**PCT** WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

| (51) International Patent Classification 7 : H01L 21/00 | A2 | (11) International Publication Number: WO 00/14775 |
|---|---|---|
| | | (43) International Publication Date: 16 March 2000 (16.03.00) |

(21) International Application Number: PCT/IB99/01710

(22) International Filing Date: 8 September 1999 (08.09.99)

(30) Priority Data:
09/150,280 9 September 1998 (09.09.98) US

(71) Applicant: STEAG RTP SYSTEMS, INC. [US/US]; 4425 Fortran Drive, San Jose, CA 95134-2300 (US).

(72) Inventor: HATHAWAY, Kevin; 940 Hutchinson Avenue, Palo Alto, CA 94301 (US).

(81) Designated States: JP, KR, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

**Published**
*Without international search report and to be republished upon receipt of that report.*

(54) Title: HEATING DEVICE CONTAINING A MULTI-LAMP CONE FOR HEATING SEMICONDUCTOR WAFERS

(57) Abstract

An apparatus for heat treating semiconductor wafers is disclosed. The apparatus includes a heating device which contains an assembly of light energy sources for emitting light energy onto a wafer. In particular, the present invention is directed to a heating device that contains at least one heating cone. The heating cone of the present invention includes a circular reflector that can be conically-shaped. A plurality of light energy sources are contained wihtin the reflector. The light energy sources can be vertically oriented or can be tilted slightly towards the central axis of the heating cone. In this arrangement, it has been discovered that the heating cone produces a uniform irradiance distribution over a wafer being heated.