



**SPECIALTY LIGHTING  
INDUSTRIES, INC.**

**MEMORANDUM**

To: All Specifiers

From: Scott J Hershman

Date: 23 May 2007

Re: Using Sylvania 50W IR Lamps in SLI Fixtures

We are occasionally asked if the Sylvania's 50W IR lamp is suitable for use in our fixtures. We have researched and tested the lamp in our fixtures and there are no issues with the 50W IR lamp that would impact its safe operation in our fixture. From a thermal standpoint our fixtures were designed for the 75w lamp and we do not enclose the back to the lamp in any way. All of the electrical components work properly and using the 50W IR lamp will not impact the UL listing or the fixture warranty.

The concern with using the 50W IR lamp is not with the fixture design but rather with the lamp design. The 50W IR lamp operates at a much higher seal temperature than a conventional lamp although the maximum limit on the seal temperature is no higher than a conventional lamp. If the seal temperature exceeds its maximum rating the lamp life will be shortened.

We received several lamps with thermocouples from Sylvania for testing in our fixtures. Based on our testing we do not recommend using this lamp in any of our fixtures. The lamps operated as advertised when tested in open air in a base down position however the lamps came to within 10C of the maximum seal temperature when the operating position was changed to base up. Some of the samples exceeded the seal temperature when operating base up in open air. As expected the lamps exceeded the permitted seal temperatures when operating base up in a fixture regardless of whether the fixture was open or closed. (This would be true with any recessed fixture with base up orientation.) This test was done in a 22C ambient. We do not see how these lamps could be used in a plenum where the air temperature is typically higher.

We gave our test results and findings to Sylvania and they have declined to comment. They did tell us that that they would need to reduce the lamp wattage to 41 watts in order to lower the operating temperatures to be similar to a conventional 50W lamp. Since they offer a 37W lamp already they will not be redesigning the product.

Our recommendation would be to limit the Sylvania lamp to 37W maximum. For higher wattage requirements we recommend that you use conventional lamps or consider the product offered by Philips. The Philips lamp is a maximum 45W and has a 25C higher seal temperature rating.

Sylvania 50W IR lamp.doc