TEST SPECIFICATION

Product:	Lava Lamp		
Scope:	Electrical Lava Lamp	Protocol No.	TYCP-LU003 (US)
		Version	1.0
		Issue Date	Sep 12, 2011
		Prepared by	Tiger Yang
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Instructions to Vendors:

Dear Valued Vendor:
Product safety is a top priority at Taymark. We, with the assistance of Intertek, a CPSC-accredited third-party testing partner or lab, have identified the various rules and regulations as well as the necessary test requirements that we need to meet in our partnership to sell products in the United States. This has been assembled into our required Test Protocol. Each product that is supplied to us must comply with this Test Protocol and any required associated test protocol(s) identified within it.

You are required by the US Law to verify the products you provide to Taymark (or any other customer marketing to children in the USA) meet the required safety standards. Likewise, Taymark is required by US Law to assure that we have documentation to confirm that you have verified that your products meet the applicable safety standards. Once you have verified that the product(s) you have supplied to us conforms to the corresponding Test Protocol(s), and the testing was conducted within the past twelve (12) months, we ask that the appropriate representative from your company provide Taymark with the proper General Certificate of Conformity ("GCC") and the corresponding documentation that you used to support the GCC, including, where applicable and required, the CPSC-accredited third-party test data. For an example of an acceptable GCC, please go to http://www.cpsc.gov/about/cpsia/faq/elecertfaq.pdf.

Key

† : Any element on the attached form with the following symbol ("†") is a Mandatory Requirement to which the product(s) or components of product(s) you supply to Taymark must conform. You must perform the associated test(s) and provide Taymark with the test data to support the fact that the test(s) was (were) conducted and that the product(s) or components of product(s) meets the described requirements. You are responsible for conducting the mandatory testing, and you are responsible for any expenses incurred as a result of conducting the test(s) (including, without limitation, the costs and expenses associated with providing any samples, testing, reporting, and preparing the General Certificate of Conformity).

: The symbol ("") on the attached form indicates that additional charges may apply. Taymark's preferred Accredited Third-Party Testing Facility is Intertek. If you choose to use Intertek to conduct the mandatory testing, please reference Taymark and Taylor Corporation when submitting your requests for testing to Intertek as you may be able to take advantage of Taymark and Taylor Corporation's volume discount. You may contact Intertek for a price quote and any additional information they might need in order to conduct the required testing.

Additional Accredited Third-Party Testing facilities can be found at http://www.cpsc.gov/cgi-bin/labsearch/.

Note:

Where there is no applicable US standard, Intertek has chosen the most relevant International Standard to assess the product safety and performance. For undated references, the latest edition of the referenced document (including any amendments) applies.

Attribute	Test Method/Standard	Requirement / Limit
Supplemental Protocol(s)		
*Battery Operated Product	TYCP-PS001	Must all also test to the Battery Operated Product protocol if applicable.
*Batteries	TYCP -PS002	Must all also test to the Batteries protocol if applicable.
*AC Adaptor	TYCP -PS003	Must all also test to the AC Adaptor protocol if applicable.
*†CA Prop 65 (mandatory in state California)	Intertek Protocol	Consent Judgment of related court case based on California Proposition 65.
*† CPSIA Supplemental	TYCP-00001-US	Shall review against the CPSIA Supplemental and shall comply with all applicable requirements. See CPSIA Supplemental Products (Non-toy) Protocol posted at http://www.taymarkinc.com
*† Children's Products (Non-toy)	TYCP-16026-US	Shall comply with the applicable requirements. See Children's Products (Non-toy) Protocol posted at http://www.taymarkinc.com
Note: Additional cost, sample size & TAT may be required if testing to 1 or more supplemental protocol is necessary. Please refer to the above referenced supplemental protocol(s) for additional information.		
Chemical Analysis		
1. * Lead Content in Paint and Similar Surface Coating	16 CFR 1303 (Scope Widened)	Shall not exceed 90ppm (0.009% by weight) total lead.
Document Check		
2. †One Time Use Products Fair Packaging and Labeling Act OR All Other Products Uniform Packaging and Labeling Regulations	F.P. & L. Act (16 CFR 500) OR NIST Uniform Laws and Regulations Handbook 130	Manufacturer, packer, or distributor's name & address (city, state & zip)
		Product Identification
		Net quantity of contents shall be expressed in terms of weight or mass, measure, numerical count, or combination so as to give accurate information to facilitate consumer comparison (U.S. and metric units).
3. †Country of Origin Marking	19 CFR 134.11	Shall indicate country of origin legibly, permanently, and in comparable size and close proximity to any mention of country other than country in which the article was manufactured or produced. Must be visible at point of purchase.
4. Use Labelling	Visual Check	Use/care instructions that are clear and understandable shall be provided in language appropriate to destination countries
5. Verify Label Claims (if any)	Visual Check	Must comply with all claims

