THE Rauland CORPORATION

5600 WEST JARVIS AVENUE CHICAGO 48, ILLINOIS

TELEPHONE MULBERRY 5-5000
TELETYPE 312-265-1293

23FNP4

DESCRIPTION

23" Direct View
Rectangular Glass Envelope
Gray Filter Glass
Aluminized Screen
6.3 Volts, ~~600~~ 450 Ma. Heater
Filled Rim Implosion Protection
92° Magnetic Deflection
Electrostatic Focus
External Conductive Coating
No Ion Trap
Rim Provides Mounting Holes

ELECTRICAL DATA

Focusing Method	Electrostatic
Deflection Angles (approx.)	
Horizontal	81 Degrees
Vertical	66 Degrees
Diagonal	92 Degrees
Direct Interelectrode Capacitances	
Cathode to all other electrodes (approx.)	5 uuf
Grid #1 to all other electrodes (approx.)	6 uuf
External Conductive Coating to Anode	2,500 max. uuf
(Including implosion protection hardware)	2,000 min. uuf
Heater Current at 6.3 Volts	600 ± 10% Ma.
Heater Warm-up time	11 Seconds

OPTICAL DATA

Phosphor Number	P4 Aluminized
Light Transmittance at Center (approx.)	42 1/2%

MECHANICAL DATA

Overall Length	18 ± 3/8"
Greatest Dimensions of Tube (Metal Rim)	
Width	21 5/8 ± 1/16"
Height	18 9/16 ± 1/16"
Minimum Useful Screen Dimensions (Projected)	
Diagonal	22 5/16"
Horizontal Axis.	19 1/4"
Vertical Axis	15 1/8"
Area	282 Sq. in.
Neck Length	5 1/2 ± 3/16"
Bulb	J187-J1
Bulb Contact	J1-21
Base	B6-203
Basing	12L

Bulb Contact Alignment
J1-21 contact aligns with pin position #6 ± 30 degrees

from JEDEC release #4875, Dec. 7, 1964

RATINGS (Design Maximum System)

Unless otherwise specified, voltage values are positive and measured with respect to cathode.

Maximum Anode Voltage	25,000 Volts
Minimum Anode Voltage	16,000 Volts
Maximum Grid #4 (Focusing Electrode) voltage	+1100 -550
Maximum Grid #2 Voltage	550 Volts
Minimum Grid #2 Voltage	200 Volts
Grid #1 Voltage	
Maximum Negative Value	155 Volts DC
Maximum Negative Peak Value	200 Volts
Maximum Positive Value	0 Volts
Maximum Positive Peak Value	2 Volts
Maximum Heater Voltage	7 Volts
Minimum Heater Voltage	5.8 Volts
Maximum Heater-Cathode Voltage	
Heater negative with respect to cathode	
During warm-up time not to exceed 15 sec.	450 Volts
After equipment warm-up period	200 Volts
Heater positive with respect to cathode	200 Volts

TYPICAL OPERATING CONDITIONS

GRID DRIVE SERVICE

Unless otherwise specified, all voltage values are positive with respect to cathode.

Anode Voltage	20,000 Volts DC
Grid #4 (Focusing Electrode) voltage (Notes 2 and 3)	250 Volts DC
Grid #2 Voltage	300 Volts DC
Grid #1 Voltage (Note 1)	-35 to -72 Volts DC

MAXIMUM CIRCUIT VALUES

Maximum Grid #1 circuit resistance	1.5 Megohms

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 200 micro-amperes on a 19 1/4" X 15 1/8" pattern from RCA 2F21 Monoscope or equivalent.

