



## LED Pumped Lasers and Amplifiers

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**Summary:** A method and apparatus for pumping solid state lasers and amplifiers using high-powered LED arrays

**Description:** Since the invention of the laser, many practical applications have strongly been tied to the development of pumping sources. This invention is of a method and apparatus for pumping solid state lasers and amplifiers using high-powered Light Emitting Diode (LED) arrays. LEDs can deliver high energy output in pulsed mode, and the visible wavelengths available spectrally match the absorption of several important gain media that are not easily pumped with laser diode. This method can be used in both the oscillator and amplifier stages as well as in continuous and variable repetition rate pulsed modes without changing the pump source. The developed LED-pumped laser systems provides several advantages over current state-of-the-art optically-pumped laser heads, including a reduction in cost and system complexity.

### Main Advantages of this Invention

- High electrical-to-optical efficiency
- Compact design
- Long-operation lifetimes
- Lower cost

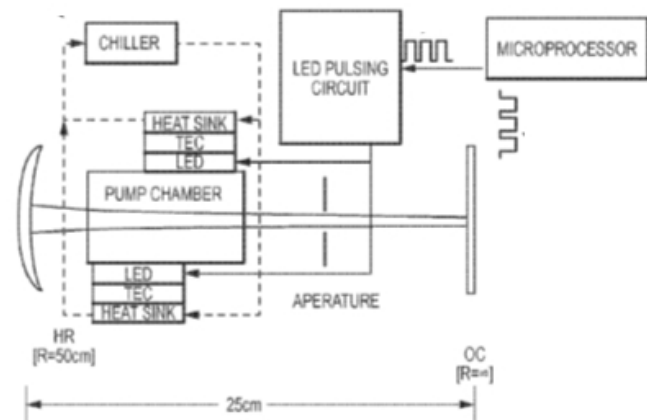
### Potential Areas of Application

- Medical applications
- Manufacturing applications

**ID number:** 14016

**Intellectual Property Status:** US utility patent pending (application #14/689,753)

**Opportunity:** We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.



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