

**Subject** : Varitronix Displays  
**Date** : Fri, 19 Mar 2004 12:56:00 +0100  
**Looked to** : Sean  
**From** : "Sean " <[Sean@varitronixuk.ltd.uk](mailto:Sean@varitronixuk.ltd.uk)> (By way of [export@viamed.co.uk](mailto:export@viamed.co.uk))  
**To** : PETER (Peter Anderson) <GoldMine User>

Dear Peter

Further to our earlier conversation I would like to take this opportunity to introduce our company to you.

Varitronix are one of the worlds largest manufactures of Liquid Crystal Displays and Modules including touch screens. We are a Hong Kong based manufacturing company, established in 1978 with us being the UK sales office based in Bracknell, Berks. Our full range of standard products can be viewed through our web site [www.varitronix.com](http://www.varitronix.com). In addition to our standard products we offer a full custom design service.

To complement our own LCD displays we also offer TFT displays from some of the worlds leading suppliers i.e. Sharp, Fujitsu and LG Phillips via our partner, Data Modul. Our full range of TFT products can be found at [www.data-modul.de](http://www.data-modul.de).

We prefer to maintain a direct relationship with our customers and would be pleased to offer any assistance you may require, be it technical or commercial and, as far as possible to support small volume and design quantities.

As discussed, I am looking into information regarding pixel/font size and will pass on any relevant information at the earliest opportunity.

I hope this information is of interest and if you have any further questions or future requirements please do not hesitate to contact us.

Best Regards

Sean Heath  
Sales Engineer

TEL: 01344 303077  
FAX: 01344 300009

[sean@varitronixuk.ltd.uk](mailto:sean@varitronixuk.ltd.uk)

38 x 20-3 4 digit

40 x 20.

£600 tooling,

8mm high.

Low batt.

10mm max.

~~VLF419~~

500

VLM332

3 1/2

40.9 x 19.5

£1.03 a.

Variance

Aperture 120 x 65

93.9 45.7

10005 of 600 - 650 . 10005

\$2500

Setup each batch.

VI 421 H = 25.4 .

~~VI~~

10005

10005

93.85 x 45.73

25.4

100

VI 421 Dirc

7-29

Delivery 6 weeks.

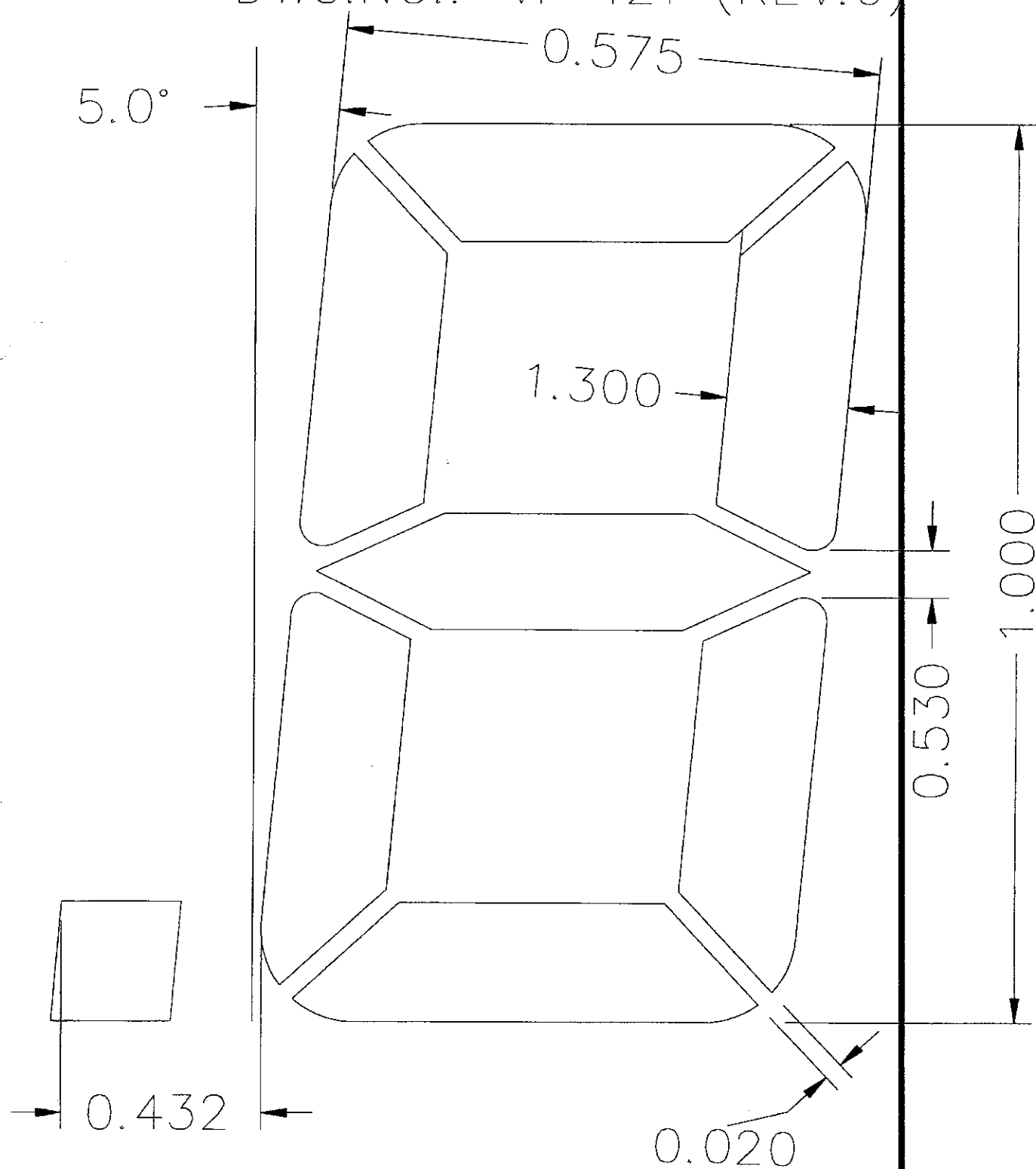
12 o'clock

VI 421-DP3.0-RC-12.

