

Title (en)  
ELECTRON TUBE

Title (de)  
ELEKTRONENSTRAHLRÖHRE

Title (fr)  
TUBE ELECTRONIQUE

Publication  
**EP 1152448 A4 20060419 (EN)**

Application  
**EP 99901128 A 19990121**

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Abstract (en)  
[origin: WO0044027A1] An electron tube (10) is mainly composed of a side tube (12), an input plate (14) having a photocathode (18), a stem (16), and a CCD device (20). The inside of the electron tube (10) is in a high vacuum state. The CCD device (20) is secured to the stem (16), with the back (B) of the CCD device (20) opposed to the photocathode (18). In the CCD device (20), on a semiconductor substrate (64) made of a semiconductor of one conductivity type are formed a buried layer (66), a barrier layer (68), an SiO<sub>2</sub> layer (70), a storage electrode layer (72), a transfer electrode layer (74), and a barrier electrode layer (76) in respective predetermined positions. On them, a PSG film (78) is formed over the entire surface (A) to planarize the surface of the CCD device (20). Further, on the film (78), an SiN film (106) mainly made of SiN is formed over the entire surface (A).

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**H01J 31/26** (2013.01); **H01J 31/49** (2013.01); **H01J 2231/50073** (2013.01)

Citation (search report)  
• [Y] US 4044374 A 19770823 - ROBERTS CHARLES GRADY, et al  
• [Y] US 3864724 A 19750204 - KUBO SHUJI, et al  
• [A] US 4682021 A 19870721 - FITTS ROBERT W [US]  
• [Y] PATENT ABSTRACTS OF JAPAN vol. 018, no. 238 (E - 1544) 6 May 1994 (1994-05-06)  
• See references of WO 0044027A1

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