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# 5 CGP 29

## CHROMAPIX

Color Cathode Ray Tube

SINGLE-GUN COLOR TUBE  
 GLASS ENVELOPE  
 TWO-COLOR PERSISTENT PHOSPHORS  
 PHOSPHORS ON FLAT FACE  
 ALUMINIZED SCREEN  
 ACTIVE SCREEN AREA  $4\frac{1}{4}$ " DIAMETER  
 SCREEN VOLTAGE UP TO 18,000 VOLTS

High resolution is afforded by phosphor strips of approximately 11 mils width on  $12\frac{1}{2}$  mil centers, or 80 color strips per inch. Simple circuitry is adequate for power supplies and color switching. Post acceleration, inherent in post-deflection focusing (PDF) produces high deflection sensitivity. Color convergence is inherent in the tube, independent of circuit adjustment.

### APPLICATIONS

Suggested applications include: target identification, moving target identification (MTI), IFF, anti-jamming, navigational beacons, terrain clearance, plane elevation indicator, collision course indicator, etc.

### DATA

#### GENERAL

Heater voltage	6.3 volts
Heater current	0.6 amperes
Direct Interelectrode Capacitances:	
Grid #1 to all other electrodes	6 uuf
Cathode to all other electrodes	4 uuf
Color Selectors to each other	880 uuf
*Phosphors, (Long Persistence)	P-25, orange P-2 green
Focusing Method	Magnetic
Color Selector Method	Electrostatic
Deflection Method	Magnetic
Deflection Angle (Approx.)	53°

\*This tube may be obtained with other standard phosphors on special order.

### MECHANICAL DATA

Overall Length	11 $\frac{1}{8}$ in.
Weight	1 $\frac{1}{2}$ lb.

### MAXIMUM RATINGS

Screen (anode) voltage (Note 1)	18,000 DC
Grid #3 voltage	12,000 DC
Grid #2 voltage	600 DC
Color Selector voltage	400 peak
Color grid to phosphor screen voltage	8,000 DC
Seeker voltage (Note 2)	350 DC
Grid #1 voltage:	
Negative bias value	200 DC
Positive bias value	0
Positive peak value	2 DC
Peak heater - cathode voltage:	
Heater neg. with respect to cathode during equip. warm-up period not to exceed 15 seconds	410 DC
After equip. warm-up	180 DC
Heater pos. with respect to cathode	180 DC

### TYPICAL OPERATION

Screen (anode) voltage	15,000 DC
Grid #3 voltage (Note 3)	6,000 to 9,000 DC
Seeker voltage	50 to 200 DC
Color selector voltage	300 peak
Grid #2 voltage	300 DC
Grid #1 voltage (Note 4)	-50 to -105 DC
Focusing coil current (Note 5)	60 to 80 ma DC
* Circuit values:	
Grid #1 circuit resistance	1.5 megs. max.

### NOTES

1. Screen (anode) voltage is defined as the total accelerating DC potential



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NOTES (continued)

between the cathode and the phosphor plate. This anode voltage provides the high potential necessary for the function of post-deflection focusing.

2. Seeker voltage is defined as the DC potential between the color selectors and Grid #3. This voltage is such that the color selectors are negative with respect to Grid #3, and is adjusted for optimum color purity.

3. Color purity is determined by the optimum ratio of the screen voltage to the Grid #3 voltage, seeker voltage, and focus coil positioning.

4. For visual extinction of focused spot.

5. With the JETEC focus coil #109 located so that the center of the focus coil gap is located four inches behind the yoke reference line.

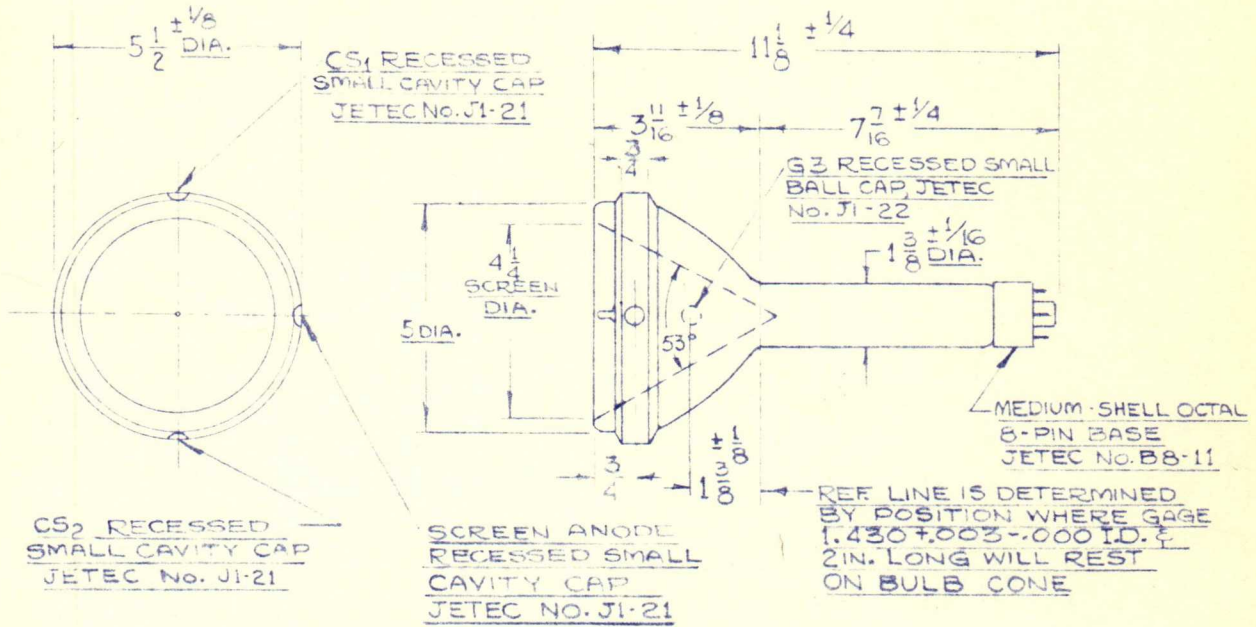
LITTON INDUSTRIES

Electron Tube Division, Electronic Display  
Laboratory  
960 Industrial Rd., San Carlos, California  
LYtell 1-8411

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SINGLE GUN  
TWO COLOR CRT

DIMENSIONAL OUTLINE



BASING DIAGRAM

