

*Excellence in Electronics***TYPE
10QP7**

The 10QP7 is a magnetic focus and magnetic deflection cathode ray tube having a long persistence cascade fluorescent screen. A special feature of the 10QP7 is that it produces a small spot of high intensity.

MECHANICAL DATA

BASE: Small Shell Duodecal 6-Pin

CAP: Recessed Small Cavity

TERMINAL CONNECTIONS:

Pin 1 Heater
Pin 2 Grid #1

Pin 11 Cathode
Pin 12 Heater
Cap Grid #2 & Collector

MOUNTING POSITION: Any

GENERAL DATA

Phosphor	#7
Fluorescence	Blue
Phosphorescence	Yellow
Persistence	Long
Deflection Method	Magnetic
Deflection Angle	50°

ELECTRICAL DATAHEATER CHARACTERISTICS:

Heater Voltage	6.3 volts
Heater Current	6.3 ± 10% amps.
Peak Heater - Cathode Voltage: Max.	
Heater Negative with Respect to Cathode	175 volts DC
Heater Positive with Respect to Cathode	175 volts DC

DIRECT INTERELECTRODE CAPACITANCES: (μfds.) (approx.)

Grid #1 to all other electrodes	4.0
Cathode to all other electrodes	3.5

DESIGN CENTER MAXIMUM RATINGS:

Collector Voltage (including Grid #2)	20,000 volts DC
Grid #1 Voltage:	
Negative - Bias Value	350 volts DC
Positive - Bias Value	0 volts DC
Positive - Peak Value	2 volts DC

CHARACTERISTICS AND TYPICAL OPERATION:

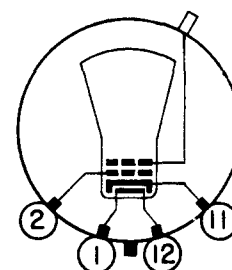
Collector Voltage (including Grid #2)	20,000 volts DC
Grid #1 Voltage ⊕	-63 to -147 volts DC
Spot Position (undeflected)	.590 inch max.

MAXIMUM CIRCUIT VALUES:

Grid #1 Circuit Resistance	1.5 meg. max.
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⊕ Visual extinction of deflected focus spot.

For standard focus coil #106 or equivalent, the focus coil current is approximately 190 MA. D.C. Grid #1 bias voltage and video signal voltage adjusted for 100 microamperes of anode current. The distance from air gap in the focus coil to reference line is 3.25 inches.



BOTTOM VIEW

12H

Tentative Data

INDUSTRIAL TUBE DIVISION

RAYTHEON MANUFACTURING COMPANY

Technical drawing of a detector tube assembly. The drawing shows a bulb with a conical face and a neck. Key dimensions and features include:

- Top diameter: $10 \frac{1}{2}'' \pm 1/16''$ Dia.
- Minimum useful screen diameter: 9"
- Top face radius: $7/16''$ R
- Inner cone radius: 20" R
- Outer cone radius: 42" R
- Cone angle: 50°
- Top face thickness: $21/32''$
- Neck diameter: $1 \frac{7}{16}'' \pm 1/16''$ Dia.
- Reference line (Note 1) is located on the neck.
- Collector terminal recessed small cavity cap (J1-21) is located on the neck.
- Neck thickness: $61/64''$ max.
- Neck length: $17 \frac{1}{8}''$
- Base length: $17 \frac{5}{8}'' \pm 3/8''$
- Base component: Small Shell Duodecal 5-Pin Base (B5-57)

NOTE 1 Reference line is determined by position where $1.5000'' + .003''$ diameter ring gauge 2" long will rest on bulb cone.

NOTE 2 EXTERNAL BULB COATING
Dri-Film #9987 applied to bulb cone between face and reference line. Conductive coating applied to neck from reference line 5" toward base.

CAUTION
Do not handle tube by the part of the bulb having the Anti-Corona Coating.

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