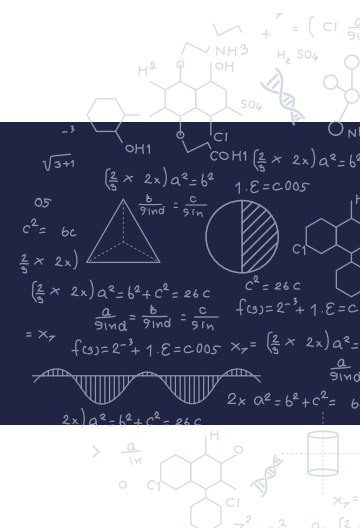


# LICENSING OPPORTUNITY: THE SMART MIRROR



## DESCRIPTION

### Problem

The design overcomes the limitations of allowing simultaneous power measurement during laser use. The non-thermal approach of the Smart Mirror reduces measurement time, which allows for better sensing of rapid changes in laser power.

### Invention

The Smart Mirror is a device that accurately measures the power of laser sources without disturbing the laser beam. This is a promising technology for accurate monitoring of output power in industrial lasers that allows power measurement during the laser's performance of its routine operations. Such high-accuracy, non-exclusive power monitoring has not been previously possible. The novelty is in a radically different approach where the laser power is determined by measuring the force of the light as it reflects from a mirror. This device operates across a power range of 25W to 500W.

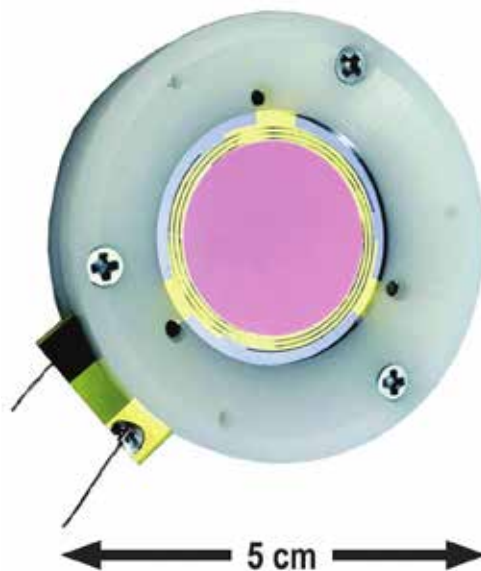
## BENEFITS

### Commercial Application

- Small, robust package for use on factory floor.

### Competitive Advantage

- This device is a miniaturized (less than 5 cm on a side), mirrored, force sensor that combines several key elements to make the sensor smaller, faster, and more sensitive to force.
- Highly accurate measurements that can be made in real time.
- Can be calibrated in-house using standard reference masses.
- Does not absorb laser light.



A mounted pair of springs with high ref ectivity mirror designed for 1070 nm laser incident at 45 degrees.

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