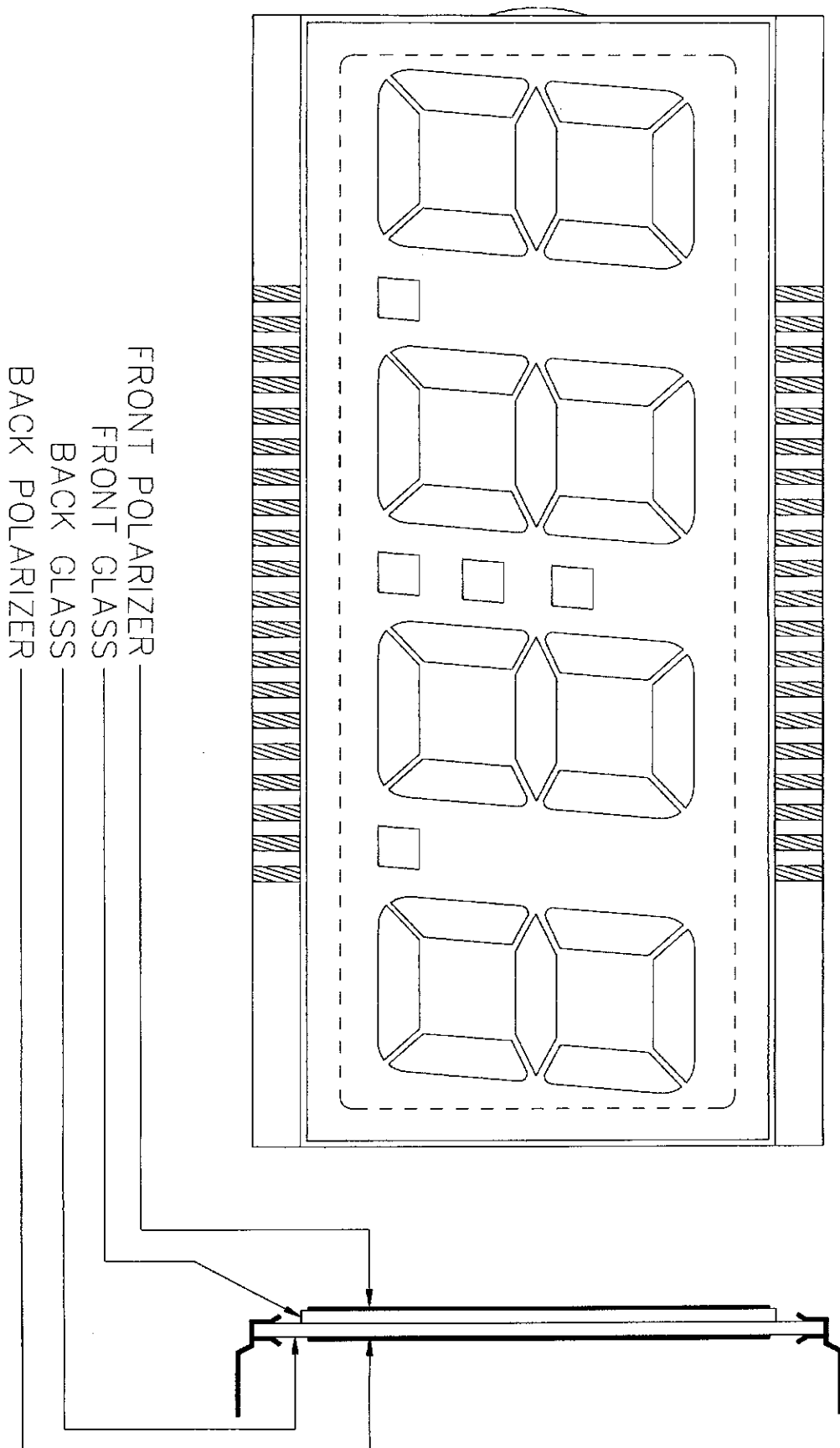
DP 3.0.

SH2/6

DWG.NO.: VI-421 (REV.0)

