



IOSP4

MONITOR KINESCOPE

ALUMINIZED SCREEN

ELECTROSTATIC FOCUS

MAGNETIC DEFLECTION

DATA

General:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. 0.6 amp

Direct Interelectrode Capacitances:

Grid No.1 to all other electrodes. 6 μ f

Cathode to all other electrodes. 5 μ f

Faceplate, Spherical Filterglass

Light transmission (Approx.) 76% ←

Phosphor (For curves, see front of this section) . . . P4—Sulfide Type

Aluminized

Fluorescence White

Phosphorescence. White

Persistence. Short

Focusing Method. Electrostatic

Deflection Method. Magnetic

Deflection Angle (Approx.) 50°

Overall Length 16-5/8" $\pm$ 3/8"

Greatest Diameter of Bulb. 10-1/2" $\pm$ 1/16" ←

Minimum Useful Screen Diameter 9-1/8"

Picture Size (Within minimum useful screen area) . . 8" x 6"

Weight (Approx.) 10 lbs ←

Operating Position Any

Cap. Recessed Small Cavity (JETEC No.J1-21)

Bulb J84 ←

Base Small-Shell Duodecal 6-Pin (JETEC No.B6-63) ←

Basing Designation for BOTTOM VIEW 12Q ←

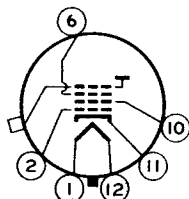
Pin 1—Heater

Pin 2—Grid No.1

Pin 6—Grid No.3

Pin 10—Grid No.2

Pin 11—Cathode



Pin 12—Heater

Cap—Ultr

(Grid No.4,

Collector)

Maximum Ratings, Design-Center Values:

ULTOR VOLTAGE. 20000 max. volts ←

GRID-No.3 VOLTAGE. 3000 max. volts ←

GRID-No.2 VOLTAGE. 410 max. volts

GRID-No.1 VOLTAGE:

Negative bias value. 125 max. volts

Positive bias value. 0 max. volts

Positive peak value. 2 max. volts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode:

During equipment warm-up period

not exceeding 15 seconds 410 max. volts

After equipment warm-up period 180 max. volts

Heater positive with respect to cathode. 180 max. volts

← Indicates a change.



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Equipment Design Ranges:

→ For any ultor voltage (E_{c4}) between 10000* and 20000 volts
and grid-No.2 voltage (E_{c2}) between 150 and 410 volts

Grid-No.3 Voltage for focus with ultor current of 100 μ a.	11.7% to 15.9% of E_{c4}	volts
Grid-No.1 Voltage for visual extinction of 8" x 6" raster	9% to 24% of E_{c2}	volts
Maximum Grid-No.3 Current**	See Curves	μ a
Grid-No.2 Current	-15 to +15	μ a
Field Strength of Adjustable Centering Magnet	0 to 8	gausses

Examples of Use of Design Ranges:

For ultor voltage of	12000	14000	volts
and grid-No.2 voltage of	200	200	volts
Grid-No.3 Voltage for focus with ultor current of 100 μ a.	1400 to 1900	1640 to 2225	volts
Grid-No.1 Voltage for visual extinction of 8" x 6" raster	-18 to -48	-18 to -48	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.5 max.	megohms
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* Brilliance and definition decrease with decreasing ultor voltage.
In general, the ultor voltage should not be less than 10,000 volts.

** Grid-No.3 current increases as the ultor voltage is decreased.

For X-ray shielding considerations, see sheet
X-RAY PRECAUTIONS FOR CATHODE-RAY TUBES
at front of this Section

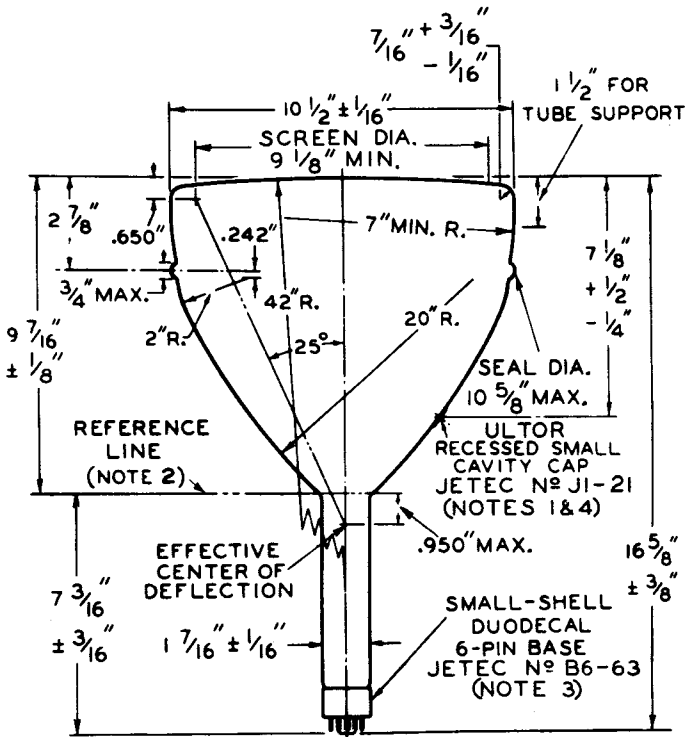
→ Indicates a change.



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92CM-7729R1

NOTE 1: THE PLANE THROUGH THE TUBE AXIS AND PIN 6 MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND ULTOR TERMINAL BY AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF $\pm 10^\circ$. ULTOR TERMINAL IS ON SAME SIDE AS PIN 6.

NOTE 2: REFERENCE LINE IS DETERMINED BY POSITION WHERE REFERENCE-LINE GAUGE (JETEC No. 112) $1.500'' + 0.003'' - 0.000''$ I.D. AND $2''$ LONG WILL REST ON BULB CONE.

NOTE 3: SOCKET FOR THIS BASE SHOULD NOT BE RIGIDLY MOUNTED; IT SHOULD HAVE FLEXIBLE LEADS AND BE ALLOWED TO MOVE FREELY. BOTTOM CIRCUMFERENCE OF BASE SHELL WILL FALL WITHIN CIRCLE CONCENTRIC WITH BULB AXIS AND HAVING DIAMETER OF $1-7/8''$.

NOTE 4: TUBE SUPPORT MUST BE KEPT AT LEAST $2''$ AWAY FROM BULB TERMINAL.

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AVERAGE GRID-DRIVE CHARACTERISTIC

