

Title (en)  
ELECTRONIC TUBE SYSTEM AND METHOD OF MANUFACTURING SAME

Title (de)  
RÖHRENSYSTEME UND HERSTELLUNGSVERFAHREN HIERZU

Title (fr)  
SYSTEME DE TUBES ELECTRONIQUES ET SON PROCEDE DE PRODUCTION

Publication  
**EP 0885453 A2 19981223 (DE)**

Application  
**EP 97918006 A 19970303**

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Abstract (en)  
[origin: DE19609234A1] In known electronic tube systems the upper limit frequency and noise characteristics are limited by the known methods of producing miniaturised multiple electrode tubes, i.e. diodes, triode tubes and multi-electrode tubes. The tube systems disclosed here comprise one or more field-emission or field-ionisation cathodes connected in parallel for electrons or ions, a grid electrode with one or more annular apertures, and one or more anodes. All electrodes are formed consecutively or simultaneously, using corpuscular radiation lithography with indexed deposition, on a planar conducting strip structure which delivers the voltages. The electrode spacing is made sufficiently small to ensure that on average only a mean free path length of the molecules at normal pressure can pass between the emitters and the anode. The range of possible uses of the invention is very wide but relates in particular to high-frequency technology.

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