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54 Electron emission element.

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57 An electron emission element comprises a P-type semiconductor substrate (1) and electrodes (2, 3) formed on both ends of the semiconductor substrate. A voltage is applied between said electrodes. The P-type semiconductor substrate is irradiated with light to emit the electrons, generated in the P-type semiconductor substrate by photoexcitation, from an electron emitting face (4) at an end of the P-type semiconductor substrate.

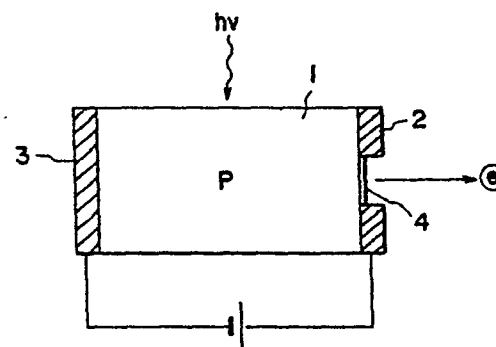


FIG. 1



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
Y	US-A-3 872 489 (GTE LABORATORIES INC.) * Figure 1; page 2, lines 26-45; * ---	1,5,6	H 01 J 1/34 H 01 J 1/30
Y	EP-A-0 041 119 (IBM CORP.) * Figure 6; page 7, lines 13-14,23-26; *	1,5,6	
A	---	3,4,11	
Y	FR-A-1 460 237 (MATSUSHITA ELECTRIC IND. CO.) * Figure 1; page 1, column 2, lines 4-5, + lines 11-16; page 1, column 2, lines 28-40 * ---	3,4,11	
A	US-A-3 624 273 (A.J. GALE) * Figure 12; page 6, lines 13-26; * ---	7-10	
A	US-A-3 119 947 (CLEVITE CORP.) * Page 2, lines 48-52; * -----	13	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			H 01 J 1 H 01 L 31 H 01 J 29 H 01 J 43
The present search report has been drawn up for all claims			
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CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			