

# Energy storage system of laser weapons

## ◆ PRODUCT INFORMATION ◆



-  **BATTERY CAPACITY**  
50kWh~500kWh
-  **DC VOLTAGE RANGE**  
400V~1000V
-  **DEGREE OF PROTECTION**  
IP54
-  **OPERATING TEMPERATURE RANGE**  
-10~50°C



## Energy storage system of laser weapons

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[The US Navy brought a 'one-of-a-kind' laser weapon back from the dead](#)

The Navy's Directed Energy Systems Integration Laboratory, or DESIL, a Naval Base Ventura County, California, facility that evaluates laser weapons in a maritime environment, "ramped

### HIGH ENERGY LASER SYSTEMS FOR DIRECTED ENERGY

DIODE PUMP SOURCES FOR DIRECTED ENERGY LASERS it is essential to develop, and optimize the laser diode pump sources. Pump sources are the single largest contributors to the size, weight



### Power Generation and Storage for Directed Energy Systems

Current prototype laser weapon systems and projected future systems require increasing levels of electrical power to generate the laser energy needed to defeat threats.

### High Energy Laser Weapon System

The increased power provides lethality at longer ranges and increased effectiveness against hard targets. The system's modular, scalable design also offers significant reductions in size, weight, and



### LASER WEAPON SYSTEMS

Laser weapons are a revolutionary technology



### **Directed Energy Weapons: Power Requirements Explained**

Advanced energy storage: higher-power-density capacitors, solid-state batteries and hybrid systems reduce mass and boost peak power delivery. Adaptive optics and predictive control:

because of the advantages of speed, flexibility, precision and low cost per engagement that are only possible with lasers. These advantages apply to stand



### [Advancing Military Lasers: Key Energy Storage Technologies for](#)

Discover advanced energy storage technologies for lasers, essential for optimizing directed energy weapons and enhancing system performance and reliability.

### [Power systems and energy storage modeling for directed energy](#)

Directed energy weapons are being deployed onboard naval platforms starting in 2014, and this paper seeks to answer the question of what energy storage, if any, must be used in



### **SHIELD ATD: BRINGING LIGHT TO THE FIGHT**

Decades of research driven by AFRL along with our industry and government partners has led to smaller, increasingly powerful and more precise laser weapons. Today's technology

**Directed Energy Professional Society, DE,**

## HEL, RF and HPM

The simplest material for thermal storage is a metal such as copper with sensible heat used as a means to store energy. However, the weight required of the TES can be significantly reduced if the latent



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