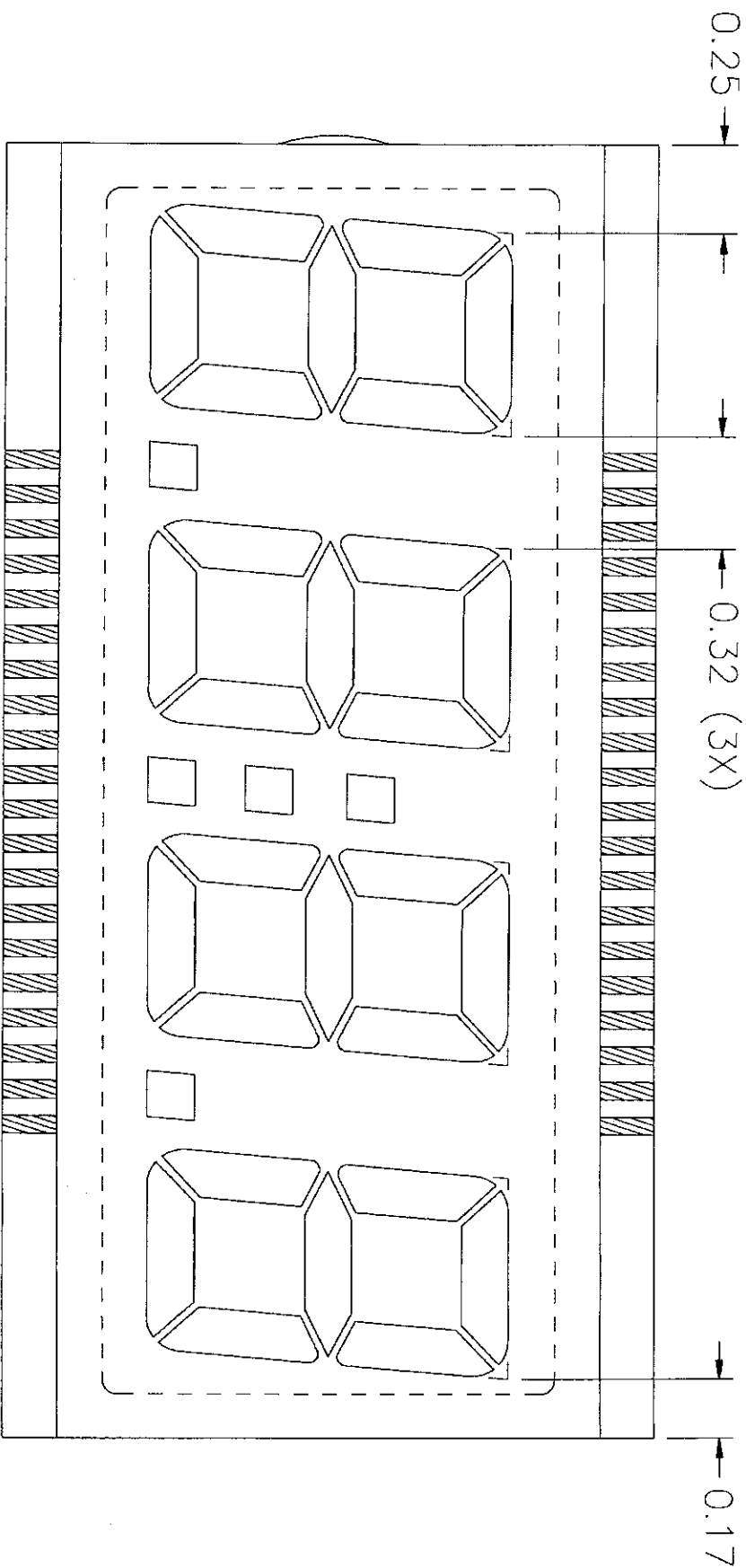


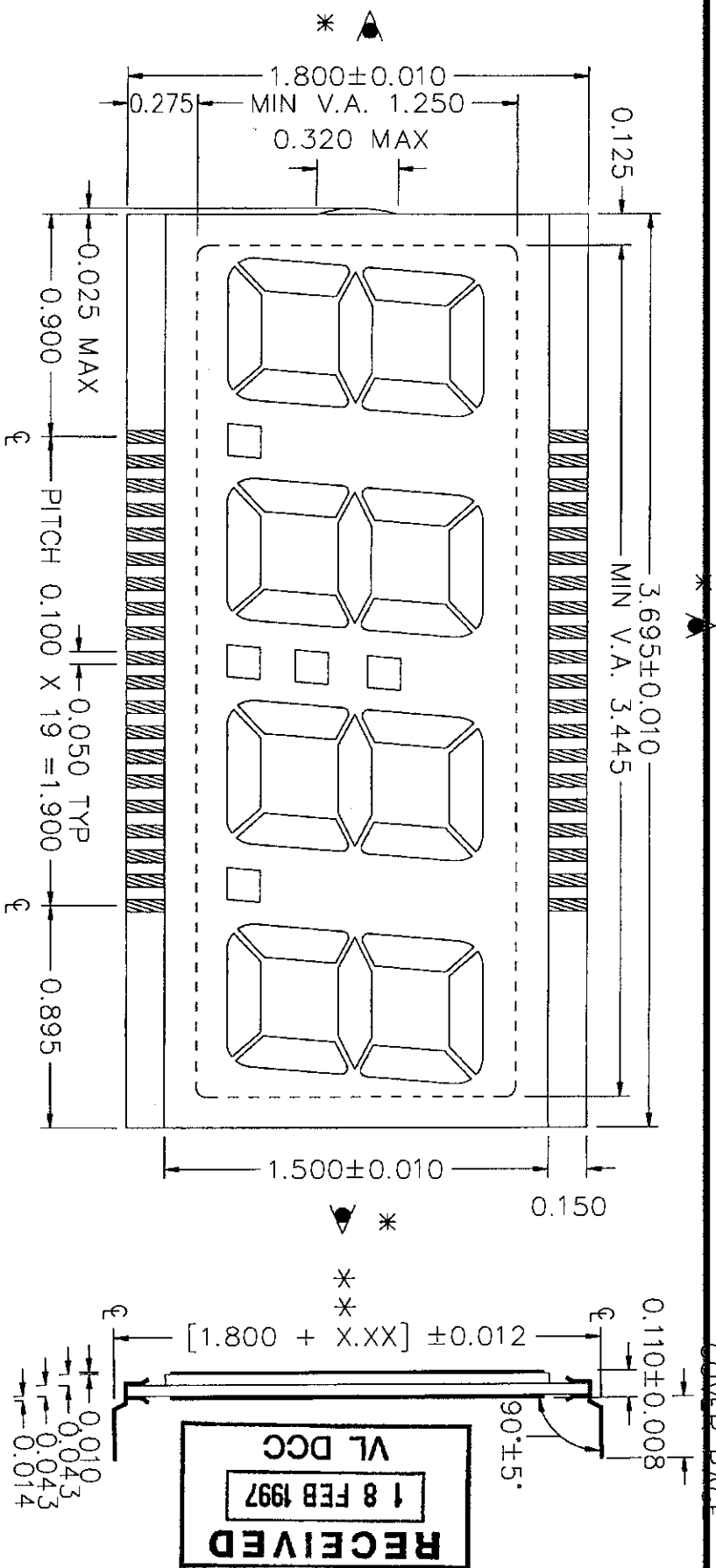
DWG. NO.: VI-421 (REV.0)



9/9 HS

DWG. NO. : VI-421 (REV.0)





