

## FY12 Solid-State Lighting Award Selections 6-7-12

<b>Solid-State Lighting Manufacturing Projects</b>				
Award Winners	City, State	Project Description	DOE Funding	Total Project Funding
Cree Inc.	Durham, NC	This project plans to develop an optimized LED fixture design for efficient manufacture that can be readily integrated into buildings and outdoor applications and uses fewer raw materials – all without compromising the performance of the light source. This project builds on Cree’s existing LED platform and has the potential to quickly reduce the cost of an already highly efficient LED fixture and allowing it to compete with existing fluorescent systems. The goal is to efficiently provide warm-white light and a minimum lifetime of 50,000 hours, while reducing the cost of manufacturing the major components and assembled product.	\$2,344,000	\$3,044,000
KLA-Tencor	Milpitas, CA	This project plans to remove one of the major barriers to the adoption high-efficiency LED lighting – namely, the difficulty of providing low-cost white light that has consistent color quality and brightness. Current practice is to separate LEDs according to color during the manufacturing process in order to maximize product yield. Unfortunately, this creates variation in light output and color quality of the product, leading to reduced performance and increased costs. KLA-Tencor seeks to improve the color consistency of LEDs by utilizing a measurement tool during manufacturing that reduces the variation in LED quality, improving performance and reducing cost.	\$3,995,000	\$7,989,500
k-Space Associates	Dexter, MI	Most monitoring of the OLED layers during the manufacturing process currently takes place after the fact, so that if problems are detected there’s little or no chance to change the production inputs. This project plans to create a more efficient manufacturing process, building on KSA’s existing optical monitoring technology to enable high-precision measurements of OLED layers during mass production. The tool will measure layer thickness and composition to ultimately control the OLED efficiency, color, and lifetime of OLEDs. This development, a first for the industry, will serve as a platform for future large-scale OLED production facilities, paving the way for a strong U.S. presence in OLED manufacturing.	\$800,000	\$1,200,000