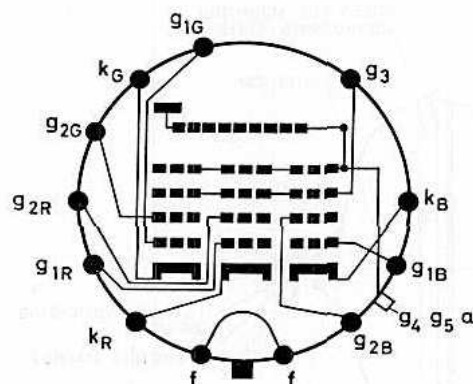


Colour Picture Tubes

A 55-14 X

For Replacement



ITT-Picture Tube A 55-14 X is a rectangular colour picture tube with 90° deflection angle and 36,5 mm neck diameter. The useful screen area of 1465 cm^2 (appr.) has nearly straight sides of $44 \times 35 \text{ cm}$ (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 gun axes are tilted slightly towards the tube axis and operates on the shadow mask principle.

The gun axes are tilted slightly toward 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. Generalities

Bulb	All-Glass Type with Convex Rectangular Faceplate Filter-Glass	
Minimum Useful Screen Dimensions	Diagonal	514 mm
	Horizontal	443 mm
	Vertical	346 mm
	Aspect Ratio	3 x 4
	Area (approx.)	1465 cm^2
Deflection Angles	Diagonal	90°
	Horizontal	79°
	Vertical	63°
Neck Diameter	36,5 mm	
Overall Length	$483 \pm 9,5 \text{ mm}$	
Weight	16 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	285 ... 685 V
at $(-U_{g1}) = 150$ V	
$(-U_{g1})$ cutoff ④	95 ... 190 V
at $U_{g2} = 400$ 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}	$\leq -45 \dots + 15 \mu A$
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	2500 pF
$C_{g4g5a/m}$ min	2000 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.

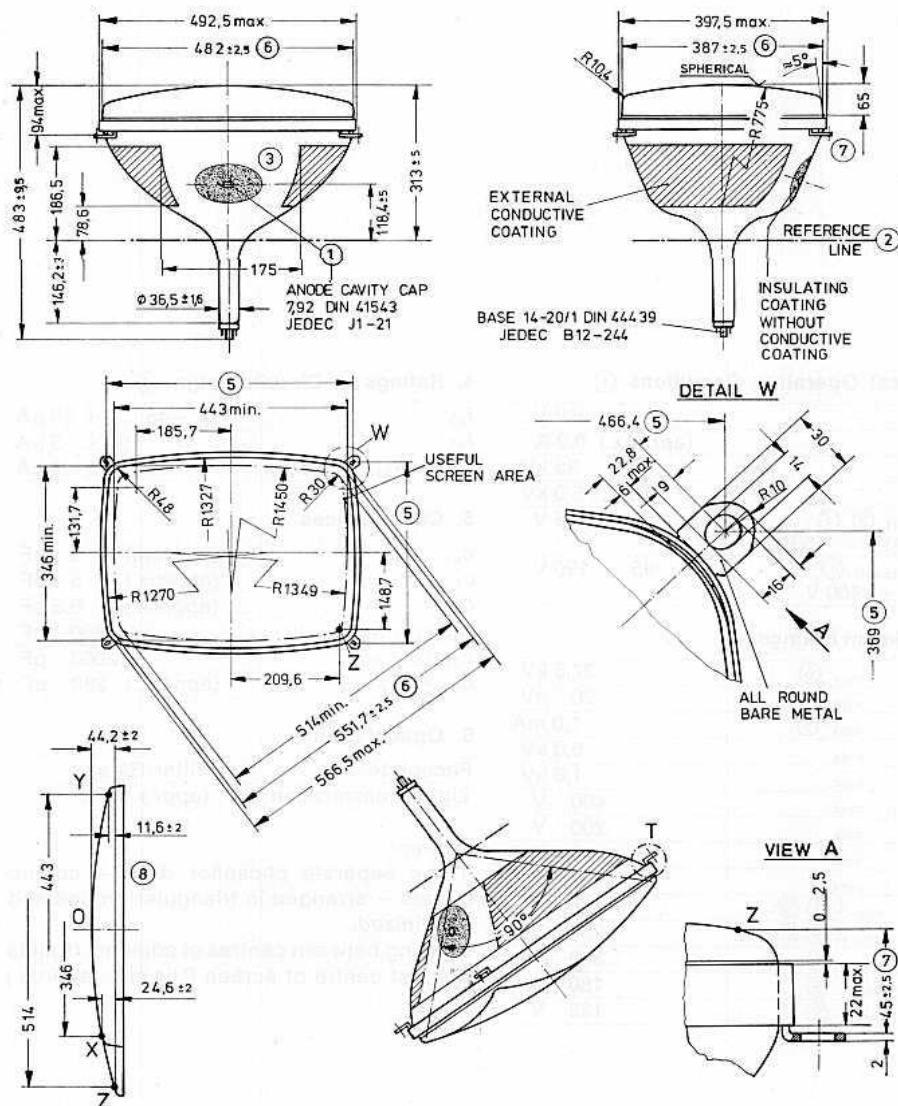
Spacing between centres of adjacent triplets nearest centre of screen 0,64 mm (approx.)

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Dimensional Drawings in mm



A 55-14 X

O Notes see pages 68 and 69

Reference line gauge see page 66