REMARKS : 1) \* = REFER TO COVER PAGE

\*\* ----- X.XX = 0.100 (FOR PIN LENGTH  $\geq 0.126$  &  $\leq 0.394$  inches)  
 \*\* ----- X.XX = 0.069 (FOR PIN LENGTH  $> 0.394$  &  $\leq 0.768$  inches)

|                  |                         |                    |                   |                                                       |  |                      |  |
|------------------|-------------------------|--------------------|-------------------|-------------------------------------------------------|--|----------------------|--|
| VARITRONIX LTD.  |                         | Dimension : inch   |                   | TOL : $\pm 0.006$ IF NOT SPECIFY DO NOT SCALE DRAWING |  | 3rd ANGLE PROJECTION |  |
| Drawn by : MING  | Checked by : <i>Wen</i> | Date : FEB 17/1997 | Date : FEB 17, 97 |                                                       |  |                      |  |
| Dwg No : VI-4210 |                         |                    |                   |                                                       |  |                      |  |

SH 116

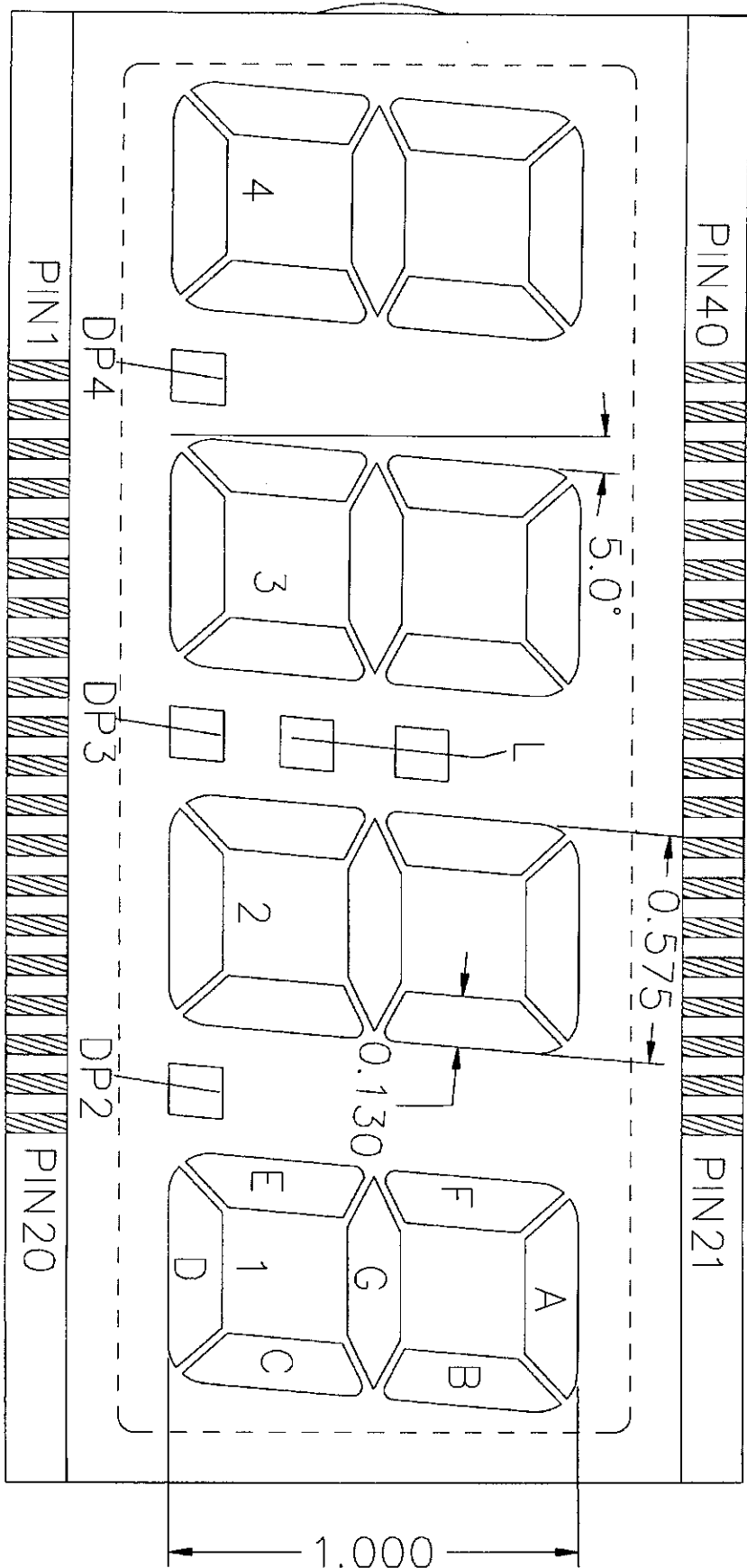
DWG.NO.: VI-421 (REV.0)

| PIN | COM1 |
|-----|------|
| 4   | COM1 |
| 5   | 4E   |
| 6   | 4D   |
| 7   | 4C   |
| 8   | DP4  |
| 9   | 3E   |
| 10  | 3D   |
| 11  | 3C   |
| 12  | DP3  |
| 13  | 2E   |
| 14  | 2D   |
| 15  | 2C   |
| 16  | DP2  |
| 17  | 1E   |
| 18  | 1D   |
| 19  | 1C   |
| 20  | 1B   |

| PIN | COM1 |
|-----|------|
| 24  | 1A   |
| 25  | 2A   |
| 26  | 2F   |
| 27  | 2G   |
| 28  | L    |
| 29  | 3B   |
| 30  | 3A   |
| 31  | 3F   |
| 32  | 3G   |
| 33  | NC   |
| 34  | 4B   |
| 35  | 4A   |
| 36  | 4F   |
| 37  | 4G   |
| 38  | NC   |
| 39  | NC   |
| 40  | NC   |

