National Lighting Partner Meeting

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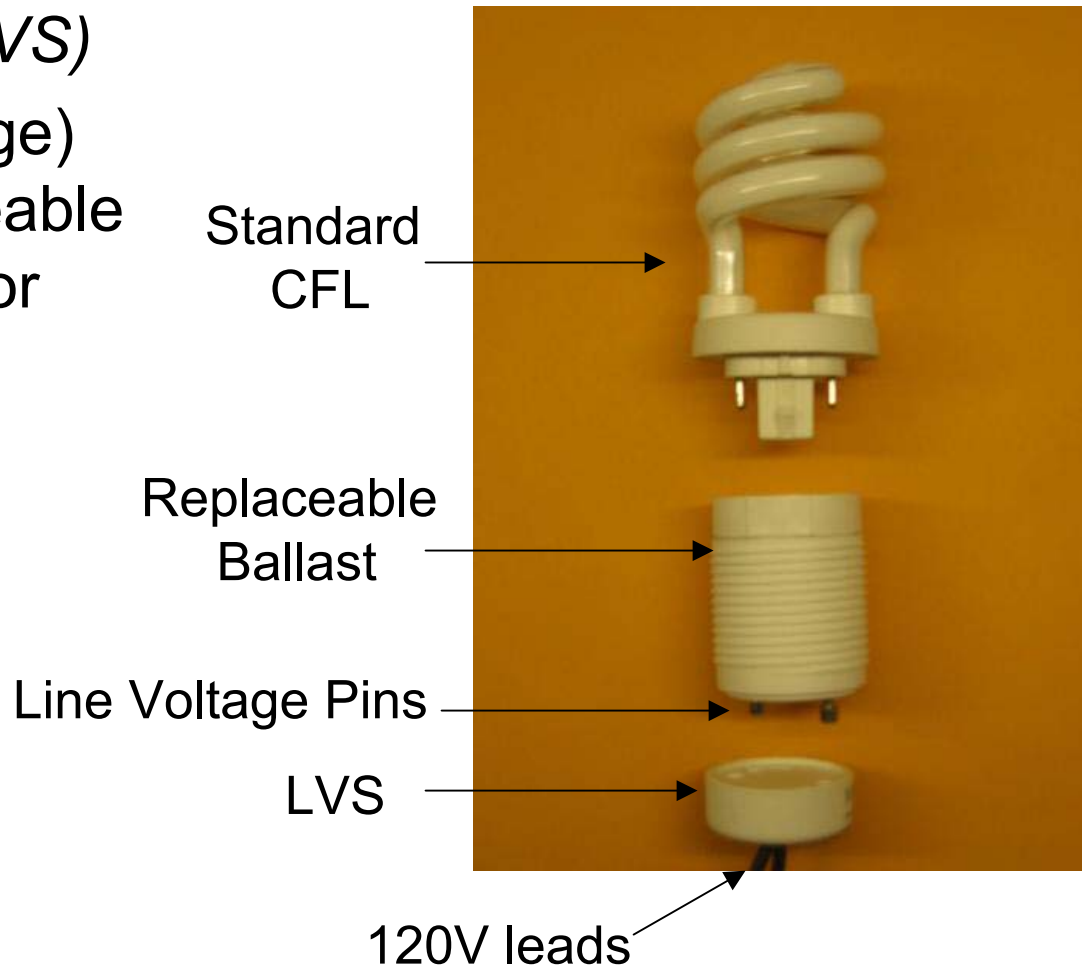
ENERGY STAR: What's on the Horizon

Line Voltage Socket Standardization

Line Voltage Socket Definition

Line Voltage Socket (LVS)

- The 120V (line voltage) socket that a replaceable ballast would “plug” or “twist and lock” into



The Problem

- Non-replaceable ballasts
- Hard to remove ballasts
- Multiple styles and configurations LVS becoming available
- Lack of a standard LVS, and lack of a standard pin base on the replaceable ballasts, is a barrier to ballast interchangeability.

