

# BABCOCK

DISPLAY PRODUCTS DIVISION

MODEL: **SP-450-034-XX**

**XX denotes dash numbers below**

## 7-SEGMENTED SCREEN IMAGE, PDP

The dc-plasma, easy-to-read, 7-Segment Screen Image Display is arranged as 5 digits by 1 row and features bright neon-orange pixels, wide viewing angle, and sharp contrast. The slim profile, compact outline, and large viewing area make efficient use of valuable system, front panel space. Inherently rugged, dc-plasma displays are a cost-effective solution when overcoming vibration, temperature, or EMI/RFI issues.

### SPECIFICATIONS

#### *Recommended Operating Conditions*

PARAMETER	SYM	MIN	TYP	MAX	UNITS	NOTES
Supply Voltage	E <sub>bb</sub>	165	185	200	VDC	1
Operating Voltage @ 2.2 mA "b" Segment	V <sub>op</sub>		140		VDC	1
Interdigit Blanking Period (Segment "b" current 2 mA max)	t <sub>kb</sub>	30	60		µSec	
Digit "On" Period	t <sub>on</sub>	60			µSec	1
Reionization Time	t <sub>zr</sub>			7	µSec	1
Heater Resistance @ 25° C		78		100	Ohms	
Peak Segment Current Density				100	mA/cm <sup>2</sup>	
Leakage, Anode to Anode		3			M-Ohms	3
Leakage, Heater to all Segments		3			M-Ohms	3
Projected Life		18K			Hours	2
Intersegmented Leakage		3			M-Ohms	4
View Angle		130			Degrees	
Luminance @ 25° C	fL	180 (616)	240 (812)	300 (1027)	fL (cd/ cm <sup>2</sup> )	3

Notes:

1. The listed parameters and data are for application purposes only.
2. Continuous operation, at rated operating conditions. End of life is defined as 50% of minimum luminance.
3. Required parameters for inspections and quality conformance.
4. Display will not have segment faults that cause ambiguous 0-9 readings (e.g. Ghosting).
5. 26 VAC heater operation will maintain display temperature above 0° C for cold temperature operation.

#### *Environmental Characteristics*

Operating Temperature (Heater)	-40 to +70° C (see note 5)
Operating Temperature (Display)	0 to +70° C
Storage Temperature	-45 to +85° C
Humidity, Operational	10 to 95% non-condensing
Humidity, Storage	2 to 98% non-condensing

#### *Pin Connection Table*

Pin Number	Segment	Pin Number	Segment
1	Anode # 1	10	All Commas
2	Heater Cond.	11	Segment D
3	Segment F	12	Segment B
4	Anode # 2	13	Anode # 4
5	Segment G	14	Segment A
6	Segment C	15	Keep Alive
7	Segment E	16	Heater Cond.
8	Anode # 3	17	Anode # 5
9	All Decimals		

SPECIFICATIONS ARE FOR REFERENCE ONLY

9200-0096 Rev. A

Phone: (714) 994-6500 **14930 East Alondra Blvd., La Mirada, CA 90638-5752** Fax: (714) 994-3013

