



The Importance of ANSI Standards in Lamp Specification

A White Paper: Failures Associated with Non-Conforming Lamps

Philips Advance ballasts are carefully designed and tested to ensure that they will start and properly operate all the lamp types that the ballast is advertised to operate. This is accomplished by using information published by the American National Standards Institute (ANSI). ANSI has defined the operating characteristics for each lamp type. This was done so that lamps purchased from different manufacturers would be compatible with all ballasts designed for that lamp type. Lamp and ballast manufacturers must control their manufacturing process to ensure that their products meet these published specifications.

The most important characteristics that determine whether a ballast is compatible with a particular lamp type are the starting voltage, the lamp operating current, and the lamp operating voltage. If the starting voltage created by the ballast is not adequate, then the lamp will not be ignited. The result will appear to be the same as a non-functioning ballast—the lamp will not produce any light. The result may also be unreliable starting that varies with line voltage, ambient temperature, or age of the lamp.

If the lamp does not operate with the proper lamp current or voltage, the result is more difficult to predict. The result can be either reduced light output or increased power dissipation in the ballast depending on the type and design of the ballast. Reduced light output may result in some level of dissatisfaction, but is usually not noticed. Increased power dissipation in the ballast is difficult to detect and will reduce the life of the ballast. In severe cases, the lamp life may be affected.

The best way to avoid these problems is to make sure any lamps purchased from new lamp suppliers are guaranteed to meet ANSI standards. Lamp manufacturers should be able to provide data that demonstrates their lamps meet ANSI standards. They should also be able to provide process control information from their manufacturing processes that verify that all lamps meet ANSI specifications. Getting this information should be part of the approval process for any new lamp manufacturer.

Philips Lighting Electronics has been involved with customer-returned ballasts that were reported to be defective. After an investigation, it was determined that the installed lamps were from a new lamp supplier

and required a starting voltage 200 Volts above the ANSI starting voltage specification. This could have been avoided by ensuring the lamps meet all ANSI specifications before purchasing and installing them.

In summary, ANSI standards matter and provide for maximum compatibility and functionality between specified lamps and ballasts.

A leader in the ballast industry for over 60 years, Philips Lighting Electronics, based in Rosemont, Illinois, offers a full line of Philips Advance branded ballasts and drivers for fluorescent, HID, and LED light sources to the market's broad range of lighting fixture manufacturers and electrical distributors. For more information on Philips Lighting Electronics' complete product line and range of Smart Solutions™, visit our website at www.philips.com/advance or call us at (800) 322-2086.



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