3. Individual tubes will have satisfactory focus at some value between 0 and 500 volts.

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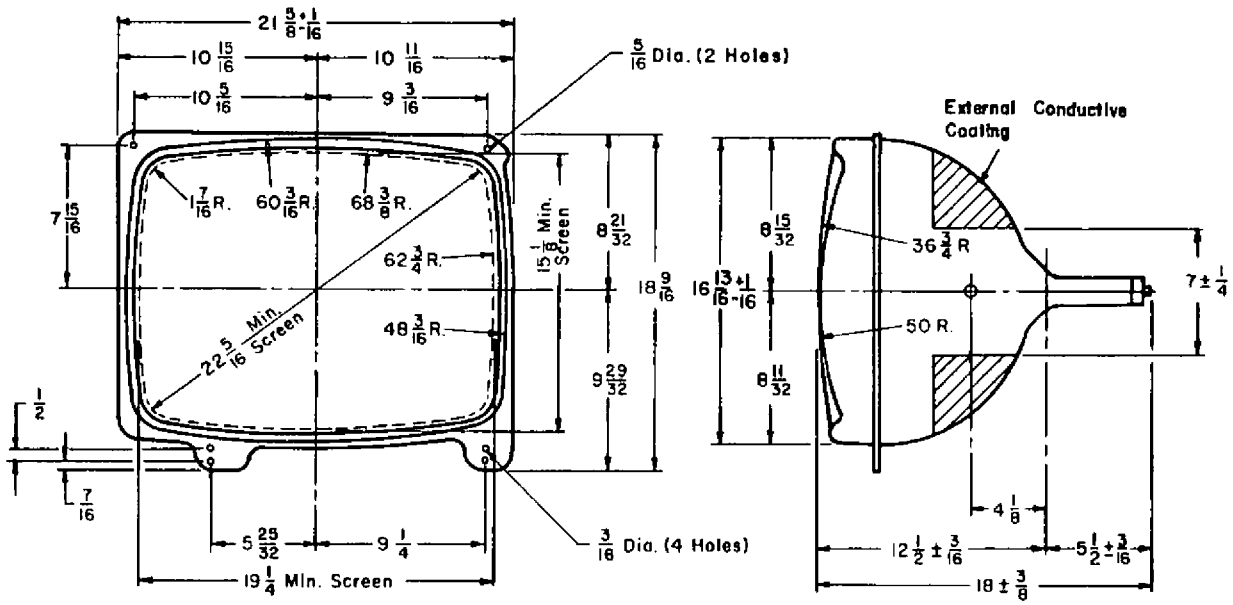

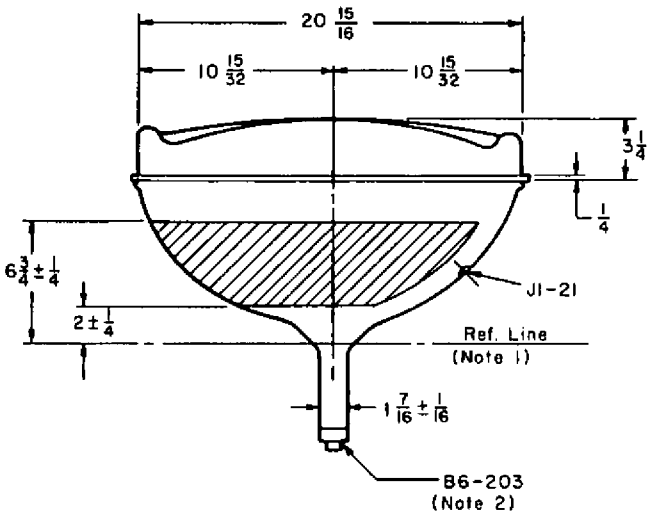

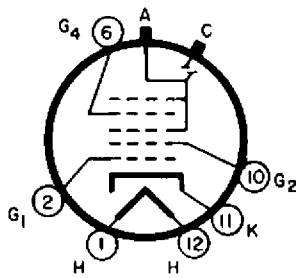

12L Basing

NOTE:—

1. Reference line determined by plane C–C' of J.E.D.E.C reference line gauge No. 116.
2. Base pin No. 6 aligned with anode contact within 30°