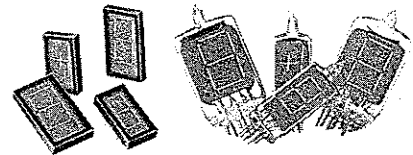




# AURORA™ / APOLLO™ INCANDESCENT DIGITAL DISPLAYS



The IEE AURORA Series of incandescent, flatpack digital displays offer unparalleled brightness and sharp contrast. They are ideally suited for those applications where panel depth, wide-angle readability, high brightness, and ease of installation are major design criteria. Available in a choice of character sizes, they may be easily adapted to a full range of colors through use of filters and are ideally suited for high ambient light conditions.

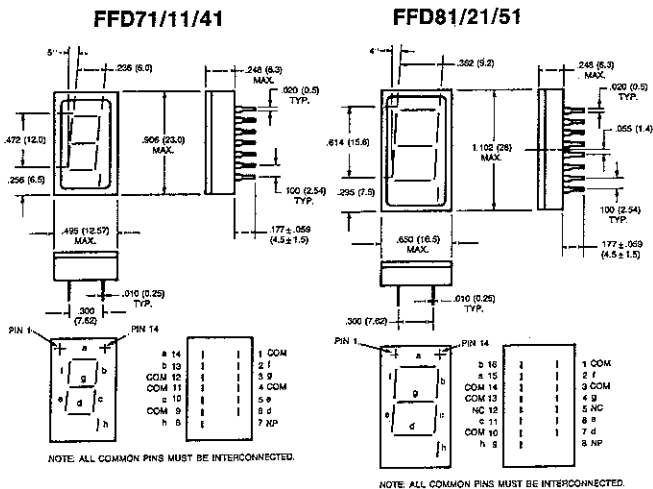
## FEATURES

- Choice of .472" or .614" high, segmented tungsten filament characters, with decimal point
- Sharp contrast and excellent 120° angular readability
- AC, DC, or pulsed mode of operation; standard TTL driver/decoder compatible
- Slim profile—seated depth of only .248" & less than .5" overall (including pins) for minimum panel depth
- Operating range of -55° to +70°C
- Brightness up to 13,000fL
- Ruggedly designed for up to 100,000 hours average life expectancy
- Full range of colors through use of filters
- Low power—as low as 15mA per segment at 5VDC
- Easily installed, standard 14-pin DIP package design
- Easily readable in direct sunlight
- A three filament indicator arrow, FFD91, available in FFD81 package size (Consult Factory)

## SPECIFICATIONS

Parameter	FFD11/21	FFD41/51	FFD71/81/91
Filament Current IF (EF = 5VDC)	15mA ± 2mA	30mA ± 4mA	17mA ± 2mA
Life Expectancy @ 5VDC	100,000 hrs.	40,000 hrs.	100,000 hrs.
Brightness (EF = 5VDC)	4,500fL	13,000fL	10,000fL

## DIMENSIONS



The IEE APOLLO readout consists of segmented tungsten filament characters with decimal point on a black ceramic base sealed in a glass tubular envelope. The displays provide ultra-wide viewing angle and superb readability. Extra long life is assured by rugged unitized construction. Brightness is fully adjustable from zero output to a level easily viewed in direct sunlight by simply varying the voltage. Any desired filter color may be used.

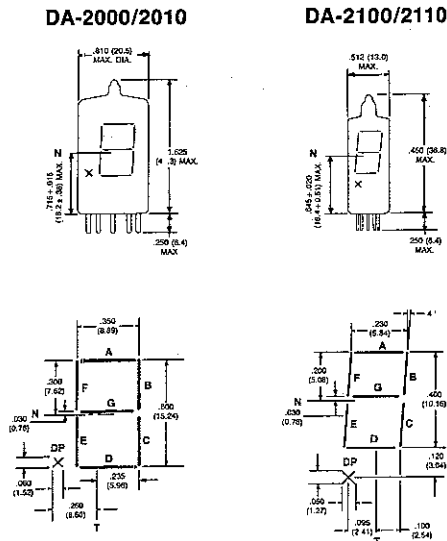
## FEATURES

- Rugged construction... environmental and operational tests (shock and vibration), show no segment linearity deviation
- High brightness of 7,000fL per segment
- Long life expectancy (more than 100,000 hours in accelerated life tests at 5 volts)
- Subminiature size permits compact equipment design
- Visibility curve ideally suited to the human eye (broad spectrum)
- Compatible with standard driver/decoders
- Low voltage operation—4.5V per segment
- Low current—24mA per segment
- Any desired color may be obtained by employing filters
- Wide single plane viewing angle (140°)
- Sharp contrast (black background)
- Brightness fully adjustable
- AC or DC operation

## SEGMENT ASSIGNMENT

Display	Type/Pin No.	1	2	3	4	5	6	7	8	9
	DA-2000	NC	COM	E	D	C	G	A	B	F
	DA-2100	NC	COM	E	D	C	G	A	B	F
	DA-2010	DP	COM	E	D	C	G	A	B	F
	DA-2110	DP	COM	E	D	C	G	A	B	F

## DIMENSIONS



N: Center of Character.  
T: Center of Readout Tube

All dimensions in inches and (millimeters).  
Specifications subject to change without notice