



**sea gull lighting®**

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August 25, 2008

Alex Baker  
ENERGY STAR Lighting Program Manager  
US EPA

Dear Mr. Baker,

On behalf of Sea Gull Lighting, I would like to thank you for the opportunity to comment on the technical amendment to the ENERGY STAR Residential Lighting Fixture specification (V4.2).

As a large residential and decorative fixture manufacturer, we feel it is important to have an ENERGY STAR specification that addresses the unique challenges of decorative residential fixtures while accurately accounting for the technical performance of fixtures using LED technology. The residential lighting industry has a number of unique challenges such as how to cost effectively test the hundreds of fixture combinations common to residential lighting when changing the shade, diffuser or providing a fixture with a slightly different size or style but uses the same light source platform and is intended for the same application. It is important to make sure these technical challenges are considered along with the time and financial burden on manufacturers to participate in the ENERGY STAR program.

It appears to be EPA's intent to have the fixture manufacturer conduct independent laboratory measurements of the LED light engine at three different operating temperatures, and use this data in conjunction with *in situ* fixture testing to determine if the fixture passes the proposed ENERGY STAR V4.2 requirements. What is unclear is how fixtures are grouped into "families" to minimize the testing burden on the fixture manufacturer. In addition, EPA should consider allowing the fixture manufacturer to conduct the *in situ* temperature testing at the manufacturer's own laboratory facility.

We also recommend EPA provide some information from laboratories on approximate costs and actual time to conduct the tests, including the estimated time of "waiting in the testing queue." Given that the industry has entered the age of advanced lighting technology, qualified laboratories have an ever increasing backlog. This is in addition to the time to set up, conduct the tests and write the reports.

After review of the *ASSIST Recommends: Recommendations for Testing and Evaluating White LED Light Engines and Integrated LED Lamps Used in Decorative Lighting Luminaires*, it is unclear how the "worst case" testing scenario relates to the ENERGY STAR specification. The testing of the LED light engines in an enclosed box does not appear practical. This adds the burden of building an additional test apparatus and the time and cost to set-up for an additional test that is not necessary. To help the manufacturers know how and what to use from the Assist Recommends document, we recommend that EPA clearly states in the ENERGY STAR specification what tests should and should not be conducted, along with a clearly defined procedure.

Additional questions on the proposed ENERGY STAR specification include:

- Are GU24 based self-contained LED lamps included in the definition of LED Light Engine?
- What is the required CRI for outdoor fixtures?

*A Generation Brands Company*



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- Are there CCT requirements for outdoor fixtures?
- What is the specified period of time when referring to color stability?

As a final note, we appreciate EPA's desire to keep the specification as brief as possible, however in Table 4 EPA should consider including the specific additional requirements for indoor and outdoor fixtures instead of referring to Table 1. This would help clarify the specific characteristics EPA would like the manufacturer to apply to LED light engines.

Thank you for your consideration of these comments.

Sincerely,

Paul Vrabel, LC, PMP  
Director, Energy Efficient Products  
Sea Gull Lighting