

# How to Qualify Products – CFLs

David Ryan D&R International, Ltd. On Behalf of the U.S. Department of Energy 2008 ENERGY STAR Lighting Partner Meeting

## Agenda



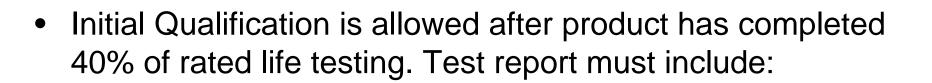
- Original Lamp Manufacturer Product Qualifications
  - Initial Qualification
  - Full Qualification
  - Upgrading Lifetimes
- Privately Labeled Product Qualifications
- Packaging

## **Original Manufacturer Lamps**



- Three Required Components of Submission:
  - 1. Qualification Form
  - 2. Test Report from NVLAP-accredited laboratory
  - 3. Product Packaging
- Accurate Qualification Form speeds processing time
  - Match Test Report
  - Match Packaging Claims
- Test report must be submitted directly from Test Laboratory. Other components may be submitted by Partner.

## Step 1: Initial Qualification



- Efficacy at 100 hours
- 1000-hour lumen maintenance (LM)
- Color Rendering
- CCT
- LM at 40% of rated life
- Power Factor
- Run-up Time

- Starting Time
- Transient Protection
- Operating Frequency
- Electromagnetic Interference
- Rapid Cycle Stress Test
- Interim Life Test
- Initial Qualification Submission must also include Initial Qualification Form and Product Packaging.



## Step 2: Full Qualification



- After a product has been initially qualified, testing must continue until full lifetime is complete.
- Submission of results of Average Rate Lamp Life (ARL) test must be submitted within 45 days of test completion.

#### Upgrading Product Lifetimes

- A Partner may only upgrade a product after completion of ARL at the lifetime they are upgrading the product to.
- Also requires compliance with Interim Life Test, Lumen Maintenance at 40% of rated life, and Rapid Cycle Stress test at upgraded lifetime.

### **Private Labeled Lamps**



- Two Required Components of Submission:
  - 1. Qualification Form
  - 2. Product Packaging
- Accurate Qualification Form speeds processing time
  - Match Specs of Original Manufacturer Product
  - Match Packaging Claims
- Private label submission may be submitted either by the private labeler or the original lamp manufacturer.

# Packaging



- Biggest delay in qualification of products is the submission of incorrect packaging.
- All packaging for products carrying the ENERGY STAR logo, or marketed as ENERGY STAR qualified, must be reviewed and approved.
- Submission of packaging early in Partners' internal process can avoid having to redesign packaging later in the process.

# Packaging



- Packaging requirements include:
  - Light Output (lumens)\*
  - Energy Used (watts)\*
  - Life (hours)\*
  - Number of lamps (if other than 1)\*
  - FTC Statement\*
  - Model Number
  - CCT (if outside 2700-3000K range)
  - Known Incompatibility with controls (i.e. Not for use with dimmer switches, etc.)
  - Starting temperature
- \* Indicates requirement of FTC

- Warranty ( $\geq$  2years residential applications,  $\geq$  1 year commercial applications)
- Instructions for warranty fulfillment (800 number, Web site, or mailing address)
- Electromagnetic Interference caution
- Equivalency to incandescent claims
- Lifetime claims in years
- ENERGY STAR Certification Mark
- Position Restriction if products tested in one position only.



# How to Qualify Products – SSL

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## Agenda



- Review of Program Status
- Before Qualifying a Product
- Anticipated Product Submission Process
- Contacts

## **Review of Program Status**



- Final ENERGY STAR Criteria for Solid-State Lighting Luminaires was released on September 12, 2007; takes effect September 30, 2008.
- Targets white-light SSL products in general illumination applications.
- Criteria divided into Category A: Near-term applications, and Category B: Future Performance Targets.
- Products will be tested in accordance with recentlydeveloped industry standards and test procedures.

## Before Qualifying a Product



- To market a product as ENERGY STAR qualified and use the ENERGY STAR brand marks, a manufacturer must PARTNER with the ENERGY STAR program.
- Program Requirements and Partner Commitment Forms are under development. Anticipate companies will be able to join ENERGY STAR as an SSL Partner beginning in June 2008.
- Please contact D&R if you would like to be on the mailing list for SSL program announcements.

## **Anticipated Qualification Process**



- DOE anticipates increasing efficacy requirements and expanding Category A applications frequently as technology develops.
- To expedite product qualification, an electronic submittal process is under development.
- Partners and/or test labs will upload test data, packaging images, warranty statements, and information regarding product families for review by program staff.

#### Contacts



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