Attribute	Test Method/Standard	Requirement / Limit
6. †*Toxics in Packaging	Toxics in Packaging Act	Intentional introduction of any amount of lead, mercury, cadmium or hexavalent chromium in any packaging is prohibited. Incidental presence of these metals is limited to 100 ppm total concentration of lead, mercury, cadmium and hexavalent chromium in any packaging. **In lieu of testing, supplier may submit a Certificate of Compliance.**
7. †Plastic Bag Warning Statement (if applicable)	Based on Various State Laws: New York, Chicago, Massachusetts, and Rhode Island State and City Laws modified	Plastic bags with a thickness less than one mil (1/1000 inch) having an opening size of five inches in diamerter or more must have the following warning or an equivalent warning visible from each side of the bag. If the total length and width is more than 40 inches, this warning or an equivalent warning must repeat at 20 inch intervals and be visible on each side of the bag: Warning: To avoid danger of suffocation, keep this plastic bag away from babies and children. Do not use this bag in cribs, beds, carriages or playpens. This bag is not a toy. Massachusetts, New York, and Rhode Island provide minimum type size for the warning. The following table sets forth type sizes that will satisfy all four state requirements. Total Length and Width of Bag Size of Print 60 inches or more at least 24 point 40 to 59 inches at least 18 point 25 to 39 inches at least 14 point Less than 25 inches at least 10 point *Virginia's law is intended for dry cleaning bags only and requires at least 36 point type.
8. Safety Listing Mark	NFPA 70	Shall have valid ETL, UL or CSA listing or equivalent. Verify listing by NRTL product directory with the sample's listing number and model number.
9. †FCC Rules	Document Check	Products shall have valid FCC report if operating frequency > 9 kHz for AC, or operating frequency > 1.705MHz for battery operated product.
10. †FCC marking and instruction	Visual	Products shall have FCC required marking and instruction if operating frequency > 9 kHz for AC, or operating frequency > 1.705MHz for battery operated product.

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11. General Markings	UL 962 Cls. 54, 55	The following markings shall be legible and readily visible during use: - Manufacturer's name, trademark or etc. - Model number, type reference or etc. - Electric ratings - Date code
12. Cautionary Markings	UL 962 Cls. 54-58A	The cautionary or warning marking requested by the standard intended to inform the user of a potential risk of fire, electrical shock, or injury to persons shall be provided.
13. User Manual / Important Safety Instructions / Assembly Instructions	UL 962, Cls. 59-64	Instructions and warnings shall be provided in the user manual identifying reasonable foreseeable uses or misuses of the product. It shall also include instructions regarding the installation, use, safety and maintenance. All accessories shall be described in the user's manual and provided with instructions for proper use
14. UPC code	Actual Use	Using a commercial available bar code reader to read the UPC code printed on the package/artwork. The code readout shall match with the number underneath. Record the reading displayed on the reader.
15. Parts Inventory	Visual Check	Shall meet label claims.
Electrical Safety		
16. Packing	Visual Check	No hazard when removing the packing
17. Workmanship – external	Visual Check	Shall have no sharp points/edges, other than those required for function. Shall have no components missing, malformed, and/or fractured.
18. Workmanship – internal	Visual Check	Solder connections shall be secured Components shall be reliably mounted on PCB or other proper fixing.
19. Mechanical Assembly	Visual Check	All mechanical parts shall be securely fixed and prevented from turning.
20. Internal Wiring	Visual Check	Wireways shall not allow wires to come in contact with sharp points, edges or moving parts.
21. Power Cord	UL 962 Cls. 15.2.7, 15.2.8	A flexible cord shall be at least Type SPT-2, SPE-2, or the equivalent. Type SVT cord is equivalent when individual conductors are provided with supplementary insulation or spaced away from metal. For furnishings where the cord exits the furnishing at a height greater than 3 feet (0.9 m), the cord length shall be a minimum of 9 feet (2.74 m) and a maximum of 15 feet (4.57 m) as measured from the exit of the furnishing to the attachment plug face. For furnishings where the cord exits the furnishing at a height of 3 feet (0.9 m) or less, the cord length shall be a minimum of 5 feet (1.5 m) and a maximum of 10 feet (3.05 m).

