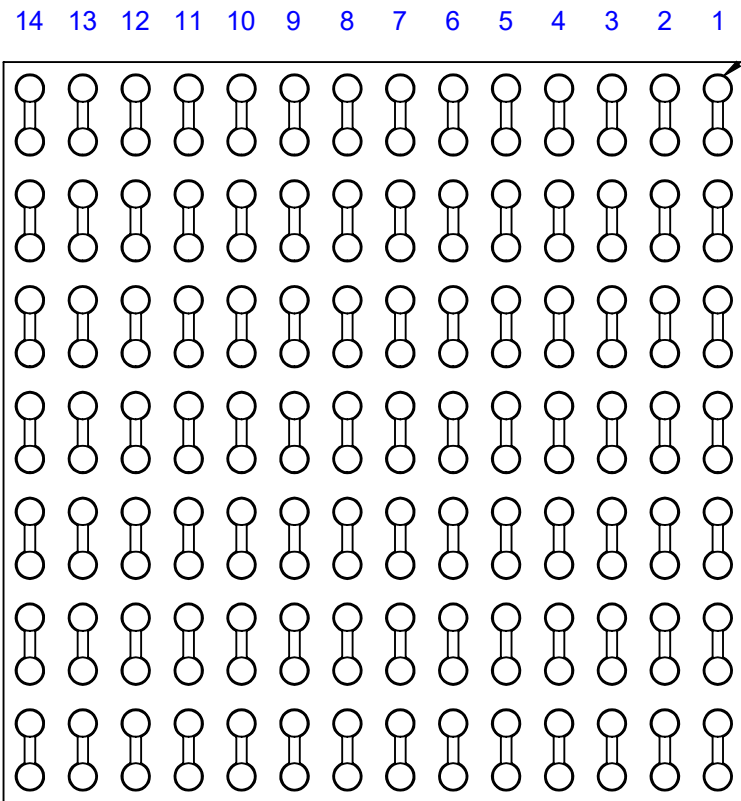


PAD FACE DOWN

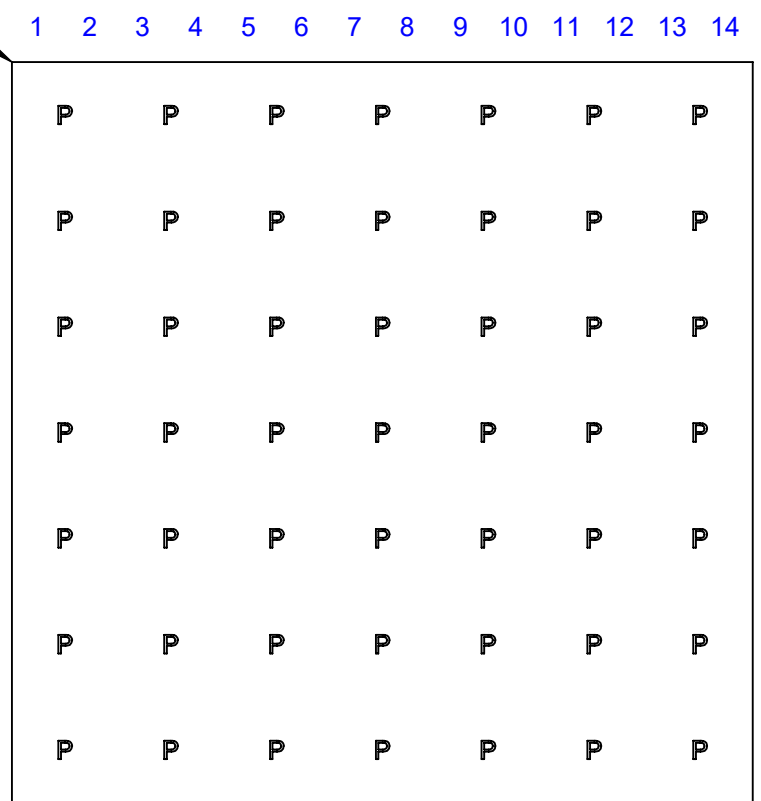
<b>TopLine®</b>			
TITLE eWLP196T.5-DC148D 196-PAD P=0.5mm			
SCALE 70:1	SIZE A	DRAWING NO. 751489	REV A
DO NOT SCALE DRAWING		SHEET 3 OF 9	

