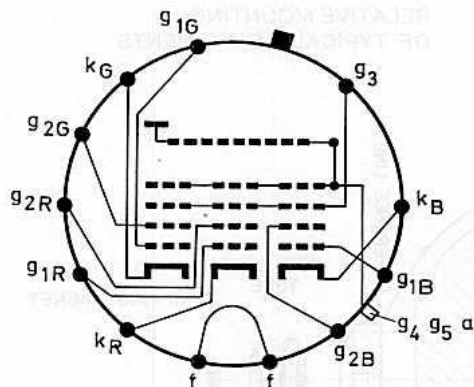


Colour Picture Tubes

A 67-150 X

A 67-510 X



ITT-Picture Tube A67-150X (A67-510X) is a rectangular colour picture tube with 110° deflection angle and 29 mm neck diameter. The useful screen area of 2100 cm² (appr.) has nearly straight sides of 53 x 40 cm (appr.) with 3 x 4 aspect ratio. The filter-glass of the faceplate has a light transmission of 49,5% (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	
Internal Magnetic Shield		
Minimum Useful	Diagonal	626 mm
Screen Dimensions	Horizontal	528 mm
	Vertical	396 mm
	Aspect Ratio	3 x 4
	Area (approx.)	2100 cm ²
Deflection Angles	Diagonal	110°
	Horizontal	97°
	Vertical	77°
Neck Diameter	29 mm	
Overall Length	432 ± 6 mm	
Weight	20 kg (appr.)	
Base	JEDEC B 12–260	
Heating Time ⑪	5 ₀ (approx.) A67-510X	
Implosion	Steel-Jacket Including	
Protection	Tube Mount	

Colour Picture Tubes

A 67-150 X

A 67-510 X

2. Typical Operating Conditions ①

U_f ②	6,3 V
I_f A 67-150 X	(approx.) 0,780 A
I_f A 67-510 X	(approx.) 0,730 A
U_{g4g5a}	25 kV
U_{g3}	4,2 ... 5,0 kV
U_{g2} cutoff ③ ④	160 ... 445 V
at $(-U_{g1}) = 105$ V	
$(-U_{g1})$ cutoff ④	76 ... 162 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	450 V
$U-f/k$ max 2 ⑨ ⑩	200 V
$U-f/k$ p max ⑨	200 V
$U+f/k$ p max ⑨	200 V
$U+f/k$ max ⑨	0 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. 3,8 pF
C_k	approx. 6,3 pF
C_{g3}	approx. 2,6 pF
$C_{g4g5a/m}$ max	2500 pF
$C_{g4g5a/m}$ min	2000 pF
$C_{g4g5a/m}$ '	approx. 450 pF

6. Optical Data

Faceplate:	Filter-Glass
Light Transmission	(appr.) 49,5%

Screen:

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

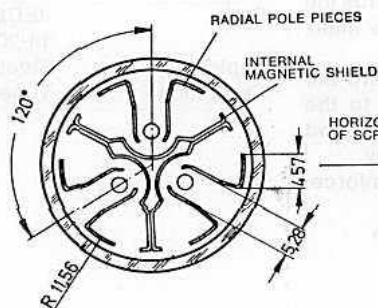
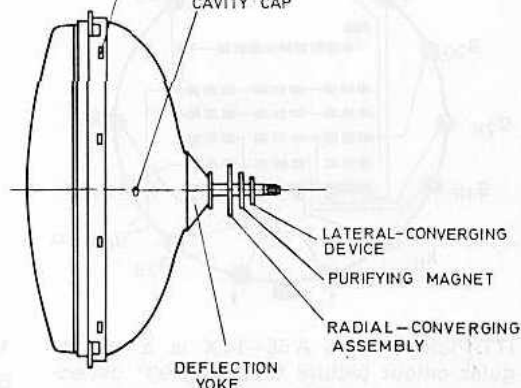
Spacing between centres of adjacent triplets nearest centre of screen 0,66 mm (appr.).

A 67-510 X

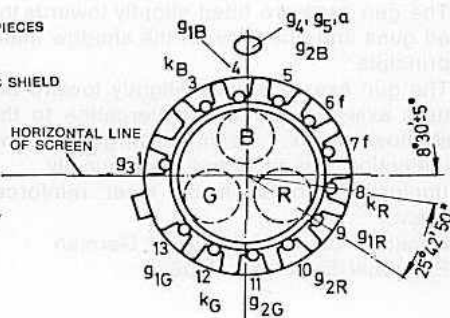
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A 67-510 X

CAVITY CAP



LOCATION OF RADIAL-CONVERGING POLE PIECES



BOTTOM VIEW OF BASE