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(54) **COMPOUND MODULATION TRANSFER FUNCTION FOR LASER SURGERY AND OTHER OPTICAL APPLICATIONS**

(75) Inventors: **Guang-Ming Dai**, Fremont, CA (US);
Kingman Yee, San Jose, CA (US)

(73) Assignee: **AMO Manufacturing USA, LLC.**,
Santa Ana, CA (US)

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(60) Provisional application No. 60/519,885, filed on Nov. 13, 2003, provisional application No. 60/468,387, filed on May 5, 2003, provisional application No. 60/468,303, filed on May 5, 2003, provisional application No. 60/431,634, filed on Dec. 6, 2002.

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(52) **U.S. Cl.** **351/205; 351/212; 351/219; 351/246; 351/247**

(58) **Field of Classification Search** **351/205, 351/212, 219, 246, 247**
See application file for complete search history.

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Primary Examiner — Jack Dinh

(74) *Attorney, Agent, or Firm* — AMO Manufacturing USA, LLC

(57) **ABSTRACT**

Methods, devices, and systems establish an optical surface shape that mitigates or treats a vision condition in a patient. An optical surface shape for a particular patient can be determined using a set of patient parameters for the specific patient by using a compound modulation transfer function (CMTF). The compound modulation transfer function can include a combination of modulation transfer functions (MTF's) at a plurality of distinct frequencies.

20 Claims, 45 Drawing Sheets