# DAISY CHAIN PATTERN ROUND PADS

## PAD VIEW

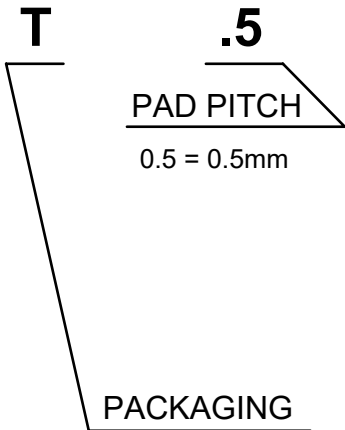
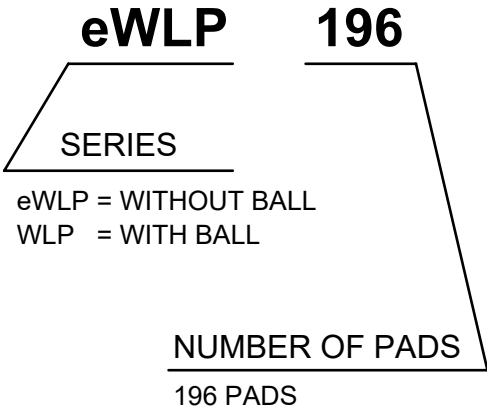


## TOP MARKING

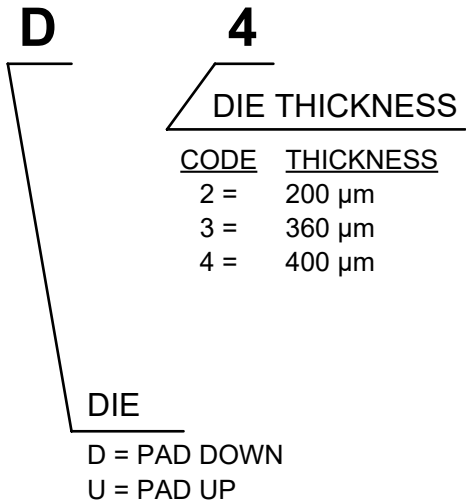
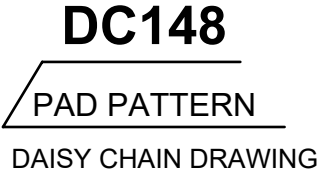


<b>TopLine<sup>®</sup></b>			
TITLE		eWLP196T.5-DC148D 196-PAD P=0.5mm	
SCALE	SIZE	DRAWING NO.	REV
14:1	A	751489	A
DO NOT SCALE DRAWING			SHEET 4 OF 9

# PART NUMBERING SYSTEM



- | CODE | PACKAGE        |
|------|----------------|
| W =  | 2" TRAY        |
| T =  | 4" TRAY        |
| E =  | TAPE & REEL    |
| U =  | UV TAPE & RING |
| X =  | UNSAWN WAFER   |



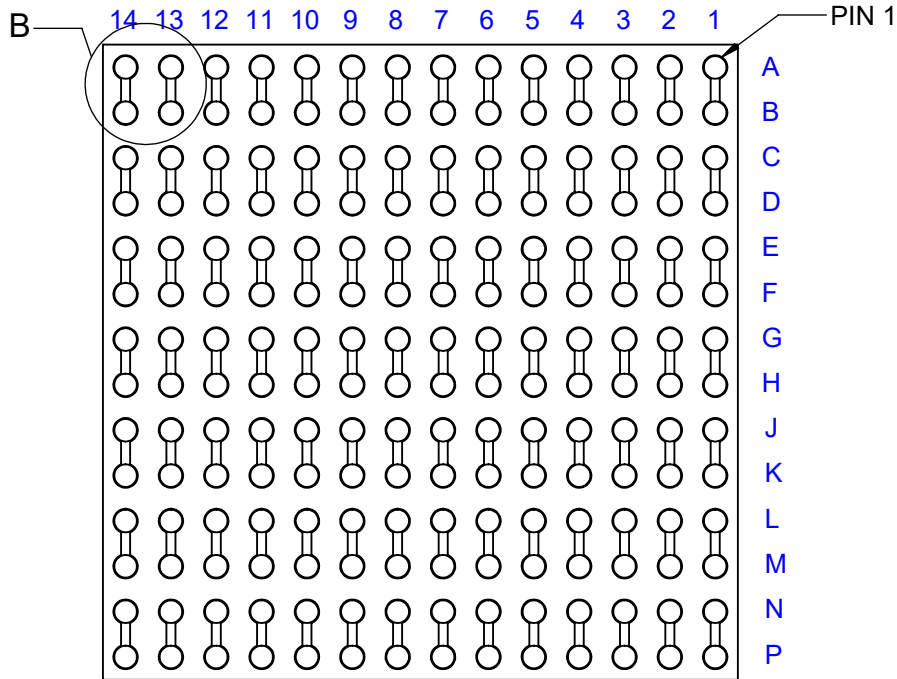
<b>TopLine®</b>			
TITLE      eWLP196T.5-DC148D 196-PAD P=0.5mm			
SCALE NONE	SIZE A	DRAWING NO. 751489	REV A
DO NOT SCALE DRAWING			SHEET 5 OF 9