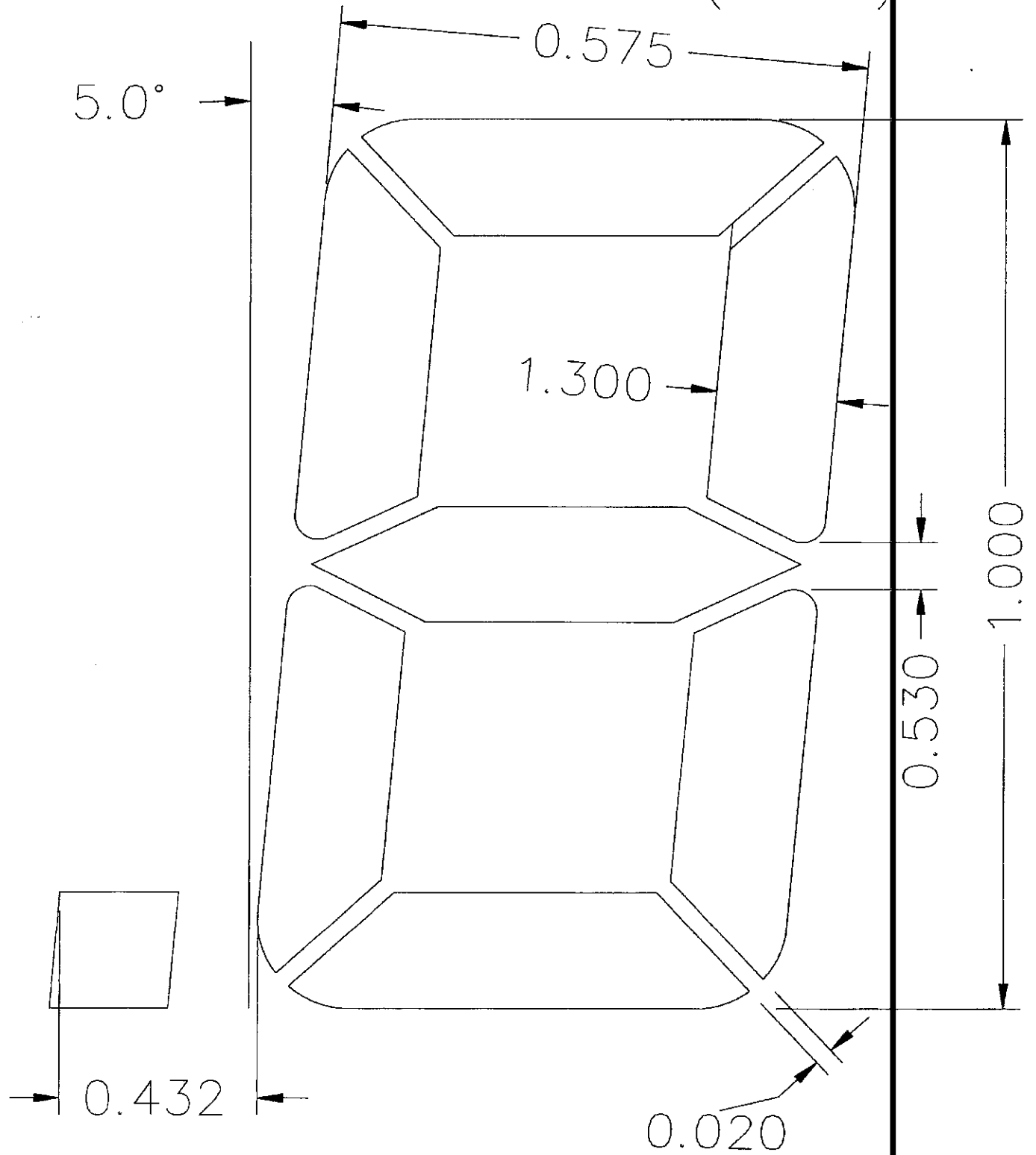
NC= NO CONNECTION

DWG.NO.: VI-421 (REV.0)

