Avnet Electronics Marketing 1700 NW 167th Place Suite 230 Beaverton, OR 97006

Hi Richard:

Please allow me to introduce myself. I am Doug Hardman, and I work in the solid-state lighting division of Avnet Electronics. We are a \$12B distributor of electronic components world-wide. My particular division is called Lightspeed. It is our charter to work specifically with new and existing customers to facilitate moving from traditional light sources to LED.

I think it is terrific the DOE is recognizing the value and potential of this technology, and there are new innovations all the time. What I am contacting you about in particular is your lumen maintenance requirement. I am concerned 35,000 will prohibit some immediate change-over, since most of the vendors have a 20,000 hour spec for bright white LED's. Have you thought of starting at 20,000, then pushing the suppliers to 35,000 in the near future?

Also, the lifetime spec can be elusive from some suppliers and must be defined. For example, some LED suppliers will fiddle with the first 1,000 hours of an LED's life. This is where the most significant drop-off in intensity occurs in the shortest amount of time. It is much more gradual over the rest of the LED's life. If this first 1,000 hours is linearly extrapolated, or otherwise fudged, the LED drop-off in intensity to 70% will look a lot better versus when it was initially used.

I look forward to your thoughts.

Regards,

Doug Hardman Sr. Illumineer, Lightspeed