ELECTRONIC TUBE REFERENCE

A6311X

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
CATHODERAY

Sixty-three-centimeter three-gun shadow-mask color television CRT with a three-color phosphor-dot screen. Its direct-view construction combines separate color beams through the mask to form a full-color receiver image.

General characteristics

BASE DESIGNATION	–	**BASE PINS**	–
NOMINAL HEATER	6.3 V / 800 mA	**PARALLEL HEATER**	– / –
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Cathode Ray

MAXIMUM PLATE VOLTAGE	27500 V

CRT section. Maximum ratings, operating conditions, capacitances, optical and mechanical values are preserved as parameters where published.

63 cm three-gun shadow-mask colour television CRT with three-colour phosphor-dot screen.

SOURCE OPERATING CONDITIONS

1959 Telefunken

SOURCE PDF

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1959 TELEFUNKEN

Section 1 · Cathode Ray

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
HeaterOrFilamentVoltage	**6.3 V**	—
HeaterOrFilamentCurrent	**300 mA**	—
UsefulScreenDiagonalMinimum	**584 mm**	—
UsefulScreenWidthMinimum	**504 mm**	—
UsefulScreenHeightMinimum	**396 mm**	—
DeflectionMethod	**Magnetic**	—
Deflection Angle	**90 degree**	—
ElectronBeamCount	**3**	—
ScreenConstruction	**Shadow-mask three-color phosphor dots**	—

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1963 Mullard

SOURCE PDF

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 MULLARD

Section 1 · Cathode Ray

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Focusing method	**Electrostatic**	—
Deflection method	**Magnetic**	—
Deflection angle	**90 deg**	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Light transmission	**52 %**	—
Cutoff-voltage range	**-65 to -135 V**	—
Light transmission	**52 %**	—
Diagonal deflection angle	**90 deg**	—
Horizontal deflection angle	**79 deg**	—
Vertical deflection angle	**62 deg**	—

CONSTRUCTION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen construction	**Metal-backed**	—
Gun count	**3**	—
Screen type	**Three-colour phosphor dot / shadow mask**	—

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	**Direct-view television / radar display**	—
Application	**Colour television picture display**	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Final-anode voltage maximum	**27.5 kV**	—
Focus-electrode control range	**4.2 to 5.0 kV**	—

SOURCE OPERATING CONDITIONS

1976 ITT Picture Tubes

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Published test conditions and operating points. Values on this page are preserved as reported by this source.

1976 ITT PICTURE TUBES

Section 1 · Cathode Ray

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
89° deflection angle and	**36.5 mm**	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The useful screen area of	**2000 cm**	—
has nearly straight sides of 50 x	**40 cm**	—
Minimum Useful Diagonail	**584 mm**	—
Screen Dimensions Horizontal	**504 mm**	—
has a light transmission of 52 % {appr.)- Vertical	**396 mm**	—
Area (appr.)	**2000 cm**	—
Neck Diameter	**36.5 mm**	—
Overall Length 526 £	**9.5 mm**	—
pounds activated with rare-earths. Weight	**19 kg**	—
U@	**63 V**	—
Iy (approx.)	**8 A**	—
Iy (approx.) 08A Ig2 = =+ (2)	**5 uA**	—
Ugdqfifl	**25 kV**	—
Ugdqfifl 25 kV A lg1 (U = (2)	**150 V**	—
Ugdqfifl 25 kV A lg1 (U = 150V) <+ (3)	**5 uA**	—
Cgdg5alm min	**2000 pF**	—
@	**275 kV**	—
@ 275kV Cg4g5alm’ A 63-11 X (approx.) (2)	**400 pF**	—
ggiQSa _min	**20 kV**	—
X (approx.)	**280 pF**	—
{gdgSa max 1	**0 mA**	—
Ug3 max	**6 kV**	—
Ug? 3 max .	**1 kV**	—
(Ugl:' p_ max	**400 V**	—
(_-:-_UQT} ik	**200 V**	—
Ug}_ P max S Y	**2 v**	—
U sk mBx1 ®®	**410 v**	—
Uik max 2 @ @© ay	**250 V**	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
nearest centre of screen	**0.74 mm**	—
Uitk max @ s	**135 V**	—

CAPACITANCE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Usz atoit @ @	**285–685 V**	—
(at (-Us1) =	**150 V**	—
(-Ua1) cuLofF@	**95–190 V**	—
(at	**400 V**	—
(at 400 V) Ck (approx.) (2)	**5 pF**	—
o7I e {approx.)	**6.5 pF**	—

Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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