

## Picture Tube

PAN-O-PLY—INTEGRAL IMPLOSION PROTECTION  
 LOW-VOLTAGE ELECTROSTATIC FOCUS 114° MAGNETIC DEFLECTION

### ELECTRICAL

#### Direct Interelectrode Capacitances

Cathode to all other electrodes. . . . .	5	pF
Grid No.1 to all other electrodes. . . . .	6	pF
External conductive coating to anode <sup>a</sup> . . . . .	1250 min—1750 max	pF
Heater Current at 6.3 V. . . . .	450 ± 20	mA
Heater Warm-up Time (Average). . . . .	11	s
Electron Gun . . . . .	Type Requiring No Ion-Trap Magnet	

### OPTICAL

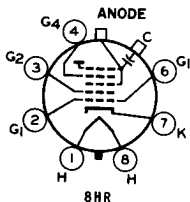
Phosphor . . . . .	P4—Sulfide Type, Aluminized
For curves, see front of this section	
Faceplate. . . . .	Filterglass
Light transmission at center (approx.) . . . . .	48%

### MECHANICAL

Weight (Approx.) . . . . .	15 lb
Overall Length . . . . .	11.625 ± 0.250 in
Neck Length. . . . .	4.375 ± 0.125 in
Projected Area of Screen . . . . .	172 sq in
External Conductive Coating	
Type (see CRT OUTLINES 1 at front of this section) . . . . .	Regular-Band
Contact area for grounding . . . . .	Near Reference Line
Cap. . . . .	Recessed Small Cavity (JEDEC No. J1-21)
Base . . . . .	Small-Button Neoeightar 7-Pin, Arrangement 1, (JEDEC No. B7-208)

### TERMINAL DIAGRAM (Bottom View)

- Pin 1—Heater
- Pin 2—Grid No.1
- Pin 3—Grid No.2
- Pin 4—Grid No.4
- Pin 6—Grid No.1
- Pin 7—Cathode
- Pin 8—Heater



- Cap—Anode  
(Grid No.3,  
Grid No.5,  
Screen,  
Collector)
- C—External  
Conductive  
Coating

### MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

*Voltages are positive with respect to cathode*

Anode Voltage. . . . .	11000 min—23000 max	V
Grid-No.4 (Focusing) Voltage		
Positive value . . . . .	1100 max	V
Negative value . . . . .	550 max	V
Grid-No.2 Voltage. . . . .	200 min—550 max	V
Grid-No.1 Voltage		
Negative peak value. . . . .	220 max	V
Negative bias value. . . . .	155 max	V
Positive bias value. . . . .	0 max	V
Positive peak value. . . . .	2 max	V



# 19FLP4

Heater Voltage . . . . . 5.7 min—6.9 max V

## Peak Heater-Cathode Voltage

Heater negative with respect to cathode:

During equipment warm-up period  $\leq$  15 seconds . . . 450 max V

After equipment warm-up period. . . . . 300 max V

Heater positive with respect to cathode:

Combined AC & DC voltage. . . . . 200 max V

DC component. . . . . 100 max V

## TYPICAL OPERATING CONDITIONS FOR CATHODE-DRIVE SERVICE

*Voltages are positive with respect to grid No. 1*

Anode Voltage. . . . . 16000 V

Grid-No. 4 Voltage<sup>b</sup>. . . . . 200 V

Grid-No. 2 Voltage. . . . . 300 V

Cathode Voltage. . . . . 28 to 62 V

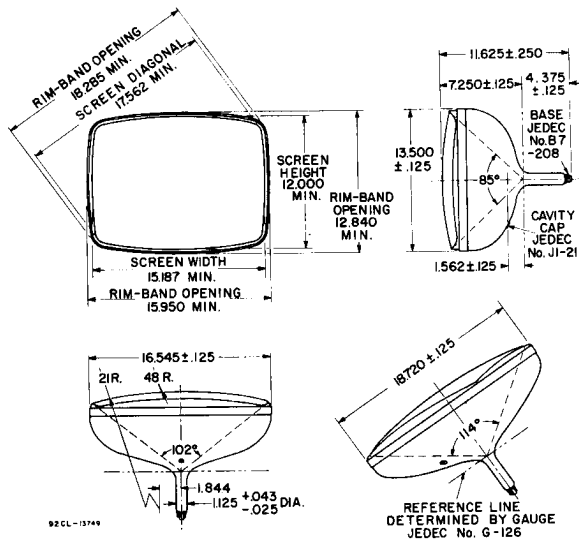
## MAXIMUM CIRCUIT VALUE

Grid-No. 1 Circuit Resistance . . . . . 1.5 max M $\Omega$

<sup>a</sup> External conductive coating and implosion protection hardware must be grounded.

<sup>b</sup> The grid-No. 4 voltage required for optimum focus of any individual tube will have a value anywhere between 0 and +400 volts with the combined grid-No. 1 voltage and video-signal voltage adjusted to give an anode current of 100 microamperes on a 10.5-inch by 14-inch pattern from an RCA-2F21 monoscope, or equivalent.

## DIMENSIONAL OUTLINE (BULB J149 FA)



DIMENSIONS IN INCHES

