

Bridgelux, Inc.  
101 Portola Avenue  
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14<sup>th</sup> January 2011

Dear Alex,

We would like to offer a few comments to the 3<sup>rd</sup> draft of the Energy Star Requirements for Luminaires, dated December 20, 2010. Once again we appreciate the opportunity to make inputs. All of our comments relate to the specifications for solid state lighting

**Luminous Efficacy and Output Requirements: Non-Directional Luminaires (page 11) and Directional Luminaires, Inseparable Luminaires (page 13-15)**

Although we believe 50LPW is the better LPW rating through 2011, we appreciate EPA's consideration of the total system losses and revision of the efficacy requirements from 70 LPW to 65 LPW until September 2013.

**Light Source Life and Color Requirements: All Luminaires (p.17, p. 23, respectively)**

As stated in our October 20<sup>th</sup> response for the second draft, we strongly believe that end-users and industry are better served with a warranty for slide state lighting luminaires, as now included on page 45 of the current draft, than the testing protocol options specified on pages 17 and 23. We believe that the tragic flaw in the options approach is that the LM-80 test data by itself is an incomplete and potentially misleading indicator of the reliability of the luminaire. It is possible to demonstrate very stable lumen and color maintenance for the LED light source independently but this is not useful if the light source is not effectively designed in to the lighting system.

Additionally, mandatory LM-80 testing of the LED light source delays product introductions by at least 9-12 months. This should be compared to the current pace of technology enhancements in which next generation technology is being launched every 6-9 months. Given the comments in the previous paragraph, we conclude that the Energy Star requirement for LM-80 testing provides an unnecessary burden on LED suppliers and luminaire manufacturers which delays product introductions and consequently delays the availability of energy efficient lighting solutions to customers. LM-80 testing will continue to be important to the industry but it will be used with

an increased level of flexibility by luminaire manufacturers in partnership with their suppliers to develop their warranty positions and should not be mandated in the Energy Star program.

Lastly and importantly, we believe that luminaire manufacturers will logically opt for option one for both lumen and color maintenance, which places emphasis on the LM-80 testing for LEDs. As we have discussed recently with you, we believe that LM-80 testing protocol, designed and implemented around an emitter, creates an uneven competitive playing field for manufacturers of higher level LED products, including arrays and light engines. We do appreciate the added comment in this last draft that states EPA will be revisiting LM-80 sample sizes, and definitions we hope, gathering further input from industry and manufacturers. We look forward to working with you.

We appreciate the process by which EPA is soliciting feedback from the industry. Thanks for your consideration of our comments and questions. Please contact me if you have any questions.

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