

Rauland

CORPORATION

600 WEST JARVIS AVENUE

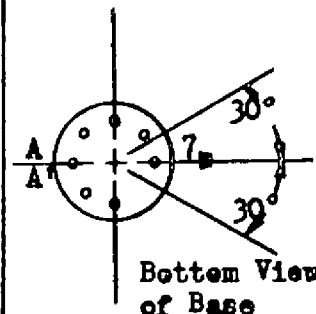
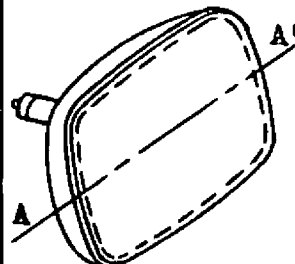
CHICAGO 48, ILLINOIS

TELEPHONE MULBERRY 5-5000

TELETYPE 312-265-1293

19DBP4DESCRIPTION

19" Direct View	Low G_2 Voltage (40V.)
Rectangular Glass Envelope	Cathode Drive Design
Spherical Faceplate	114° Magnetic Deflection
Gray Filter Glass	Electrostatic Focus
Aluminized Screen	External Conductive Coating
6.3 Volt, 450 Ma. Heater	No Ion Trap
Bonded Implosion Panel	



Bottom View of Base

SPECIAL CHARACTERISTICSAnode Penetration Current⁴150 μ a max.ELECTRICAL DATA

Focusing Method

Electrostatic

Deflection Angles, Approximate

Horizontal

103 Degrees

Vertical

86 Degrees

Diagonal

114 Degrees

Direct Interelectrode Capacitances

Cathode to all other electrodes, approximate

5 uuf

Grid #1 to all other electrodes, approximate

6 uuf

External Conductive Coating to Anode

1900 max. uuf

1400 min. uuf

Heater Current at 6.3 volts

450 $\pm$ 10% Ma.

Heater Warm-up Time

11 Seconds

OPTICAL DATA

Phosphor Number

P4 Aluminized

Light Transmittance at Center, Approximate

48 Percent

MECHANICAL DATA

Overall Length

11 13/16 $\pm$ 5/16 Inches

Greatest Dimensions of Tube

Diagonal

18 5/8 $\pm$ 1/8 Inches

Width

16 13/32 $\pm$ 1/8 Inches

Height

13 11/32 $\pm$ 1/8 Inches

Minimum Useful Screen Dimensions (Projected)

Diagonal

17 9/16 Inches

Horizontal Axis

15 1/8 Inches

Vertical Axis

12 Inches

Area

172 Sq. Inches

Neck Length

4 3/8 $\pm$ Inches

Bulb

J149C1

Implosion Panel

FP149B2

Bulb Contact

J1-21

Base
Basing
Bulb Contact Alignment
Anode contact aligns with pin position #7

B6-214
7FA
 ± 30 Degrees

RATINGS (Design Maximum System)

Unless otherwise specified, voltages are positive and measured with respect to Grid #1

Maximum Anode Voltage	19,800 Volts
Minimum Anode Voltage	12,000 Volts
Maximum Grid #4 (Focusing Electrode) Voltage	+1100 -500 Volts
Maximum Grid #2 Voltage	60 Volts
Minimum Grid #2 Voltage	25 Volts
Cathode Voltage	100 Volts
Maximum Heater Voltage	7 Volts
Minimum Heater Voltage	5.8 Volts
Maximum Heater-Cathode Voltage	
Heater negatives with respect to cathode	
During warm-up period not to exceed 15 seconds	-410 Volts
After equipment warm-up period	-180 Volts
Heater positive with respect to cathode	180 Volts

TYPICAL OPERATING CONDITIONS

CATHODE DRIVE SERVICE

Unless otherwise specified, all voltage values are positive with respect to Grid #1

Anode Voltage	16,000 Volts
Grid #4 Voltage (Focusing Electrode) ^{2, 3}	250 Volts
Grid #2 Voltage	40 Volts
Cathode Voltage ¹	35 to 50 Volts

MAXIMUM CIRCUIT VALUES

Maximum Grid #1 Circuit Resistance	1.5 Megohms
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NOTES

1. Visual extinction of focused raster.
2. With the combined Grid #1 bias voltage and video-signal voltage adjusted to give an anode current of 150 microamperes on a 15 1/8 x 12 pattern from 2F21 Monoscope or equivalent.
3. Individual tubes will have satisfactory focus at some value between 0 and 500 Volts.
4. This is the maximum beam current with 19,800 volts (design max.) applied to Anode, zero voltage applied to Cathode, Grid #1 and Grid #2; all other elements to have nominal voltages.



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19DBP4



1. Reference line as determined by plane C-C' of J. E. D. E. C. reference line gauge No. 126
2. Base pin No. 7 aligns with anode contact within 30°

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