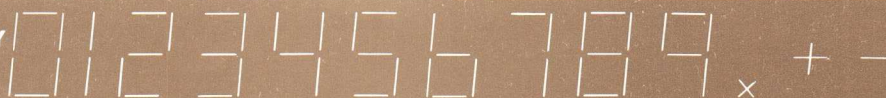


Apollo

INCANDESCENT DIGITAL READOUT TUBES DA-1300 Series —PAT. PENDING—

—TOKYO EXPORT QUALITY GOODS—

STANDARD DISPLAY PATTERNS



DESCRIPTION

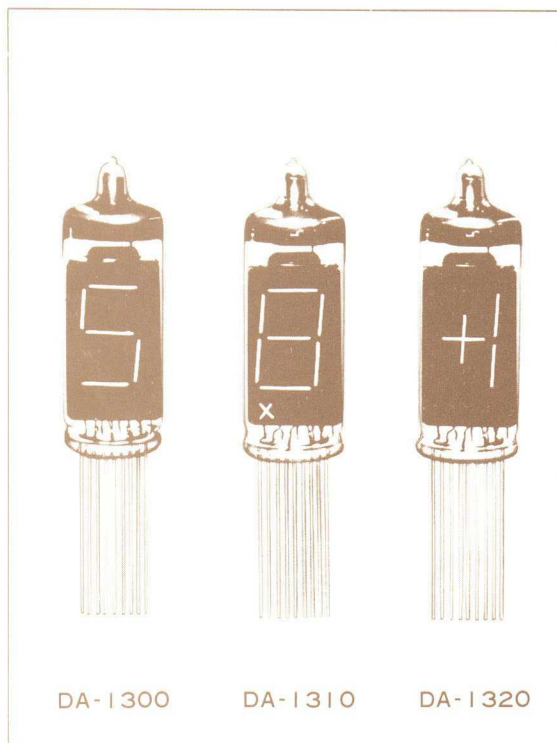
Apollo readout tube consists of 7 special luminescent material segments in a single plane arrangement on a black ceramic base sealed in glass. A direct light source for the display is provided by each of the segments. This single-plane indicating system provides an ultra wide viewing angle and superb readability. Extra long life is assured by rugged unit construction. Brightness is fully adjustable from zero output to a level easily viewed even in direct sunlight by simply varying the voltage. In addition to photography and copying being possible, any desired filter color may be selected. The utilization of Fresnel lens permits display magnification.

The Apollo incandescent readout tube is especially designed for employment in small indicating devices, i.e. measuring instruments, aircraft instruments, precision devices and electronic clocks, and operate on low voltage and current. The Apollo DA-1300 Series is therefore, ideally suited for IC decoder/driver employment.

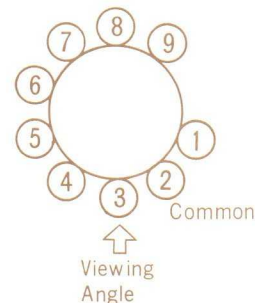
Being the first in Japan to employ an entirely new system, these small indicating devices will without doubt assume the burden of the information display industry in the future.

FEATURES

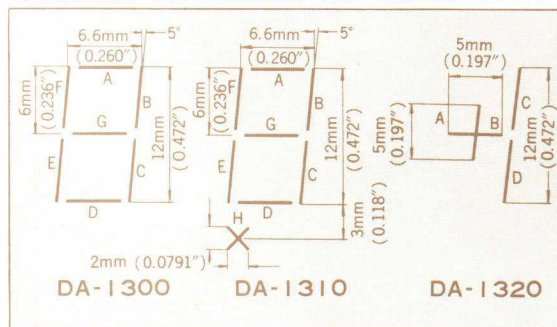
- Low voltage operation (3.5-5V)
- Compatible to IC Decoder/Driver
- Operation on AC or DC possible
- Rugged construction...Environmental and operational tests (shock and vibration), show no segment linearity deviation
- Life expectancy long (More than 100,000 hours in accelerated life tests)...The tube does not heat up due to the elements being housed in a vacuum
- Brightness fully adjustable, suited for distance readout (6,000FL)
- Any desired color may be obtained by employing filters
- Visibility curve ideally suited to the human eye (Broad spectrum)
- Sharp contrast (Black background)
- Numerals, decimal points, and alphabetical characters (A, C, E, F, H, J, L, P, U) may be indicated
- Wide single plane viewing angle (140°)
- Subminiature size permits compact equipment design



LEAD DESIGNATION



SEGMENT DIMENSIONS AND ASSIGNMENT



SEGMENT ASSIGNMENT

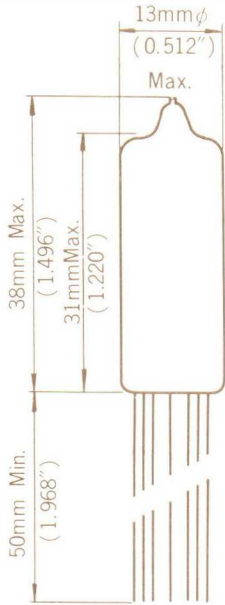
APOLLO Type	Lead Designation								
	1	2	3	4	5	6	7	8	9
DA-1300	NC	COMMON	E	D	C	G	A	B	F
DA-1310	H		E	D	C	G	A	B	F
DA-1320	NC		NC	NC	D	B	C	A	