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### Ratio Table

Segment	A	B	C	D	E	F	G	DEC	COM	KA
Ratio	.99	1.0	.98	.99	.99	.98	1.09	.31	.31	.16

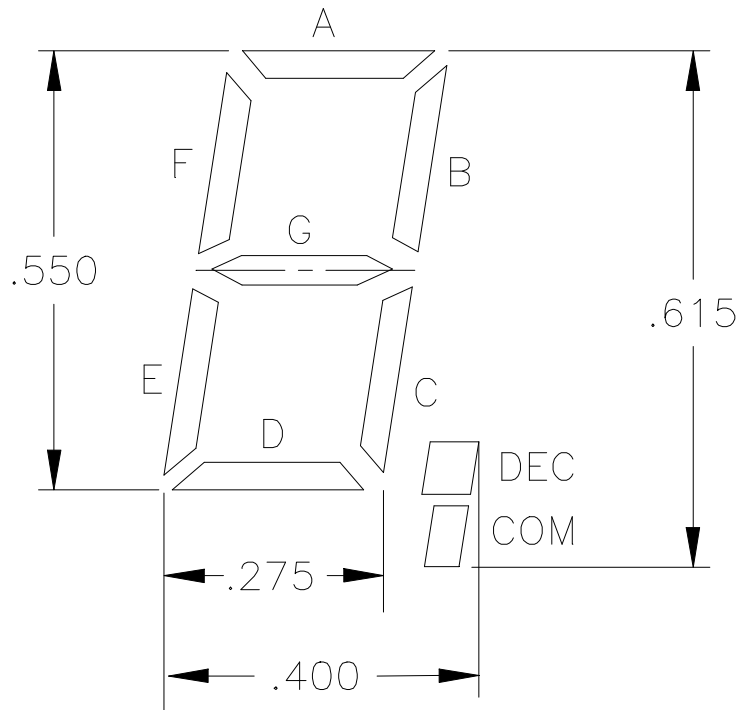
Segment Ratios

$$\text{b}'' = .00055245$$

Seg Area

$$\text{Ratio} = \frac{\text{Seg Area}}{\text{Seg b}'' \text{ Area}}$$

Seg b'' Area



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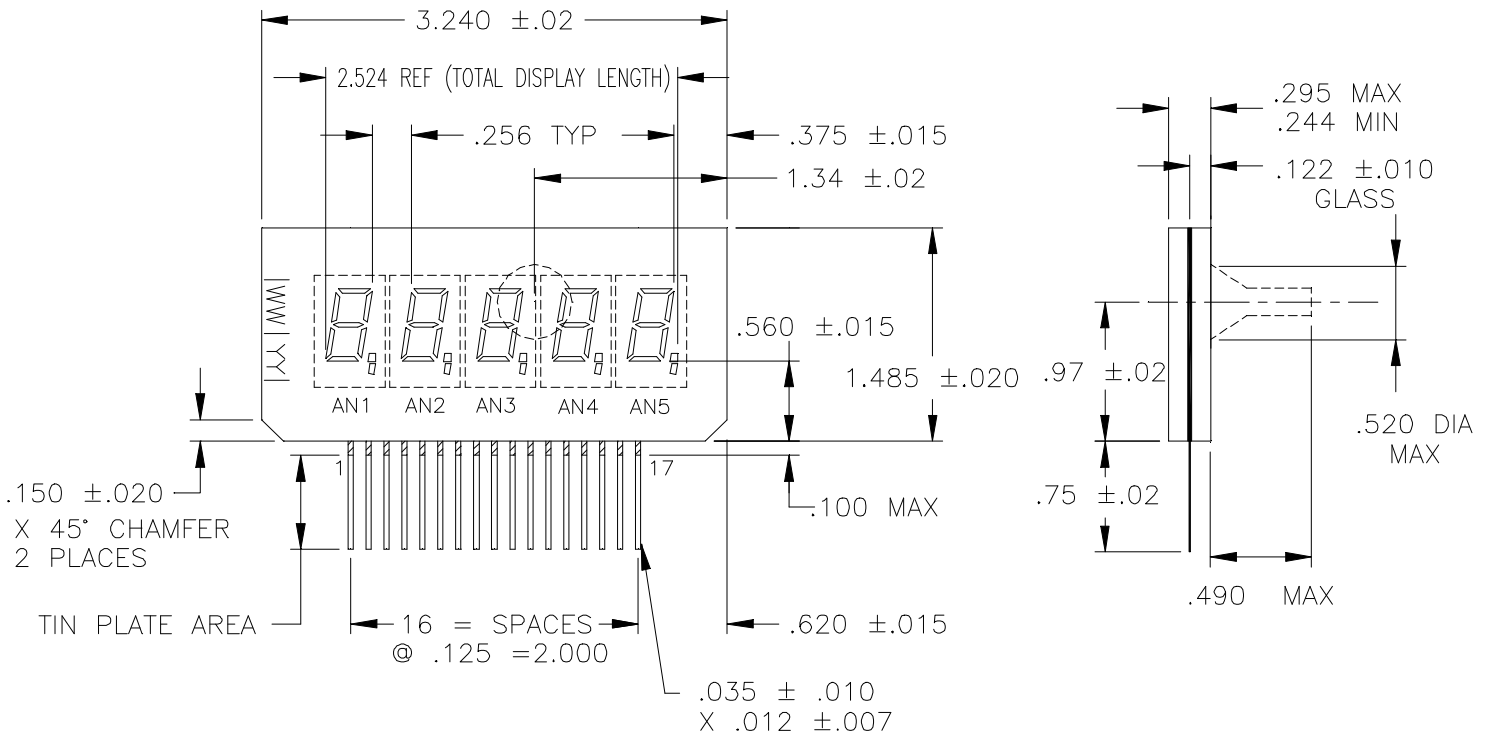
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MODEL: **SP-450-034-XX**

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**7-SEGMENTED SCREEN IMAGE, PDP**

**SP-450-034-02**



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