

9706138-6
IPQS



PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : H01J 1/62, 63/04	A1	(11) International Publication Number: WO 96/38854 (43) International Publication Date: 5 December 1996 (05.12.96)
(21) International Application Number: PCT/US96/08254 (22) International Filing Date: 31 May 1996 (31.05.96) (30) Priority Data: 08/458,137 2 June 1995 (02.06.95) US 08/459,033 2 June 1995 (02.06.95) US (71) Applicant: ADVANCED VISION TECHNOLOGIES, INC. [US/US]; 40 Sandringham Road, Rochester, NY 14610 (US). (71)(72) Applicant and Inventor: POTTER, Michael, D. [US/US]; East Shore Road, P.O. Box 174, Grand Isle, VT 05458 (US). (74) Agent: TOUW, Theodore, R.; 4 Forest Lane, Westford, VT 05494 (US).		(81) Designated States: AU, BR, CA, CN, HU, JP, KP, KR, MX, NO, NZ, PL, RU, (6) TR, UA, VN, Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

(54) Title: **LATERAL-EMITTER FIELD-EMISSION DEVICE WITH SIMPLIFIED ANODE AND FABRICATION THEREOF**

(57) Abstract

A lateral field-emission device (10) has a lateral emitter (100) substantially parallel to a substrate (20) and has a simplified anode structure (70). The anode's top surface is precisely spaced apart from the plane of the lateral emitter and receives electrons emitted by field emission from the edge of the lateral emitter cathode, when a suitable bias voltage is applied. The device may be configured as a diode, or as a triode, tetrode, etc. having control electrodes (140) positioned to allow control of current from the emitter to the anode by an electrical signal applied to the control electrode.

