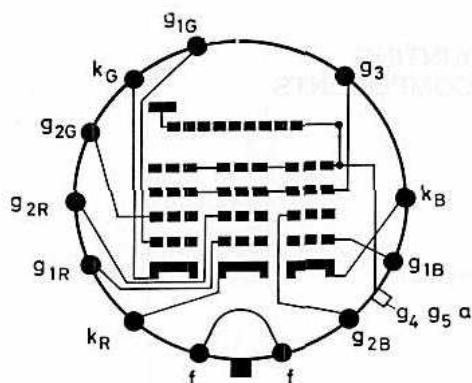


Colour Picture Tubes

A 56-120 X

For Replacement



ITT-Picture Tube A 56-120 X is a rectangular colour picture tube with 90° deflection angle and 36,5 mm neck diameter. The useful screen area of 1465 cm² (appr.) has nearly straight sides of 44 x 35 cm (appr.) with 3 x 4 aspect ratio. The filter-glass of the faceplate has a light transmission of 52% (appr.).

The phosphor screen is composed of triangular dot groups — colour triplets — each consisting of a red-, green- and blue-emitting phosphor dot. The green- and blue-emitting phosphors are silver activated sulfide phosphors, the red emitting phosphor is composed of yttrium compounds activated with rare-earths.

The tube uses three electrostatically focused guns and operates on the shadow mask principle.

The gun axes are tilted slightly towards the tube axis to facilitate convergence to the shadow mask. Beam-convergence and deflection are provided magnetically.

Implosion protection by steel reinforcement. Admitted by Association of German Electrical Engineers, VDE.

1. Mechanical Data

Bulb	All-Glass Type with Convex Rectangular Faceplate Filter-Glass		
Minimum Useful Screen Dimensions	Diagonal	533 mm	
	Horizontal	447 mm	
	Vertical	337 mm	
	Aspect Ratio	3 x 4	
Deflection Angles	Area (approx.)	1465 cm ²	
	Diagonal	90°	
	Horizontal	79°	
	Vertical	63°	
Neck Diameter	36,5 mm		
Overall Length	472 ± 9,5 mm		
Weight	15 kg (appr.)		
Base	JEDEC B 12-244		
	14-20/1 DIN 44439		
Implosion Protection	Steel-Jacket Including Tube Mount		

2. Typical Operating Conditions ①

U_f ②	6,3 V
I_f	(approx.) 0,9 A
U_{g4g5a}	25 kV
U_{g3}	4,2 ... 5,0 kV
U_{g2} cutoff ③ ④	210 ... 495 V
at $(-U_{g1}) = 105$ V	
$(-U_{g1})$ cutoff ④	70 ... 140 V
at $-U_{g2} = 300$ V	

3. Maximum Ratings ⑧

U_{g4g5a} max ⑥	27,5 kV
U_{g4g5a} min	20 kV
I_{g4g5a} max ⑤	1,0 mA
U_{g3} max	6,0 kV
U_{g2} p max	1,0 kV
$(-U_{g1})$ p max	400 V
$(-U_{g1})$ max	200 V
U_{g1} max	0 V
U_{g1} p max	2 V
$U - f/k$ max 1 ⑨ ⑩	410 V
$U - f/k$ max 2 ⑨ ⑩	250 V
$U - f/k$ p max ⑨	300 V
$U + f/k$ p max ⑨	180 V
$U + f/k$ max ⑨	135 V

4. Ratings for Circuit Design ⑦

I_{g3}	$\leq \pm 15 \mu A$
I_{g2}	$\leq \pm 5 \mu A$
I_{g1} ($-U_{g1} = 150$ V)	$\leq \pm 5 \mu A$

5. Capacitances

C_{g1}	(approx.) 6 pF
C_k	(approx.) 5 pF
C_{g3}	(approx.) 6,5 pF
$C_{g4g5a/m}$ max	2300 pF
$C_{g4g5a/m}$ min	1700 pF
$C_{g4g5a/m'}$	(approx.) 280 pF

6. Optical Data

Faceplate:	Filter-Glass
Light Transmission	(appr.) 52%

Screen:

Three separate phosphor dots — colour triplets — arranged in triangular groups and aluminized.

