

## Medical optical scanner

A disclosed optical scanner apparatus can include a member having spaced apart proximal and distal portions. An optical scanning device can be configured to direct optical radiation, which is moveably coupled to the proximal portion of the member and can be configured to rotate in a plane of movement to a first position to direct the optical radiation along a first path and can be configured to rotate in the plane of movement to a second position to direct the optical radiation along a second path. A MicroElectroMechanical Systems (MEMS) actuator can be coupled to the optical scanning device, where the MEMS actuator can be configured to move in a first direction to move the optical scanning device to the first position and can be configured to move in a second direction to move the optical scanning device to the second position. The MEMS actuator can have proximal and distal portions, where the distal portion of the MEMS actuator is coupled to the proximal portion of the member and the proximal portion of the MEMS actuator is coupled to the optical scanning device. Other scanner apparatus are disclosed.

### Patents

Patent Number: 7,706,039

Title: Scanner Apparatus Having Electromagnetic Radiation Devices Coupled to MEMS Actuators

Country: United States of America

Patent Number: 8,400,697

Title: SCANNER APPARATUS HAVING ELECTROMAGNETIC RADIATION DEVICES COUPLED TO MEMS ACTUATORS

Country: United States of America

# Duke

## LICENSING & VENTURES



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