DWG	PART NUMBER	DIE THICKNESS	PAD PIN 1	PAD UP/DOWN	PACKAGING
ROUND PADS					
651487	eWLP196W.5-DC148U2	200 µm	ROUND	UP	2-INCH TRAY
651488	eWLP196W.5-DC148D2	200 µm	ROUND	DOWN	2-INCH TRAY
651489	eWLP196T.5-DC148U2	200 µm	ROUND	UP	4-INCH TRAY
651480	eWLP196T.5-DC148D2	200 µm	ROUND	DOWN	4-INCH TRAY
651481	eWLP196E.5-DC148D2	200 µm	ROUND	DOWN	TAPE & REEL
651482	eWLP196E.5-DC148D2	200 µm	ROUND	DOWN	CUT TAPE
651483	eWLP196U.5-DC148U2	200 µm	ROUND	UP	SAWN WAFER - UV TAPE & RING
651485	eWLP196X.5-DC148U2	200 µm	ROUND	UP	UNSAWN WAFER

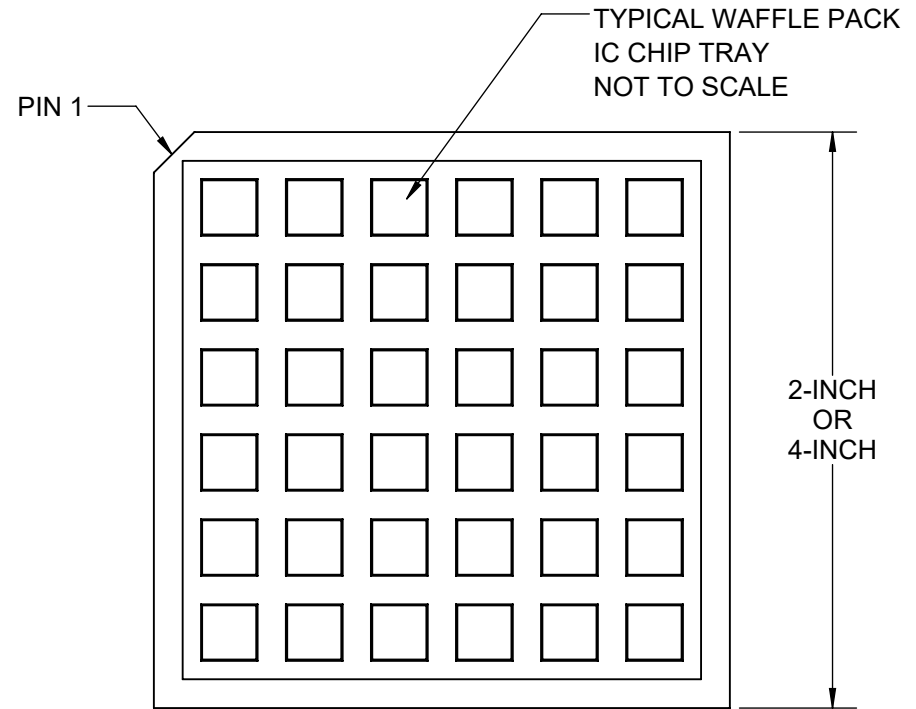
DWG	PART NUMBER	DIE THICKNESS	PAD PIN 1	PAD UP/DOWN	PACKAGING
ROUND PADS					
751487	eWLP196W.5-DC148U4	400 µm	ROUND	UP	2-INCH TRAY
751488	eWLP196W.5-DC148D4	400 µm	ROUND	DOWN	2-INCH TRAY
751489	eWLP196T.5-DC148U4	400 µm	ROUND	UP	4-INCH TRAY
751480	eWLP196T.5-DC148D4	400 µm	ROUND	DOWN	4-INCH TRAY
751481	eWLP196E.5-DC148D4	400 µm	ROUND	DOWN	TAPE & REEL
751482	eWLP196E.5-DC148D4	400 µm	ROUND	DOWN	CUT TAPE
751483	eWLP196U.5-DC148U4	400 µm	ROUND	UP	SAWN WAFER - UV TAPE & RING
751485	eWLP196X.5-DC148U4	400 µm	ROUND	UP	UNSAWN WAFER