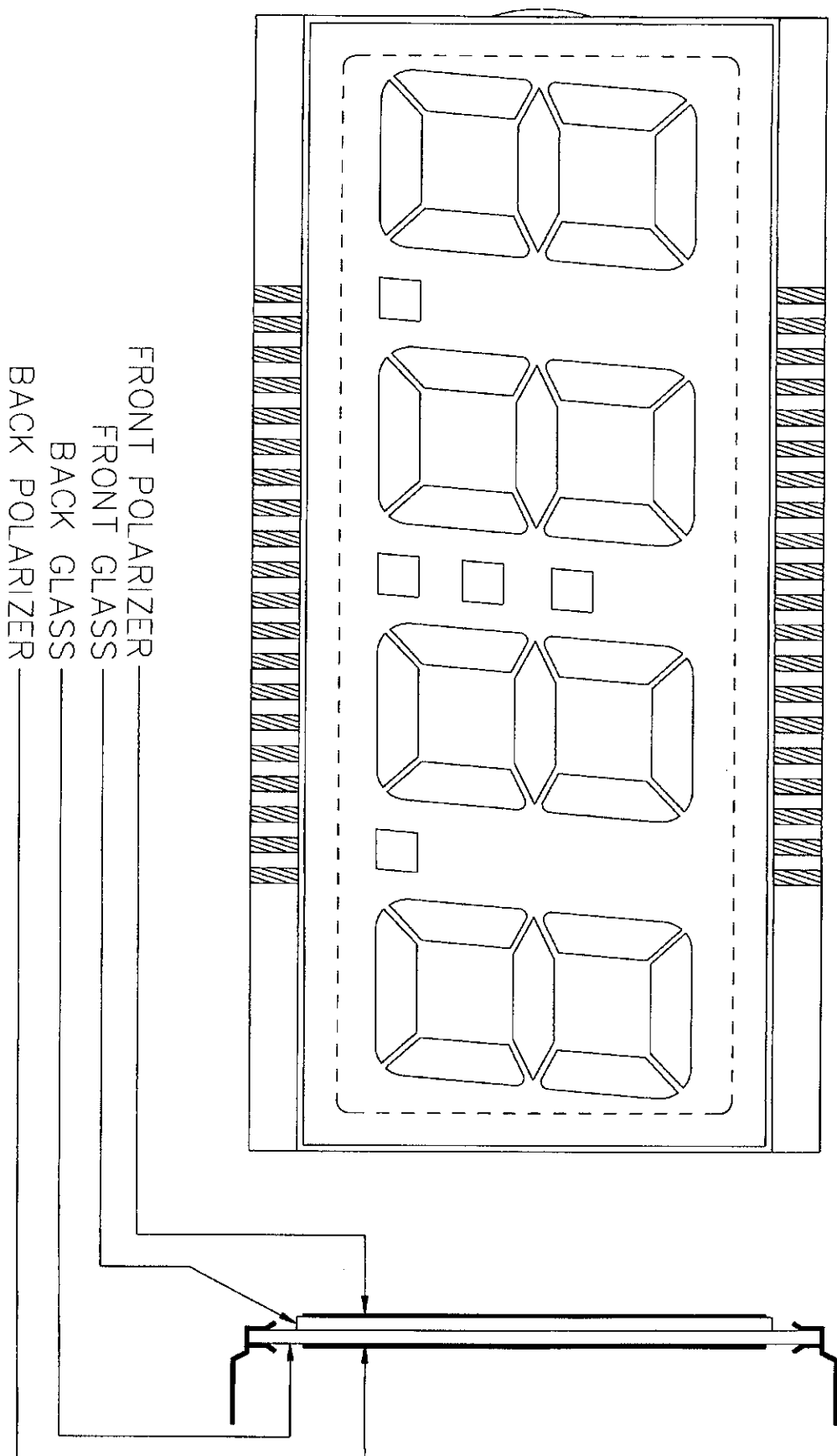


SH2/6

DWG.NO.: VI-421 (REV.0)



DWG. NO.: VI-421 (REV.0)



9/9 HS

1  
2  
3  
4

CONTINUED  
NC  
NC  
NC

21  
22  
23  
24

Seq 1A  
1F  
1G  
2E

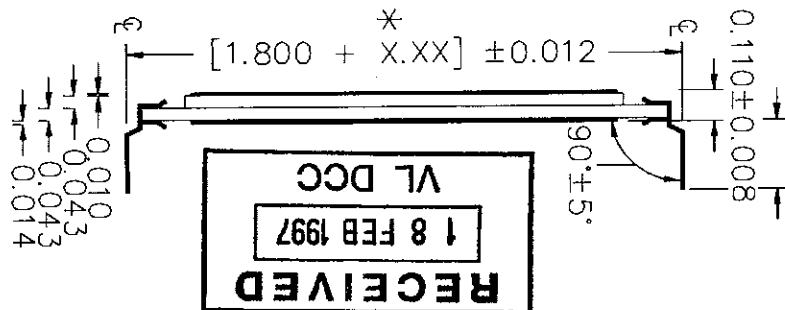
SH5/6

DWG.NO.: VI-421 (REV.0)

| PIN | COM1 |
|-----|------|
| 4   | COM1 |
| 5   | 4E   |
| 6   | 4D   |
| 7   | 4C   |
| 8   | DP4  |
| 9   | 3E   |
| 10  | 3D   |
| 11  | 3C   |
| 12  | DP3  |
| 13  | 2E   |
| 14  | 2D   |
| 15  | 2C   |
| 16  | DP2  |
| 17  | 1E   |
| 18  | 1D   |
| 19  | 1C   |
| 20  | 1B   |

| PIN | COM1 |
|-----|------|
| 24  | 2A   |
| 25  | 2A   |
| 26  | 2F   |
| 27  | 2G   |
| 28  | L    |
| 29  | 3B   |
| 30  | 3A   |
| 31  | 3F   |
| 32  | 3G   |
| 33  | NC   |
| 34  | 4B   |
| 35  | 4A   |
| 36  | 4F   |
| 37  | 4G   |
| 38  | NC   |
| 39  | NC   |
| 40  | NC   |

