

LIGHT BEAM SCANNING SYSTEM

ABSTRACT

The present application relates to the technical field of optical scanning, and specifically discloses a light beam scanning system. The system comprises a beam splitting apparatus, an
5 optical waveguide array, a light beam combining member, a light beam adjusting apparatus and a phase adjusting apparatus. The beam splitting apparatus receives a laser light beam, and divides the laser light beam into a plurality of sub-beams and then emits the sub-beams; the optical waveguide array is used to receive the plurality of sub-beams and transmit the plurality of sub-beams to a predetermined waveguide emergent end; the light beam combining member is
10 connected to the optical waveguide array, each sub-beam emitted by the waveguide emergent end is subjected to diffraction and superposition in the light beam combining member, and the combined beam is focused on a predetermined light beam emergent surface; the light beam adjusting apparatus is used to expand and collimate the light beam emitted from the light beam emergent surface to form a scanning light beam; the phase adjusting apparatus is used to adjust
15 the relative phase distribution of the waveguide wavelets in the optical waveguide array, so as to adjust the focus position of the combined light beam on the light beam emergent surface, and carry out light beam scanning in a first direction. Thus, the problem of large coupling interference of the phase control waveguide array is solved.

20 FIG. 2