Attribute	Test Method/Standard	Requirement / Limit
22. Power Cord – Cross Section Area of Conductor (mm^2)	Standard Measure	The cross section area of conductor shall comply with Table 20.1 of UL1581 for the AWG claimed.
23. Plug	Visual Check	Plug shall be 3-wire grounding type or 2-wire polarized attachment plug.
24. Stability Test	UL 962 Cls. 31	The unit shall not overturn when resting on a plane inclined at an angle of 10 degrees with the horizontal.
25. Strain Relief Test	UL 962 Cls. 40	The strain relief means provided on power cord shall withstand for 1 minute without displacement a direct pull of 35 pounds (156 N) applied to the cord, with the connections within the furnishing disconnected. At the point of disconnection of the conductors, there shall be no movement of the cord indicating that connections were stressed.
26. Accessibility of Live Parts	UL 962 Cls. 14	Openings in external enclosures shall be contructed, located, or baffled to prevent a standard probe from being inserted and touching live parts.
27. Power Input Test	UL 962 Cls. 38	The power input to an appliance shall not be more than 110 percent of its marked rating.
28. Dielectric Strength Test	UL 962 Cls. 43	The insulation and spacings of a furnishing shall withstand for 1 minute, without breakdown, the test potential specified in 43.3. For products employing double insulation, the test potential shall be as specified in 43.4.
29. Leakage Current Test	UL 962 Cls. 36	The leakage current of a cord-connected appliance when tested shall not be more than: a) 0.5 mA for an ungrounded (2-wire) appliance, b) 0.5 mA for a grounded (3-wire) appliance that is easily carried or conveyed by hand.
30. Grounding-Impedance	UL 962 Cls. 42	The impedance of two electrically interconnected electrical enclosures, between the point of connection of the equipment-grounding means and other metal parts that become energized, is to be measured in accordance with 42.2 and 42.3. The impedance shall not be more than 0.1 ohm.
31. Impact Test (for glass part)	In-house method	The glass panel, such as a window or wall, shall be subjected to below test. A solid steel sphere 2 inches (51 mm) in diameter and weighing 1.18 pounds (0.54 kg) is to fall, as in a pendulum, through a vertical distance of 20 inches to strike the surface. The sample is to be supported by a furnishing or clamped in a position simulating intended use without restricting movement of components on the side opposite the impacts. After test, the panel shall not crack or break to result in leakage of inside liquid.
32. Power Cord - Cross Section Area of Conductor (mm^2)	Standard Measure	The cross section area of conductor shall comply with Table 20.1 of UL1581 for the AWG claimed.

Attribute	Test Method/Standard	Requirement / Limit
33. Security of Blade Test	UL 817, 11ed. Cls.82	Each blade and pin shall be capable of withstanding a pull of 20 lbf for 2 minutes. Displacement of more than 2.4 mm is not acceptable.
34.		
Performance Test		
35. Functional Check	Actual Use	All the major features shall be matched with the installation and use instructions and claims made on the packaging, with no inaccurate or misleading statements about the product, or any other user-friendliness problems.
36. Ease of Installation	Actual use	Follow the instructions for assembly and disassembly the product; and comment on the method of the installation. Parts shall not be easy to break during normal use.
37. Ease of Cleaning	Actual use	Follow the instructions to clean up the unit. Comment on the method of cleaning.
38. Range of operation	In-house method	The unit should operate within the voltage range of 106-127 volts.
39. Continuous Operation Test	In-house method	Place the unit on a softwood surface covered with 2 pieces of tissue paper; set the unit to normal operation according to user manual; continuously operate for 4 hours. Shall not indicate safety issue, fire risk, or any other abnormality. Polymeric material used as decorative parts shall not melt or deform in such a way as to interfere with normal operation of the product. After the test, check for excessive temperatures on supporting surface and all accessible surfaces. In case of doubt, measure the temperature rise and shall not exceed the following, - External surfaces: 65K - Surface intended to be grasped: 20K (Metallic); 35K (Nonmetallic) - Surface intended for momentary contact: 65K (Wood); 60K (Plastic); 25K (Metallic)
40. Durability of Switches	In-house method	Switches shall continue to function correctly after 200 cycles of operations.

Remark: Additional tests may be incurred subject to the final samples reviewed by Intertek.