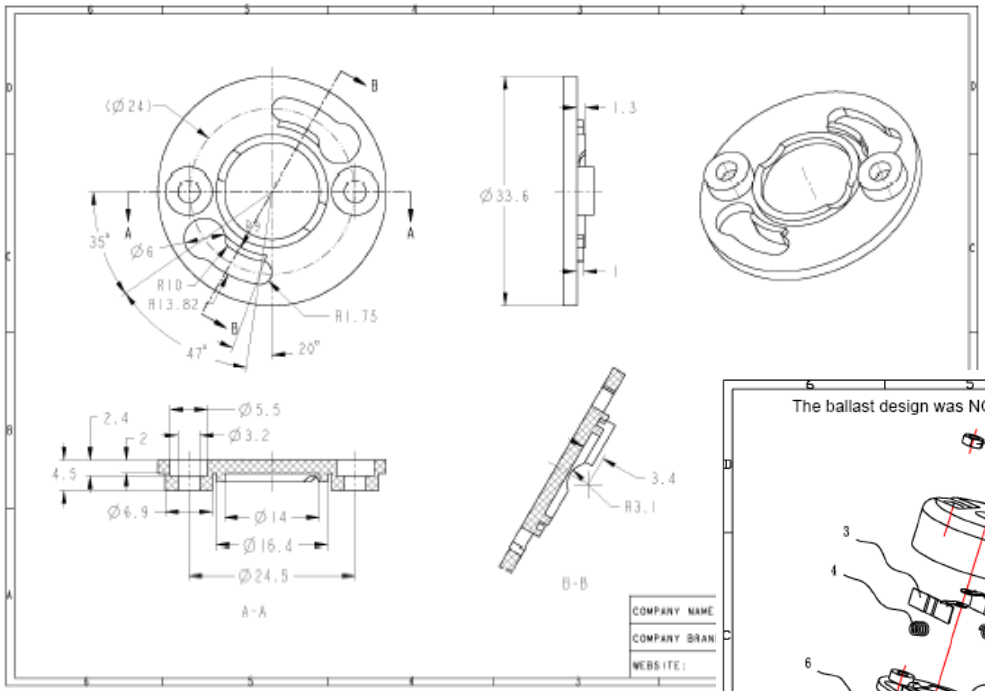
Solution: Design Competition

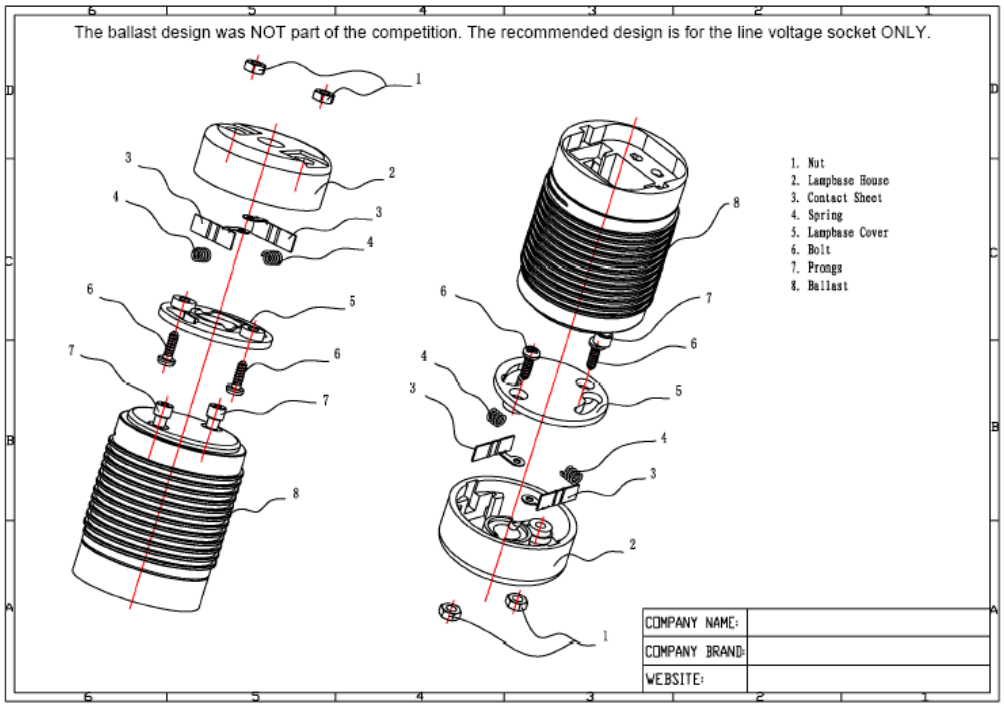
- Roundtable held on June 24, 2004
- Fixture and ballast manufacturers worked to determine a standard pin-base configuration
- Design competition
  - Focused on the LVS not the ballast
  - Innovation was encouraged
  - Industry members evaluation committee
  - Suitable for residential luminaires 26 watts or less
  - Engineering Design Specification Drawings submitted
  - Winning socket design—no royalties or patents

