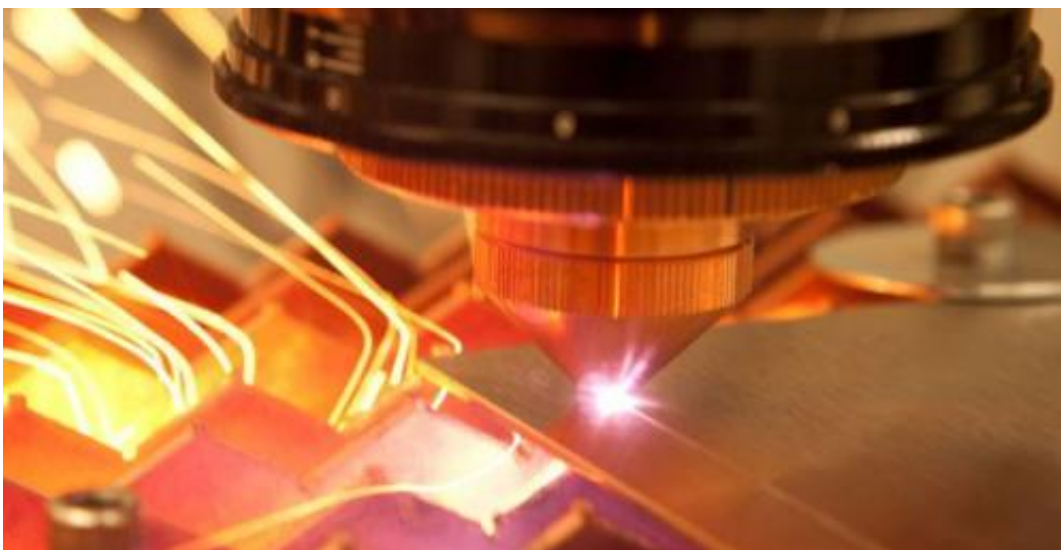


## MIT Lincoln Lab spinout unveils new more powerful direct-diode laser

July 8 2011, by Bob Yirka

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(PhysOrg.com) -- TeraDiode, a spinout company from MIT Lincoln Lab and located nearby in Littleton, MA, has unveiled, a new powerful direct-diode laser capable of cutting all the way through steel up to half an inch thick at various speeds. The laser is based on technology developed by company co-founders Dr. Bien Chann and Dr. Robin Huang while still at MIT.

The new [laser system](#) is based on [semiconductor technology](#), which means it uses [electricity](#), rather than chemicals, and employs an optical

system that directs multiple individual beams into one single stronger one, and, according to [the company website](#), the laser has "revolutionary TeraDrive technology" that has "coupled 1000 watts into a 200 um, 0.18 NA fiber." Which means, it is assumed, that they believe they have succeeded in creating the most powerful direct-diode laser ever; one that is also brighter and more focused than those that came before it.

The bottom line here appears to be that the company has put together [laser technology](#) that when deployed, will be smaller than others that have similar strength, and will be both more compact, and more efficient; making it perhaps, at last, suitable for creating laser guns like we've been seeing in science-fiction movies for years.

Company CEO David Sossen says that the new laser breaks through the limiting factors that have held back the use of truly powerful lasers in all but manufacturing pursuits; namely, the inefficiencies and huge power appetites normally associated with powerful lasers, and can "output between several hundred and several thousand [watts](#), and in principle up to 100 kilowatts," all in a package that is smaller than other laser systems currently available.

The company makes clear it sees its new technology as not just a new tool for manufacturing, but as a future weapon that could be placed aboard a tank or ship in perhaps as few as five years. In the meantime, the company says it will be focusing on testing the new technology to see if it might be used in missile defense, such as connecting it to the back of a fighter plane to stymie the technology in heat-seeking weapons currently used in anti-aircraft missiles, or better yet, to simply destroy them.

**More information:** [teradiode.com/](http://teradiode.com/)

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