TUBE LEAD DESIGNATION

Display	Lead No.
0	3 4 5 7 8 9
1	5 8
2	3 4 6 7 8
3	4 5 6 7 8
4	5 6 8 9
5	4 5 6 7 9
6	3 4 5 6 9
7	5 7 8
8	3 4 5 6 7 8 9
9	5 6 7 8 9
x	1
+	7 9
-	7

Lead No. 2 Common For All Types

DIMENSIONAL OUTLINE



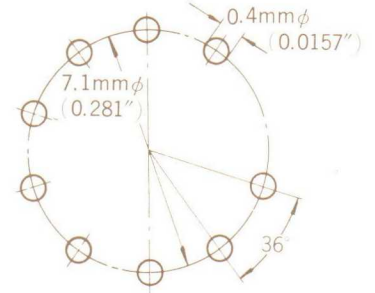
RATINGS

		DA-1300 series
DC Segment Voltage	V	5.0
Segment Current	mA	23.0
Digital Display		0 through 9 Decimal Point +, -

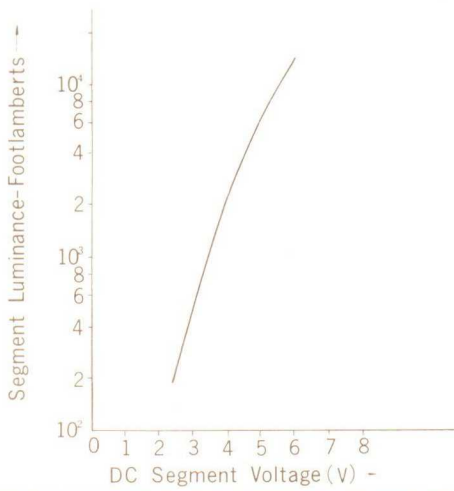
CHARACTERISTICS (DC SEGMENT VOLTAGE=5.0V)

Brightness (per segment)	FL	6,000
Response Time		
ascent to visibility	mS	15
descent to 50% of luminance	mS	20
Life Expectancy	H	100,000
Viewing Angle		140°
Weight	g	Approx. 5

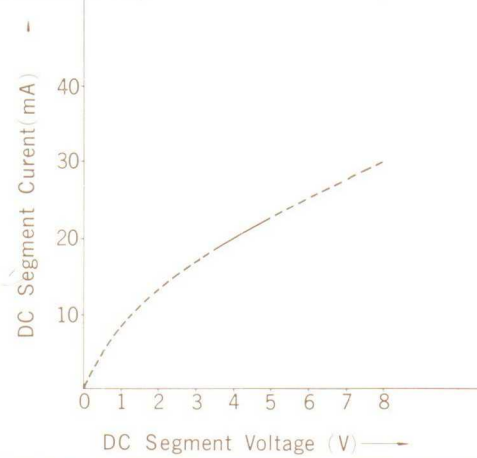
BASE DIAGRAM AND PIN CIRCLE DIMENSIONS



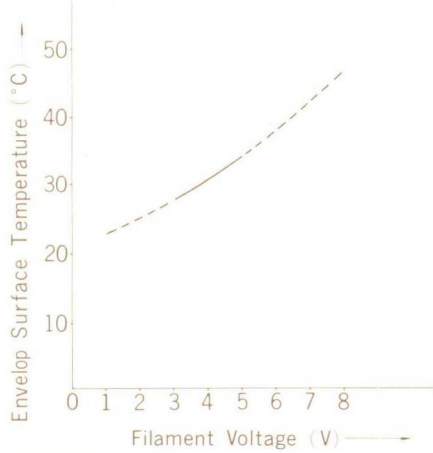
SEGMENT LUMINANCE vs SEGMENT VOLTAGE



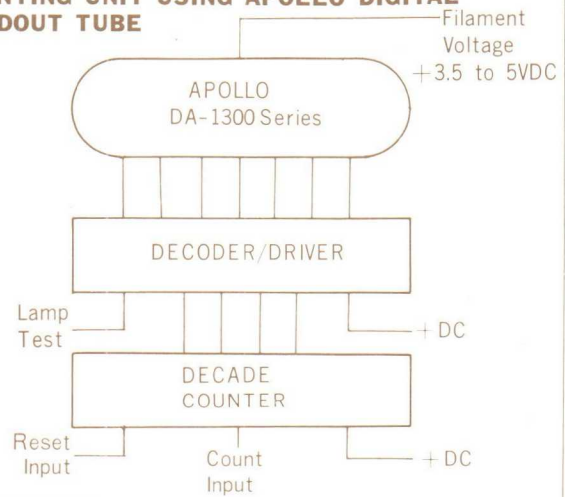
SEGMENT CURRENT vs SEGMENT VOLTAGE (PER SEGMENT)



ENVELOP SURFACE TEMPERATURE vs FILAMENT VOLTAGE



COUNTING UNIT USING APOLLO DIGITAL READOUT TUBE



Different size and type available upon request

Manufacturer :

Apollo

5-1, TOGOSHI 6-CHOME,
SHINAGAWA, TOKYO 141
PHONE: (03) 786-2005

CORPORATION CABLES: "APOLLOHAGITA" TOKYO