Evaluation Committee

- LRC (Chair)
- MT Groups
  - CEE
- Industry:
  - MaxLite
  - Sea Gull Lighting
  - Super X – Good Earth Lighting
- Lighting Associations
  - ALA
- Labs
  - PNNL
- Advisors
  - General Electric

Results


(Ø24)
35°
Ø6
R10
R13.82
R1.75
47°
20°
1.3
Ø33.6
1
2.4
2
4.5
Ø5.5
Ø3.2
Ø6.9
Ø14
Ø16.4
Ø24.5
A-A
3.4
R3.1
B-B
COMPANY NAME
COMPANY BRAN
WEBSITE:


The ballast design was NOT part of the competition. The recommended design is for the line voltage socket ONLY.
1. Nut
2. Lampbase House
3. Contact Sheet
4. Spring
5. Lampbase Cover
6. Bolt
7. Prongs
8. Ballast
COMPANY NAME:
COMPANY BRAND:
WEBSITE:

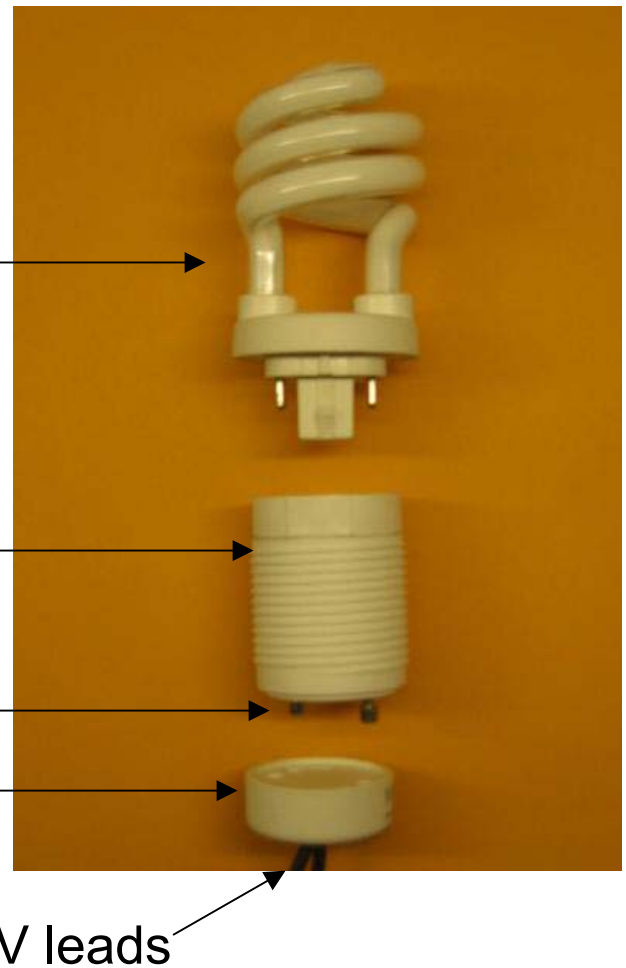
Results

- Evaluation committee submitted its recommended design to ALA and U.S. EPA
- Winning socket design maintains an open protocol and is available to the public without any royalties.
- Results are located at http://www.lrc.rpi.edu/programs/lightingtransformation/linevoltage/index.asp

Line Voltage Socket Results

Winning Submission

VIVA LIGHTING – socket design, not the ballast



Why Adopt the LVS

- Accepts multiple wattages, international voltages
- EPA promoting winning design, will eventually require this design in future specs/interim revisions
- Fixture manufacturers – one socket, numerous suppliers
- The socket is just a connection – similar to a USB, compete for the ballasts

Next Steps

- Review results and download specs
- *Fixture manufacturers*: Request standard LVS from your ballast suppliers; shop around.
- *Ballast manufacturers*: Adoption of the standardized LVS design, and promotion to ENERGY STAR fixture manufacturers.
- *MT Groups*: Encourage adoption of this technology, discourage competing models.
- *Retailers*: stock single SKU.

For More Information

- Drawings, tech specs for manufacturers
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