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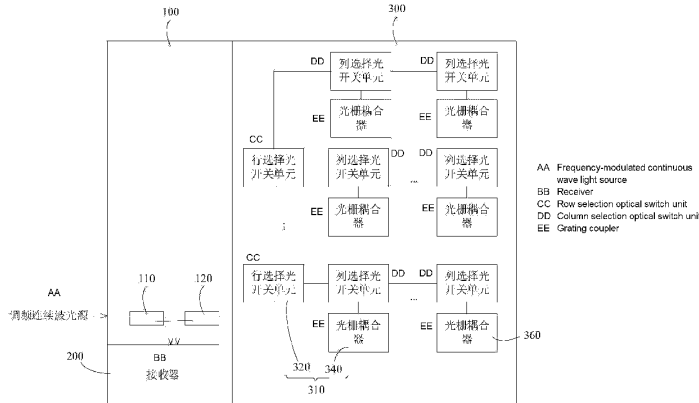
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- (81) 指定国(除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW。
- (84) 指定国(除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE,

(54) Title: LIDAR CHIP AND LIDAR

(54) 发明名称: 激光雷达芯片和激光雷达

[图1]



(57) Abstract: The present application relates to a LiDAR chip and a LiDAR. The LiDAR chip comprises an optical splitter, a beam splitter, a receiver and a transmitter, the transmitter being a focal plane switch array transmitter; the transmitter comprises an optical switch array and a grating coupler array, the grating coupler array being connected to the optical splitter by means of the optical switch array, and the optical splitter being connected to the receiver; the grating coupler array is connected to the receiver by means of the beam splitter, the beam splitter being connected to the optical splitter. The LiDAR chip receives a laser signal, and outputs measurement light to the focal plane switch array transmitter by means of the optical splitter while outputting local oscillation light to the receiver by means of the optical splitter; by means of a corresponding optical switch, the optical switch array introduces into a corresponding grating coupler in the grating coupler array the measurement light which is then emitted by means of said grating coupler; a reflection echo received by a grating coupler is subjected to polarization splitting by means of the beam splitter and is then transmitted to the receiver; the grating couplers are dual-polarization grating couplers.

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HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO,
PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN,
TD, TG)。

根据细则4.17的声明:

- 关于发明人身份(细则4.17(i))
- 关于申请人有权申请并被授予专利(细则4.17(ii))
- 发明人资格(细则4.17(iv))

本国际公布:

- 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本申请涉及一种激光雷达芯片和激光雷达, 激光雷达芯片包括分光器、分束器、接收器和发射器, 发射器为焦平面开关阵列发射器, 发射器包括光开关阵列和光栅耦合器阵列, 光栅耦合器阵列通过光开关阵列连接分光器, 分光器同时与接收器相连, 光栅耦合器阵列通过分束器与接收器连接, 分束器与分光器相连; 激光雷达芯片接收激光信号, 通过分光器输出测量光至焦平面开关阵列发射器, 同时通过分光器输出本振光至接收器; 光开关阵列通过相应的光开关来将测量光导入到光栅耦合器阵列中相应的光栅耦合器, 并通过光栅耦合器出射; 光栅耦合器接收到的反射回波通过分束器进行偏振分束后传输至接收器; 光栅耦合器为双偏振光栅耦合器。