

Rauland

CORPORATION

600 WEST JARVIS AVENUE

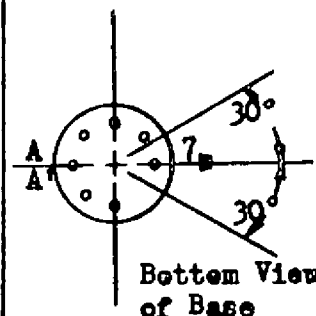
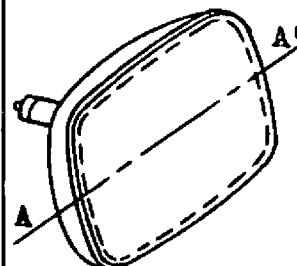
CHICAGO 48, ILLINOIS

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	

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.

Rawland

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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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