



December 8, 2011

Via E-Mail

Mr. Paul Karaffa
U.S. Environmental Protection Agency
ENERGY STAR Decorative Lighting String Program
decorativelightstrings@energystar.gov

Re: ENERGY STAR Program Requirements Product Specification
For Decorative Lighting Strings, Eligibility Criteria and Test Method,
Comments on Draft 1, Version 1.5, November 2011

Dear Mr. Karaffa:

Thank you for the opportunity to review and provide comments on the proposed changes indicated in Version 1.5 of the Decorative Lighting Strings ENERGY STAR Program.

We greatly appreciate this undertaking and inclusion of additional categories under the ENERGY STAR Decorative Lighting String product specification.

Seasonal Specialties is one of the industry leaders of supplying energy efficient and ENERGY STAR decorative lighting products for many years and was a committee member during the development of initial Version 1.4.

We would like to provide the following comments for the Eligibility Criteria and Test Method specifications:

Eligibility Criteria

Scope:

Excluded Products – We request that the definition of Rope Lighting given in the parenthesis of this section be revised to match the ANSI/UL2388 (Standard for Flexible Lighting, aka rope lights) definition to avoid conflict and prevents some decorative light string products from being excluded, because some decorative light string products covered by UL 588 and C22.2 No.37 have tubes over a string of lights, the most common example would be the numerous lighted Candy Canes that you see used indoors and outdoors, where the string of lights are located inside a plastic tube and internally illuminates the candy cane from within the tube.

Our proposed revision is shown below:

Excluded Products: Rope lighting ([non-replaceable series and series/parallel connected lamps fully enclosed and sealed within a flexible polymeric tube or extrusion](#)), (~~light string inside a tube or diffuser fully enclosing the lighted length of the string~~), and replacement lamps are not eligible to earn the ENERGY STAR.

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Table 1, A. Inspection:

- I. **Decorative Forms** - We would request that the “Decorative Forms” ENERGY STAR Requirements include indoor use products. As currently worded, only products that are rated for use both indoors and outdoors could be ENERGY STAR qualified. This contrary to Decorative Light Strings that can be indoor only rated.

There are many “Decorative Forms” such as holiday trees, illuminated window decorations (such as snowmen, Santa, holiday sayings, etc.), indoor illuminated décor (such as table top items), lighted branches, etc. that this would preclude as they may not be suitable for outdoor use and are appropriately marked as indoor use only. In addition, the majority of holiday trees are only rated for indoor use, and only some smaller holiday trees that are intended for porch use are indoor/outdoor rated. In some cases the decorative light strings may be rated for indoor/outdoor use, however, the decorative frame may only be rated for indoor use due to the decorative materials used on the frame. We have revised the requirement to allow for this, otherwise it would be prohibited.

A proposed revision could look like:

All decorative light strings attached to a decorative form shall be ENERGY STAR qualified for ~~indoor/outdoor~~ their intended end use on the decorative form, meet all applicable electrical safety requirements for ~~indoor/outdoor~~ their intended use, and the decorative form shall be rated ~~as such~~ for their intended use. Intended use shall be either indoor only, or indoor/outdoor rated. Indoor/outdoor rated strings are permitted for use on indoor only rated decorative forms.

The allowance for indoor only decorative frames also follows what is currently allowed for Decorative Lighting Strings, which is for DLS to be rated either indoor-only or indoor/outdoor use and shown in Table 1, and shown only a few cells below this section.

- II. **Safety Requirements** – We recommend that the year be removed from the CSA standard reference, so that it is revised to read “C22.2 No.37” as this would allow for the most recent standard to be utilized which is the case for the current reference to UL 588 without edition or year in Table 1. Currently the CSA standard dates back to 1989, and does not have specific requirements for newer technology light sources, as a result, CSA is in the process of revising C22.2 No.37, which I am the Chair of that working group. The CSA standard update should be completed within 2012. The reference in Table 1 to the 1989 of the edition would not incorporate the latest requirements of the standard.

Table 1, C. Output and Reliability Requirements:

Maintained Light Output – We request that the wording return to the Version 1.4 text that includes “phosphor based lamps” as this section does not apply to white lamps only and was discussed during the initial development of Version 1.4. Phosphor based lamps also include LEDs in purple, pink, teal and other specialized colors that are commonly used in the decorative lighting industry. Removal of this phrase would be a change in requirements as phosphor based lamps are allowed a different end point due to the technology used.

Table 1, D. Weathering Requirements:

Maintained Light Output – As requested above for Table 1 C., we request that the wording return to the Version 1.4 text that includes “phosphor based lamps” as this section does not apply to white lamps only and was discussed during the initial development of Version 1.4. Phosphor based lamps also include LEDs in purple, pink, teal and other specialized colors that are commonly used in the decorative lighting industry. Removal of this phrase would be a change in requirements as phosphor based lamps are allowed a different end point due to the technology used.

Table 2, Test Methods:

Safety – As requested above for Table 1 A, Item II, we recommend that the year be removed from the CSA standard reference, so that it appears as “C22.2 No.37” as this would allow for the most recent standard to be utilized. Same would apply to the dating of UL 588 which also is under constant review.

Test Group C. Weathering Test:

We request that the wording return to the Version 1.4 text that includes “phosphor based lamps” as this does not refer to white lamps only. And should be revised throughout the document (including Annex A) back to the Version 1.4 text. Please see complete explanation of our request indicated in Table 1, C above.

Test Method – Annex A

Test Conditions and Method:

Electrical Testing – We recommend that paragraphs 2 and 3 be headed with “Input Power” and “Over-Voltage” respectively to match Table 1, Section B of the Eligibility Criteria and to make it easier to read and use, please see below for proposed change.

Proposed insertion of “Input Power” and “Over-Voltage” to 2nd and 3rd Paragraphs of Electrical Testing:

A. Electrical Testing: Prior to testing, operate three decorative light strings for a 24 hour ($\pm 1\%$) seasoning period at $120\text{ V} \pm 1\text{ V RMS AC}$. Repeat all steps below for each of the three samples.

Input Power - Measure input power and current at $120\text{ V} \pm 0.5\text{ V RMS AC}$. For light string systems with power adapters or controllers that can accommodate multiple light strings, the input power shall be measured with the rated maximum number of strings attached. Divide the measured input power by the number of lamps on the tested string to calculate the input power consumption per lamp.

Over-Voltage - Energize the light string at $132\text{ V} \pm 1\text{ V RMS AC}$ for one hour and examine for failure. Count any lamps that have failed (as per definition 1.C in Eligibility Criteria). Calculate the failed lamps as a percentage of total lamps on the three strings.

Thank you again for this opportunity, please do not hesitate to contact me with any questions on the comments and recommendations above.

Best regards,



Steven Altamura
Director of Engineering
Seasonal Specialties LLC