<b>TopLine<sup>®</sup></b>			
TITLE		eWLP196T.5-DC148D 196-PAD P=0.5mm	
SCALE	SIZE	DRAWING NO.	REV
NONE	A	751489	A
DO NOT SCALE DRAWING			SHEET 6 OF 9

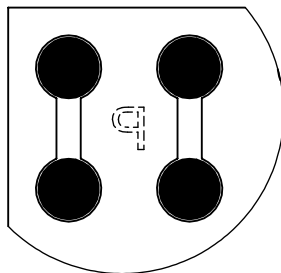
### DAISY CHAIN PAD VIEW



### WAFFLE PACK PAD SIDE FACE UP



NUMBER OF POCKETS WILL CHANGE  
BASED ON THE SIZE OF THE CHIP



DETAIL B  
SCALE 32:1  
ROUND PAD

Notes: (Unless Otherwise Specified).

- 1) TOP SIDE LASER MARKING.
- 2) ORIENT LETTERS FOR LOCATION OF PIN A1 CORNER.
- 3) ALLOWABLE LETTER MARKING: A, F, T, M, L, Y AND P.
- 4) SINGLE LETTER IS REPEATED MULTIPLE TIMES ACROSS TOP SIDE.
- 5) DAISY CHAIN IS HIDDEN UNDER RESIN ON PAD SIDE.
- 6) TOP SIDE DOES NOT HAVE A DOT FOR LOCATION OF PIN A1.
- 7) LETTERS ARE NOT MARKED ON BOTTOM (PADS) SIDE.

MARKING CODE	
PITCH	LETTER
0.3 MM	A
0.4 MM	F
0.5 MM	P

**TopLine**<sup>®</sup>

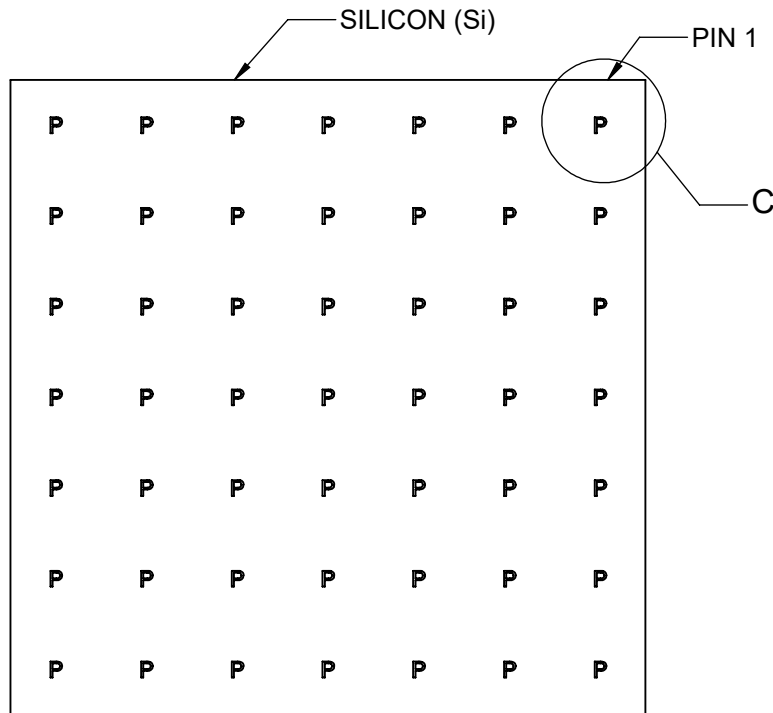
TITLE eWLP196T.5-DC148D  
196-PAD P=0.5mm