NC= NO CONNECTION



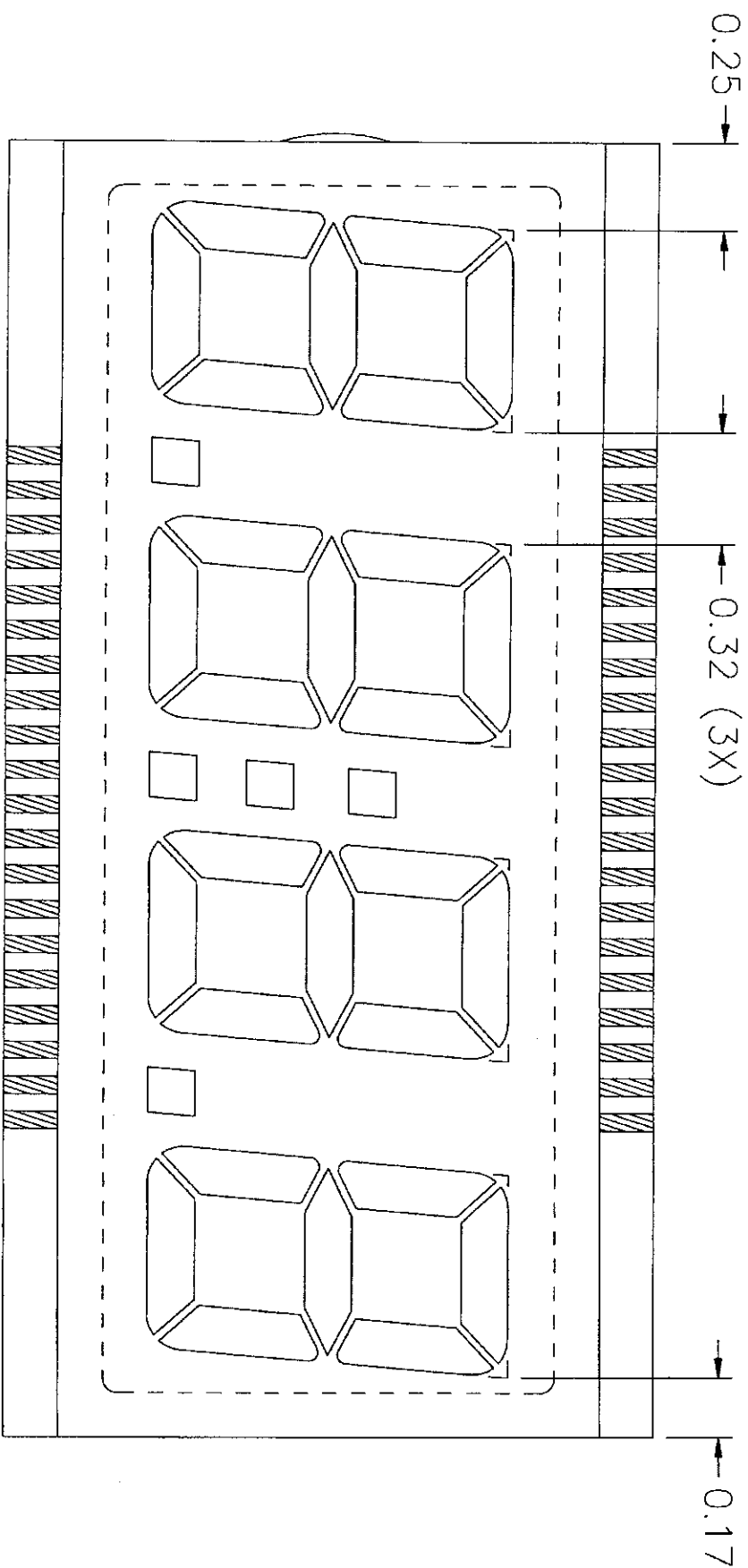
REMARKS : 1) \* = REFER TO COVER PAGE

\*\* ----- X.XX = 0.100 (FOR PIN LENGTH  $\geq$  0.126 &  $\leq$  0.394 inches)  
 \*\* ----- X.XX = 0.069 (FOR PIN LENGTH  $>$  0.394 &  $\leq$  0.768 inches)

|                   |  |                           |                             |                                                                                     |                                  |
|-------------------|--|---------------------------|-----------------------------|-------------------------------------------------------------------------------------|----------------------------------|
| VARITRONIX LTD.   |  | Dimension : inch          | TOL : ±0.006 IF NOT SPECIFY | DO NOT SCALE DRAWING                                                                | 3 <sup>rd</sup> ANGLE PROJECTION |
| DRAWING : V-I-421 |  | Drawn by : MING           | Date : FEB 17/1997          |                                                                                     |                                  |
| REV : 0           |  | Checked by : <i>offen</i> | Date : <i>FEB 17, 97</i>    |  |                                  |

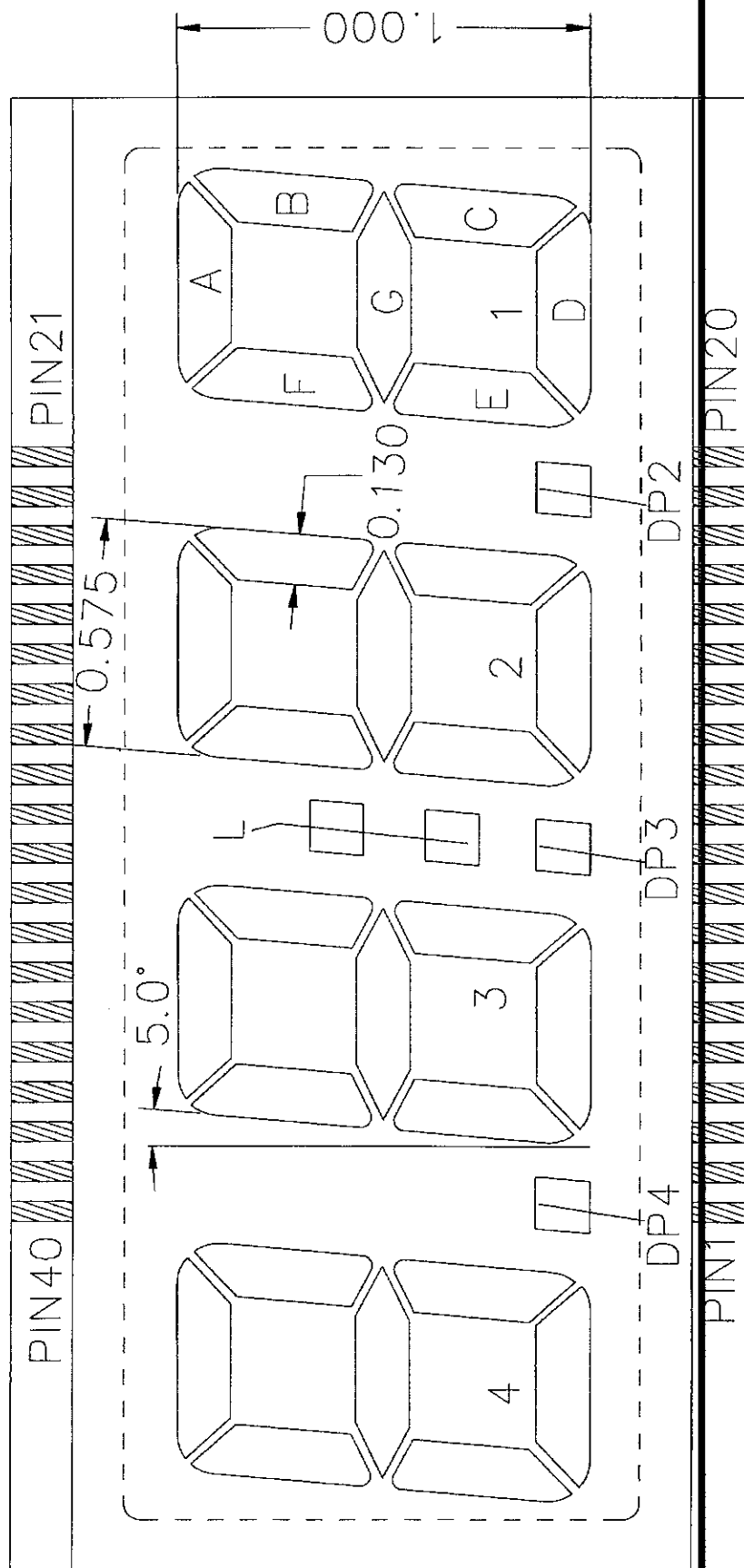
9/1 HS

DWG. NO. : VI-421 (REV.0)



