



CATHODE-RAY TUBE

DESCRIPTION

The GL-7UP7 is a magnetic-focus and magnetic-deflection direct-view cathode-ray tube for oscillograph applications. A feature of this tube is a reflective metal-backed screen which reduces undesirable screen charging and prevents ion-spot

blemishes. The anode terminal used, a small-cavity cap, eliminates corona discharge at high altitudes and increases the strength of the mechanical link between the anode button and the lead.

TECHNICAL INFORMATION

GENERAL

Electrical

Heater voltage.....	6.3 volts
Heater current.....	0.6 $\pm$ 10% ampere
Focusing method—magnetic	
Deflecting method—magnetic	
Deflecting angle, approximate.....	53 degrees
Phosphor—P7	
Fluorescence—blue	
Phosphorescence—greenish yellow	
Persistence—long	
Faceplate—clear	
Direct interelectrode capacitances, approximate	
Cathode to all other electrodes.....	5 uuf
Grid-No. 1 to all other electrodes.....	8.5 uuf


Electronic
TUBE

GENERAL  ELECTRIC

TECHNICAL INFORMATION (CONT'D)

Mechanical

Over-all length	13 1/4 ± 3/8	inches
Greatest diameter of bulb	7 ± 1/8	inches
Minimum useful screen diameter	6	inches
Anode contact—recessed small-cavity cap, J1-21		
Base—Long medium-shell octal 8-pin, B8-65 or		
Long medium-shell octal 5-pin, B5-80		
Base pin connections		
Pin 1—NC	Pin 4—NC	Pin 7—cathode
Pin 2—heater	Pin 5—grid-No. 1	Pin 8—heater
Pin 3—grid-No. 2	Pin 6—NC	
Anode contact alignment		
Anode contact aligns with pin-No. 5 ± 10 degrees		

MAXIMUM RATINGS, Design Center Values

Anode voltage*	10,000 max	volts d-c
Grid-No. 2 voltage	700 max	volts d-c
Grid-No. 1 voltage		
Negative-bias value	125 max	volts d-c
Positive-bias value	0 max	volt d-c
Positive-peak value	2 max	volts
Peak heater-cathode voltage†		
Heater negative with respect to cathode		
During warm-up period not to exceed 15 seconds	410 max	volts d-c
After equipment warm-up period	180 max	volts d-c
Heater positive with respect to cathode	180 max	volts d-c

RECOMMENDED OPERATING CONDITIONS

Anode-No. 2 voltage	7000	volts
Grid-No. 2 voltage	250	volts
Grid-No. 1 voltage‡	—25 to —70	volts
Focusing-coil current, approximate§	117	milliamperes

MAXIMUM CIRCUIT VALUES

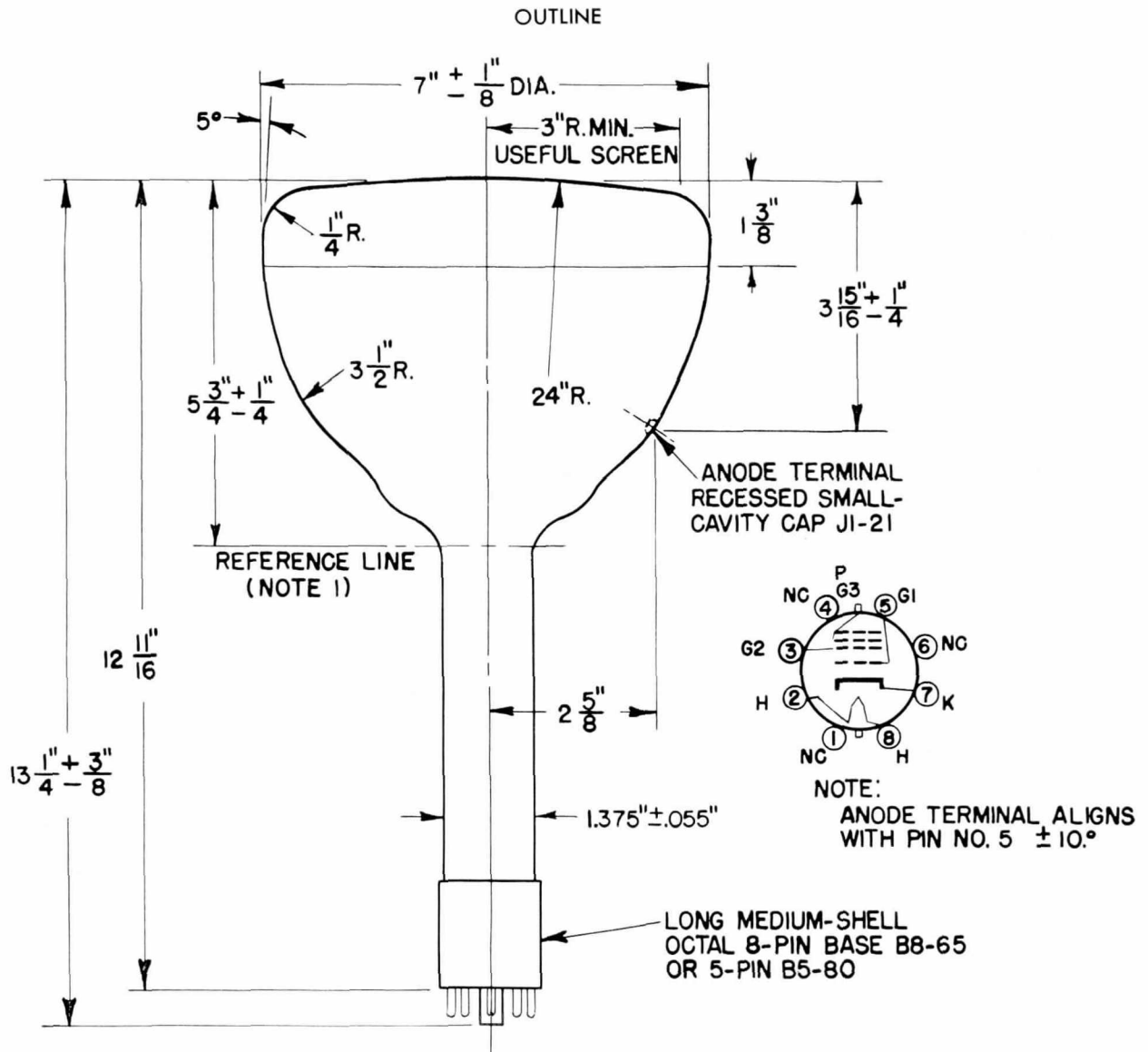
Grid-No. 1 circuit resistance	1.5 max	megohms
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*Anode and grid-No. 3 which are connected together within the tube, are referred to herein as anode.

†Cathode should be returned to one side or to the midtap of the heater transformer winding.

‡For visual extinction of undeflected focused spot.

§For RTMA focus coil No. 106 or equivalent with the combined grid-No. 1 bias voltage and video-signal voltage adjusted to produce a beam current of 200 microamperes and with the distance from the reference line to the center of the air gap equal to $2\frac{3}{4}$ inches.



NOTE:

1. REFERENCE LINE IS DETERMINED BY POSITION WHERE 1.430" $\pm .003$ " ID 2-INCH LONG GAGE WILL REST ON BULB CONE.

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