

LASER SYSTEM FOR SIMULTANEOUS  
TEXTURING OF TWO SIDES OF A SUBSTRATE

ABSTRACT

A laser system which concurrently directs diffracted beams (14a, 14b) derived from an initial laser beam (16) to both sides of a substrate (95). The diffracted beams may be generated with sufficient energy to soften spots on the substrate to form texture bumps as are used on substrates for magnetic disks. The diffracted beams are generated by a multichannel acousto-optic modulator (12) (MCAOM) having at least two channels. The crystal in the MCAOM has at least two mounting faces oriented so that the transducers (13a, 13b) generate acoustic fields which intersect the incident laser beam at the Bragg angle. Energizing any of the transducers causes a corresponding first order beam to be diffracted out. The diffracted beams are generated by alternating driving signals to transducers to produce two beams with pulse intensity greater than 50% of that of the incident beam which can be directed to opposite sides of a substrate.

Figure 9