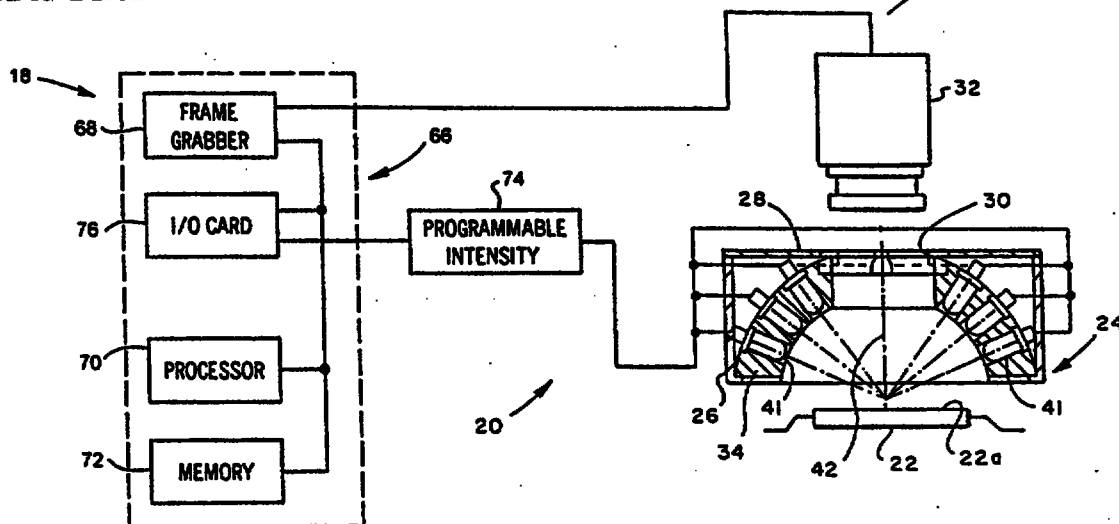




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(54) Title: ADAPTIVE LIGHTING SYSTEM AND METHOD FOR MACHINE VISION APPARATUS



(57) Abstract

A variable intensity lighting system (20) for use with a machine vision apparatus (18) for capturing high contrast images of articles to be inspected (22), such as semiconductor packages, includes an LED or optical fiber and flash lamp array (24) configured in multiple segments which are operable to be controlled as to light output intensity by a programmable intensity control circuit (74) operably connected to a microprocessor (66). The intensity control circuit includes multiple digital potentiometers operable to control selected segments of the lighting array. The control circuit is adapted to control up to 64 segments of the lighting array individually at 64 incremental intensity levels, respectively. The control circuit may include a light failure module to detect a segment failure or a reversed connection.