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(71) Applicant: **ADVANCED MICRO FOUNDRY PTE. LTD.** [SG/SG]; 11 Science Park Road, Singapore 117685 (SG).

(72) Inventors: **TAN, You Sian James**; 11 Science Park Rd, Singapore 117685 (SG). **LUO, Xianshu**; 11 Science Park Rd, Singapore 117685 (SG).

(74) Agent: **LO, Wen Yu**; 77 Robinson Road, #22-01 Robinson 77, Singapore 068896 (SG).

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(54) Title: WIDE-ANGLE BEAM STEERING WITH REDUCED CONTROL COMPLEXITY

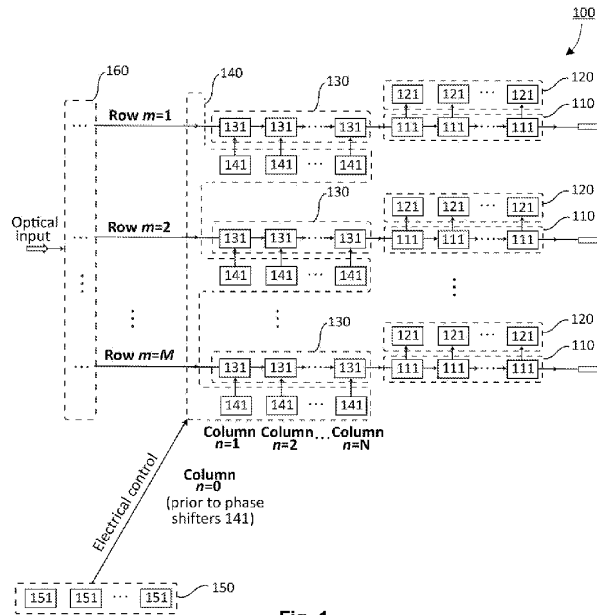


Fig. 1

(57) Abstract: The present disclosure relates to an optical phased array which comprises photonic components for on-chip beam forming and steering, and is adapted to use at least one optical phase shift control element which is configured to be electrically modulated to steer the direction of an output optical field of an emitted beam having a wavelength which ranges from visible light to a short-wavelength infrared region. The photonic components comprise simultaneously-modulated optical phase shifters of monotonically varying dimensions independently positioned on, below, or otherwise integrated to each optical waveguide connected to the beam emitters. Such an optical phased array is useful in LiDAR systems, and transceivers.

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