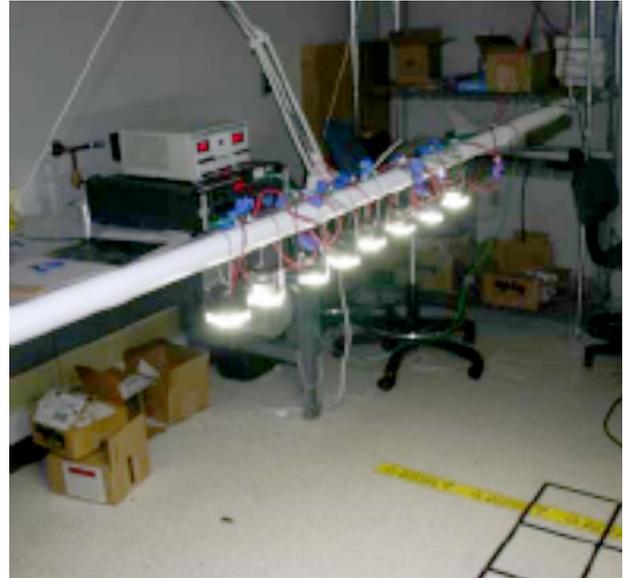




SOLID STATE LIGHTING FOR SHELTERS I | STEFD

Start/Completion Dates: February 2006 - February 2008

- NSRDEC and Techshot are developing a solid state lighting system using LED luminaries. LEDs have the advantage of producing an efficient, lightweight, rugged lighting system that is integral to shelter systems. The Techshot Shelter Lighting System (SLS) provides lighting intensity and uniformity required for battlefield or other temporary military structures. The SLS is an adjustable illumination assembly for battlefield shelters in a package that is robust, transportable and reliable. The SLS is shatterproof, containing no fragile components subject to early failure or fault. The SLS is an ideal system for deployed Medical or Command and Control structures requiring high intensity and uniform lighting. This system can operate from a wide range of AC or DC input power including solar (photovoltaic), AC generator, vehicular, stationary, fuel cell or battery. In addition, the system is designed to provide uninterrupted power via an internal secondary battery backup circuit.



**LIGHT MODULE ASSEMBLIES (LMAS)
STRING TEST SET-UP**

- The SLS consists of a power controller unit and a Flexible Illuminator Assembly (FIA). The FIA is a string of light module assemblies (LMAs) that house multiple LEDs and their driving electronics. The FIAs not only provide superb lighting but can also be stored and transported within the structure, eliminating the substantial logistical issues common with the fragile fluorescent systems. For those applications not requiring a 700 lumen light source, the FIA can be constructed to support lower intensity general purpose needs, or the SLS can provide dimming capabilities. The FIA can also be configured as a drop-in replacement for permanent, removable, underwater, and other mission critical fixtures.
- The SLS is currently in the second year of a Small Business Innovation Research (SBIR) Phase II program. The SLS design has been completed, and a complete SLS including a touch-sensitive power controller unit with dimming function will be delivered to NSRDEC in early FY08. Human factors testing will be conducted once delivered to NSRDEC to verify SLS performance and to gain the invaluable input of Soldiers.
- Techshot is in the process of identifying industry partners for mass production and integration into Army shelters.

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