SCALE 12:1	SIZE A	DRAWING NO. 751489	REV A
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DO NOT SCALE DRAWING

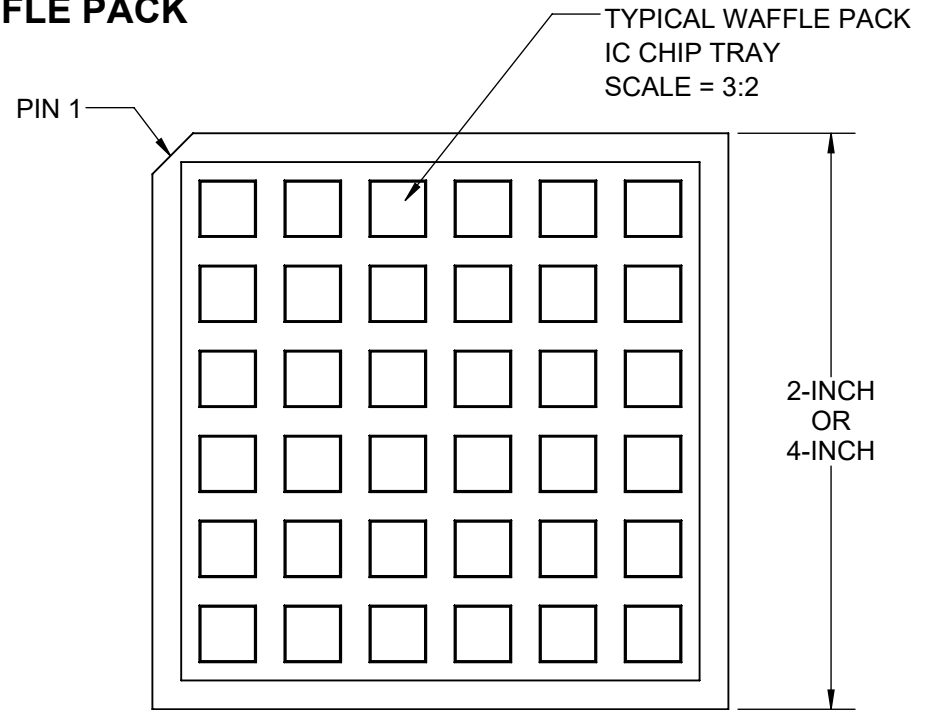
SHEET 7 OF 9

**TOP VIEW**



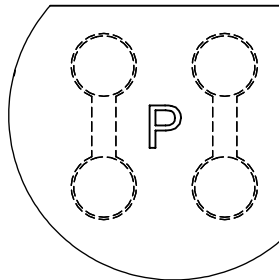
EXAMPLE OF ORIENTATION OF MARKINGS ON eWLP

**PAD SIDE DOWN ORIENTATION WAFFLE PACK**



NUMBER OF POCKETS WILL CHANGE BASED ON THE SIZE OF THE WLP CHIP

DAISY CHAIN VIEWED THRU DIE



DAISY CHAIN ORIENTATION

DETAIL C  
SCALE 32 : 1  
ROUND PAD

Notes: (Unless Otherwise Specified).

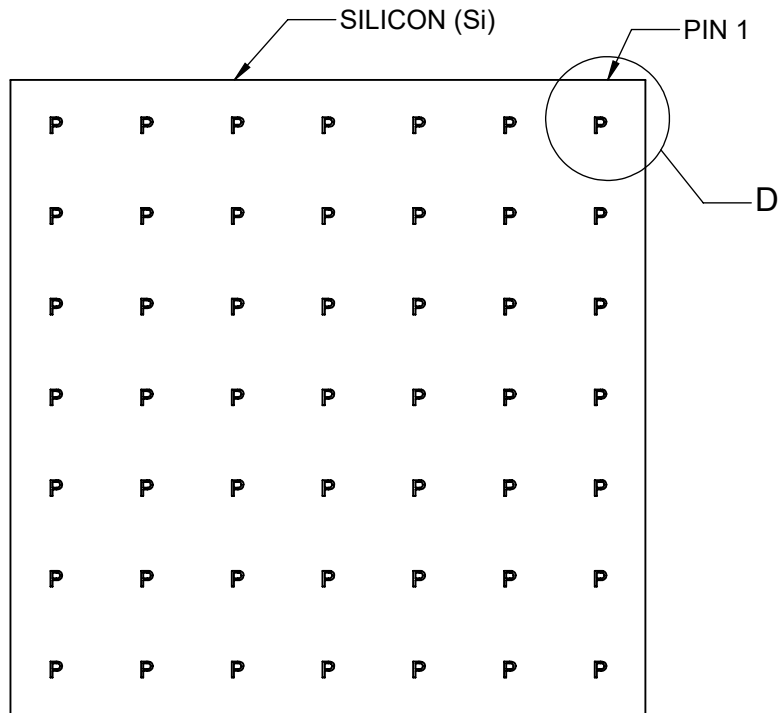
- 1) EXAMPLE OF TOP SIDE LASER MARKING.
- 2) ORIENT LETTERS FOR LOCATION OF PIN A1 CORNER.
- 3) ALLOWABLE LETTER MARKING: A, F, T, M, L, Y AND P.
- 4) SINGLE LETTER IS REPEATED MULTIPLE TIMES ACROSS TOP SIDE.
- 5) DAISY CHAIN IS HIDDEN UNDER RESIN ON PAD SIDE.
- 6) TOP SIDE DOES NOT HAVE A DOT FOR LOCATION OF PIN A1.
- 7) LETTERS ARE NOT MARKED ON BOTTOM (PADS) SIDE.

