

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF  
AIR AND RADIATION

February 7, 2008

Ms. Catherine Emerling  
Qualification Manager  
Osram Sylvania, Inc.  
100 Endicott St.  
Danvers, MA 01923

Dear Catherine:

EPA has reviewed the Testing Documentation submitted by Osram Sylvania for the following GU-24 based integrated lamp and determined that it meets the Version 4.1 Residential Light Fixture (RLF) specifications indicated below. Osram Sylvania may provide this Letter of Approval to fixture manufacturers interested in qualifying a fixture with this GU-24 based integrated lamp for ENERGY STAR. Those manufacturers may, in turn, submit a copy of this Letter in lieu of lab testing reports for the given performance characteristics. Please note that this Letter of Approval only covers the performance requirements in the table below.

Components: Ballast(s) Manufacturer OSRAM Sylvania Model # 29163  
Lamp(s) Manufacturer OSRAM Sylvania Model # 29163

# of Lamps:	<u>1</u>	Indiv. Listed Lamp Wattage:	<u>23</u>	Lamp Type:	<u>CFL</u>	GU-24 Lamp Type:	<u>B</u>	Lamp Size:	<u>T3</u>	Ballast Type:	Electronic
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<b>Testing Orientation*</b> ( <i>due 8/1/08 for continued compliance</i> )	<b>Base Up</b> <input type="checkbox"/>	<b>Base Down</b> <input type="checkbox"/>	<b>50% Up/50% Down</b> <input type="checkbox"/>	<b>Horizontal Operation</b> <input type="checkbox"/>
<b>Performance Characteristic</b>	<b>Test Result</b>			<b>Meets ENERGY STAR Specification? (Yes/No)</b>
<b>Combined Lamp &amp; Ballast Requirements:</b>				
System Efficacy*	<u>1740</u>	Total Lumen Output		Yes
	<u>24.3</u>	Input Power (watts)		Yes
	<u>71.55</u>	Lumens Per Watt		Yes
<b>Lamp Requirements:</b>				
Lamp Life*	<u>10,000</u>	Average Rated Hours		Yes
1000 Hour Lumen Maintenance*	<u>n/a</u>	% of initial lumens at 1000 hours rated lamp life		n/a ( <i>due 8/1/08</i> )
Lumen Maintenance*	<u>82.6</u>	% of initial lumens at 40% rated lamp life (4,000 hour minimum)		Yes
Accelerated Cycling, Thermal, and Voltage (ACTV) stress test*	<input type="checkbox"/>	Meets ACTV test requirements at 60°C		n/a ( <i>due 8/1/08</i> )
	<input type="checkbox"/>	Meets ACTV test requirements at 80°C		
Color Rendering Index*	<u>81</u>	CRI		Yes
Lamp Correlated Color Temp*	<u>2700</u>	Target CCT (degrees Kelvin)		Yes
	<u>100</u>	% of samples fall within 7-step Mac Adam ellipse		
Lamp/Lampholder Compatibility	<u>N/A - LVS</u>	ANSI-IEC Designated <b>Lamp Base Type</b>		Yes
	Yes OR <input type="checkbox"/> <u>No</u>	ANSI-IEC Standardized <b>Lamp</b>		Yes
	<input type="checkbox"/> OR <input type="checkbox"/> <u>N/A</u>	ANSI-IEC <b>Lamp</b> Standard Data Sheet Number		Yes

\* All performance characteristics marked with an asterisk (\*) must have been tested with the same test orientation.

Testing Orientation <sup>(due 8/1/08 for continued compliance)</sup>	Base Up <input type="checkbox"/>	Base Down <input type="checkbox"/>	50% Up/50% Down <input type="checkbox"/>	Horizontal Operation <input type="checkbox"/>
Performance Characteristic	Test Result			Meets ENERGY STAR Specification? (Yes/No)
Lamp Labeling Requirement	<input checked="" type="checkbox"/>	Lamp labeling requirement is met		n/a (due 8/1/08)
	<input type="checkbox"/>	Mercury labeling requirement is met (for integrated GU-24 based lamps)		
<b>Ballast/Ballast Circuitry Requirements:</b>				
Lamp Start Time*	<u>16</u>	Milliseconds		Yes
Run-up Time*	<u>n/a</u>	Milliseconds		n/a (due 8/1/08)
Power Factor	<u>0.566</u>			Yes
Lamp Current Crest Factor	<u>1.35</u>			Yes
Maximum Recommended Ballast Case Temperature During Normal Operation Inside a Fixture	<u>85</u>	Degrees Celsius		Yes
Electromagnetic and Radio Frequency Interference	<input checked="" type="checkbox"/>	Ballast meets FCC requirements for consumer use		Yes
Ballast Frequency	<u>50.00</u>	kHz		Yes
Transient Protection	<input checked="" type="checkbox"/>	Ballast meets transient protection requirements		Yes
End of Life Protection (Only required for ballasts with lamps sized T5 & smaller)	<input checked="" type="checkbox"/> Yes OR N/A	Testing requirements are met		Yes
	<u>1</u> OR N/A	Maximum number of lamps shut down when lamp end of life occurs		
Dimming	<input type="checkbox"/>	3-Way Switching		Yes
	<input type="checkbox"/>	Continuous Dimming		
Safety – Ballasts, Integrated Lamps, and “Non Edison base Fluorescent Adapters”	<input checked="" type="checkbox"/> Yes OR N/A	Listed for Safety		RLF or ceiling fan partner using this form in lieu of testing documentation must submit appropriate safety report for portable or hardwired fixtures.
Integrated Lamp Warranty	Yes OR <input checked="" type="checkbox"/> N/A	Lamp warranty included that covers a minimum of 2 years from the date of purchase based on no less than 4 hours per day of use		n/a
GU-24 Base	This platform <b>does</b> use the GU-24 Base			Yes
GU-24 Base with Self-Ballasted Pin-Based Lamp	This platform <b>does</b> use a self-ballasted GU-24 based lamps			Yes

The approved GU-24 based integrated lamp listed on this letter must be updated where noted to Version 4.1 requirements by 8/1/08 for continued compliance. Before this date, this letter may be promoted as an acceptable alternative to providing test reports with Residential Light Fixture submittals for ENERGY STAR qualification under the Version 4.0 Specification.

Any RLF or ceiling fan partner submitting this Letter of Approval in lieu of laboratory testing reports is still responsible for completing and signing a Qualified Product Information (QPI) form for the applicable lamp/ballast combination, and submitting any required test data not covered by this Letter.

Please contact Christina Morris at (202) 862-1141, or myself at (202) 343-9272 with any questions. Thank you for your continued support.

Sincerely,



Alex Baker, Lighting Program Manager  
ENERGY STAR for Residential Light Fixtures