

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
30 January 2020 (30.01.2020)



(10) International Publication Number
WO 2020/023427 A1

(51) International Patent Classification:

G01B 11/24 (2006.01) G02B 27/00 (2006.01)
G01B 11/02 (2006.01) G02B 21/00 (2006.01)
G02B 7/02 (2006.01)

(21) International Application Number:

PCT/US2019/042897

(22) International Filing Date:

23 July 2019 (23.07.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/702,894 24 July 2018 (24.07.2018) US
16/513,091 16 July 2019 (16.07.2019) US

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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
MG, MK, MN, 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, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(54) Title: CHROMATIC CONFOCAL AREA SENSOR

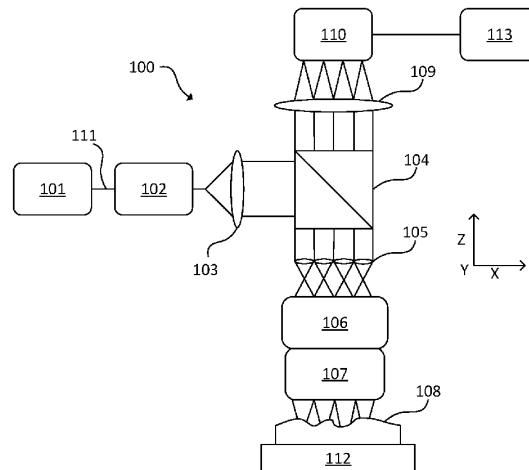


FIG. 1

(57) Abstract: 3D measurements of features on a workpiece, such as ball height, co-planarity, component thickness, or warpage, are determined. The system includes a broadband light source, a microlens array, a tunable color filter, a lens system, and a detector. The microlens array can focus a light beam to a points in a focal plane of the microlens array. The tunable color filter can narrow the light beam to a band at a central wavelength. The lens system can provide longitudinal chromatic aberration whereby different wavelengths are imaged at different distances from the lens system.

[Continued on next page]

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, 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).

Published:

— with international search report (Art. 21(3))