MARKING CODE	
PITCH	LETTER
0.3 MM	A
0.4 MM	F
0.5 MM	P

<b>TopLine<sup>®</sup></b>			
TITLE eWLP196T.5-DC148D 196-PAD P=0.5mm			
SCALE 12:1	SIZE A	DRAWING NO. 751489	REV A
DO NOT SCALE DRAWING			SHEET 8 OF 9

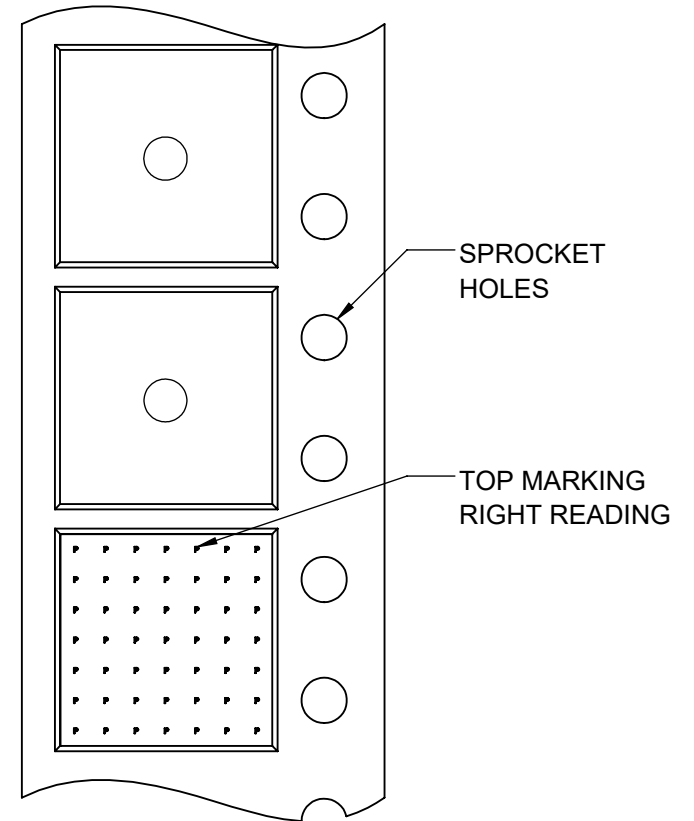


**TOP VIEW**



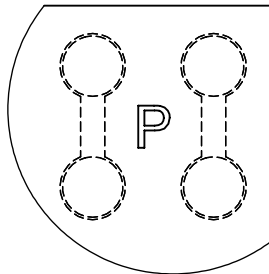
EXAMPLE OF ORIENTATION OF MARKINGS ON eWLP

**eWLP ORIENTATION TAPE AND REEL**



DIRECTION OF FEED

DAISY CHAIN VIEWED THRU DIE



DAISY CHAIN ORIENTATION

DETAIL D NOT TO SCALE ROUND PAD

Notes: (Unless Otherwise Specified).

- 1) TOP SIDE LASER MARKING.
- 2) ORIENT LETTERS FOR LOCATION OF PIN A1 CORNER.
- 3) ALLOWABLE LETTER MARKING: A, F, T, M, L, Y AND P.
- 4) SINGLE LETTER IS REPEATED MULTIPLE TIMES ACROSS TOP SIDE.
- 5) DAISY CHAIN IS HIDDEN UNDER RESIN ON PAD SIDE.
- 6) TOP SIDE DOES NOT HAVE A DOT FOR LOCATION OF PIN A1.
- 7) LETTERS ARE NOT MARKED ON BOTTOM (PADS) SIDE.

MARKING CODE	
PITCH	LETTER
0.3 MM	A
0.4 MM	F
0.5 MM	P

<b>TopLine<sup>®</sup></b>			
TITLE eWLP196T.5-DC148D 196-PAD P=0.5mm			
SCALE 12:1	SIZE A	DRAWING NO. 751489	REV A
DO NOT SCALE DRAWING			SHEET 9 OF 9