SH3/6

SH416



12 \*



| LCD | CNTBLR | DATA | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----|--------|------|---|---|---|---|---|---|---|---|---|
| 1E  | G      | D3   | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1D  | E      | D2   | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1C  | D      | D1   | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| DP  | DP     | D0   | X | X | X | X | X | X | X | X | X |
|     |        |      | E | 2 | C | 6 | 2 | 6 | 2 | E | 2 |
| 1B  | C      | D7   | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1A  | B      | D6   | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1F  | A      | D5   | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 16  | F      | D4   | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
|     |        |      | E | 8 | D | B | 7 | 7 | C | F | F |

| LCD | CNTRLA | DATA | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----|--------|------|---|---|---|---|---|---|---|---|---|---|
| 2B  | G      | D3   | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 2A  | E      | D2   | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 2F  | D      | D1   | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 |
| 2G  | DP     | D0   | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
|     |        | E8   | E | 8 | D | D | B | 7 | 7 | C | F | F |

|     |   |    |   |   |   |   |   |   |   |   |   |   |
|-----|---|----|---|---|---|---|---|---|---|---|---|---|
| 2E  | C | D7 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 2D  | B | D6 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 2C  | A | D5 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| DP2 | F | D4 | x | x | x | x | x | x | x | x | x | x |
|     |   | E  | E | 2 | C | 6 | 2 | 6 | E | 2 | E | 2 |

| LCD   | CNTRLR | DATA | ✓ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|--------|------|---|---|---|---|---|---|---|---|---|---|
| ✓ 3E  | G      | D3   | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| ✓ 3D  | E      | D2   | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| ✓ 3C  | D      | D1   | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ✓ DP3 | DP     | D0   | X | X | X | X | X | X | X | X | X | X |
|       |        |      | E | 2 | C | 6 | 2 | 6 | E | 2 | E | 2 |

|      |   |    |   |   |   |   |   |   |   |   |   |   |
|------|---|----|---|---|---|---|---|---|---|---|---|---|
| ✓ 3B | C | D7 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| ✓ 3A | B | D6 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| ✓ 3F | A | D5 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 |
| ✓ 3G | F | D4 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
|      |   |    | E | 8 | D | D | B | 7 | 7 | C | E | E |

| LCD | CNTPLR | DATA | φ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----|--------|------|---|---|---|---|---|---|---|---|---|---|
| 4E  | C      | D7   | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 4D  | B      | D6   | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 4C  | A      | D5   | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| DP4 | F      | D4   | x | x | x | x | x | x | x | x | x | x |
|     |        |      | E | 2 | C | 6 | 2 | 6 | E | 2 | E | 2 |

|    |    |    |   |   |   |   |   |   |   |   |   |   |
|----|----|----|---|---|---|---|---|---|---|---|---|---|
| 4B | G  | D3 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 4A | E  | D2 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 4F | D  | D1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 |
| 4G | DP | D0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
|    |    |    | E | 8 | D | D | B | 7 | 7 | C | F | F |

|       |     |     |
|-------|-----|-----|
| 1C    | S24 |     |
| B     | S25 |     |
| A     | S26 | Top |
| F     | S27 |     |
| <hr/> |     |     |
| G     | S20 |     |
| E     | S21 | B   |
| D     | S22 |     |
| DP    | —   |     |

BYTE

1

2

3

4

\*

\*

A

F

B

G

E

C

D

Ø

A B C D E F

1

B C

2

A B G E D

3

A B G C D

4

F G B C

5

A B G E D

6

A F G E D C

7

A B C

8

A B C D E F G

9

A B C F G

7

Ø

C B A F G E D DP.

|       |     |   |
|-------|-----|---|
| 2C    | S16 |   |
| B     | S17 |   |
| A     | S18 | T |
| F     | S19 |   |
| <hr/> |     |   |
| G     | S28 |   |
| E     | S29 |   |
| D     | S30 | B |
| DP    | S31 |   |

|       |     |   |
|-------|-----|---|
| 3C    | S32 |   |
| B     | S33 |   |
| A     | S34 | T |
| F     | S35 |   |
| <hr/> |     |   |
| G     | S4  |   |
| E     | S5  | B |
| D     | S6  |   |
| DP    | S7  |   |

|       |     |   |
|-------|-----|---|
| 4C    | SØ  |   |
| B     | S1  |   |
| A     | S2  | T |
| F     | S3  |   |
| <hr/> |     |   |
| G     | S36 |   |
| E     | S37 |   |
| D     | S38 | B |
| DP    | S39 |   |

L C S8

|      |   |            |           |         |
|------|---|------------|-----------|---------|
| BYTE | 1 | S0 - S3    | 4 TOP     | MIN X10 |
|      |   | S4 - S7    | 3 BOTTOM  | MIN     |
| BYTE | 2 | S8 - S11   | } COLON   |         |
|      |   | S12 - S15  |           |         |
| BYTE | 3 | S16 - S19  | 2 TOP     | SEC X10 |
|      |   | S20 - S23  | 1 BOTTOM  | SEC     |
| BYTE | 4 | S24 - S27  | 1 TOP     | SEC     |
|      |   | S28 - S31  | 2 BOTTOM  | SEC X10 |
| BYTE | 5 | S32 - S35  | 3 TOP     | MIN     |
|      |   | S36 - S39. | 4 BOTTOM. | MIN X10 |

Shawn Heath.

- T 01344 303077.