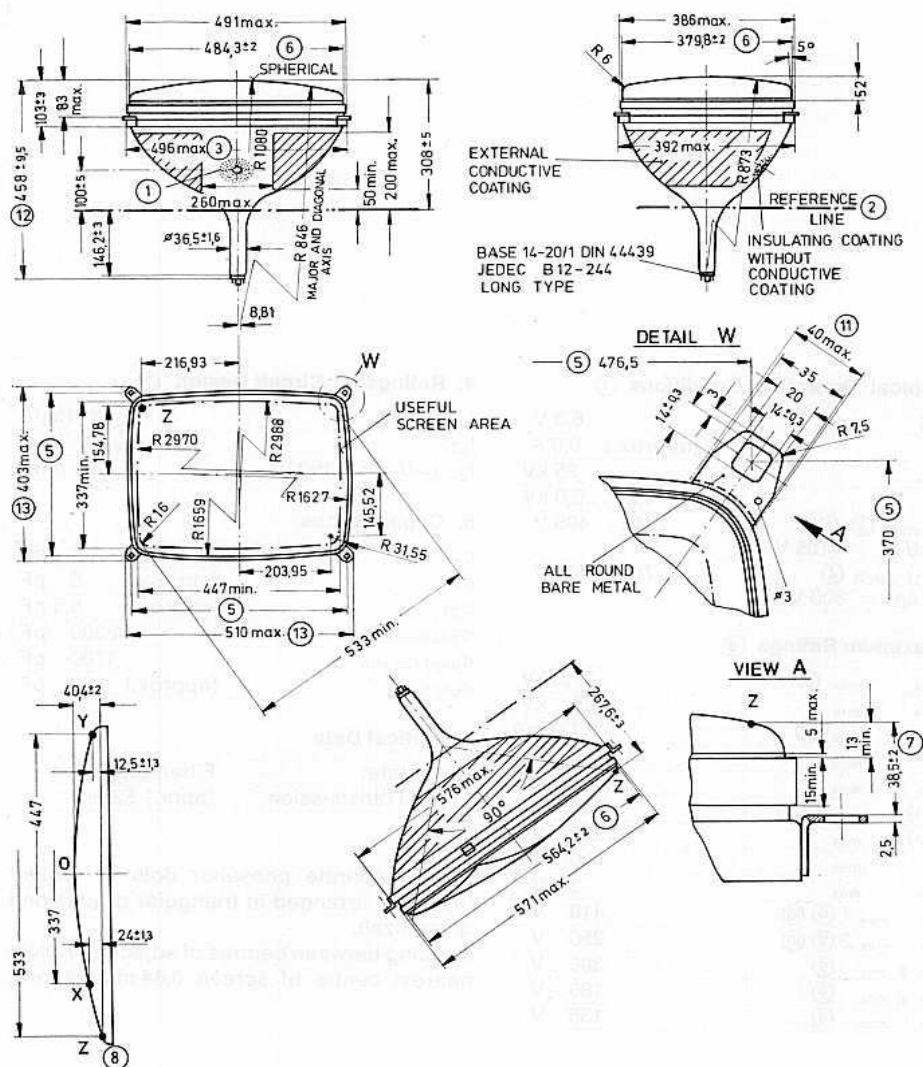
Spacing between centres of adjacent triplets nearest centre of screen 0,64 mm (appr.).

Colour Picture Tubes

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Dimensional Drawings in mm

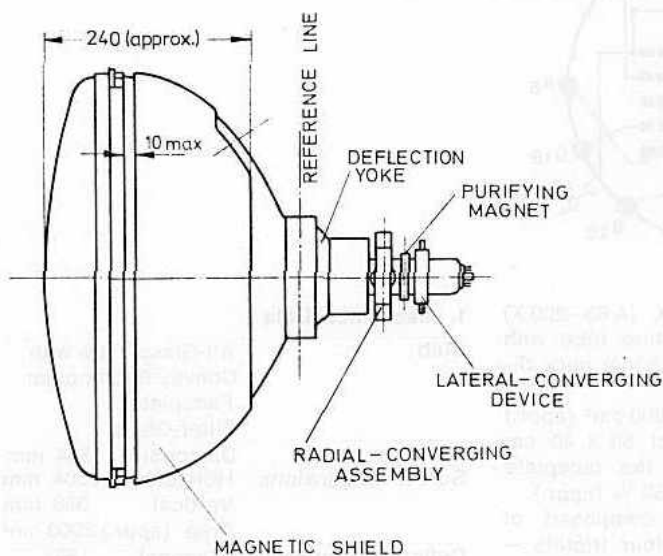


A 56-120 X

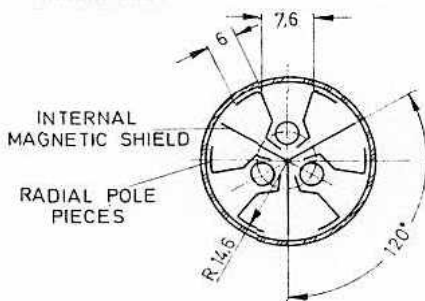
O Notes see pages 68 and 69

Reference line gauge see page 66

RELATIVE MOUNTING OF TYPICAL COMPONENTS



LOCATION OF RADIAL-CONVERGING POLE PIECES



BOTTOM VIEW OF BASE

