ENERGY STAR Qualified Decorative Light Strings

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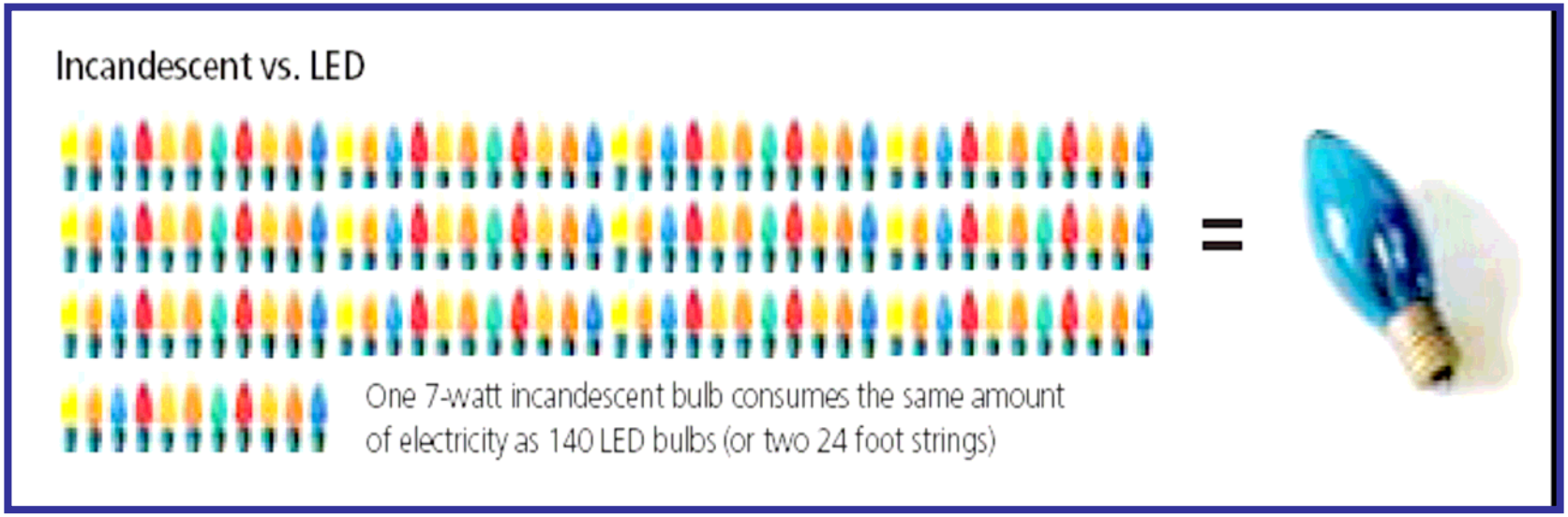
Agenda

- Specification for Decorative Light Strings (DLS)
- Impact for Canada
- Current Market in Canada
- Consumer Outreach



Definition

Decorative Light String (DLS):

- A string of lamps that operate on AC power in North America (120 V RMS AC, 60 Hz) or via a power adapter or controller that connects directly to AC power
- Residential lighting purposes
- Replaceable or sealed
- Net or icicle configuration

Inspection

- Number of lamps per strings
- Replaceable lamps
- Safety requirements
- Rated for indoor or indoor/outdoor applications
- Warranty – minimum 3 years

Electrical requirements

- Input Power: 0.20 watts per lamp

- Over-Voltage: Failed lamps < 3%

(over-voltage test at 132 V for one hour)

Lifetime requirements

Lifetime test consists of operating the lamps for 1000 hours continuously

- Maintained light output:
  - No less than 70% for color lamps
  - No less than 50% for white phosphor based lamps
- Failed lamps: < 3%

Weathering Requirements

Weathering test consists of 20 cycles of 8 hours of uv light at 60 degrees Celcius, 0.25 hours of water spray, 3.75 hours of condensation at 50 d.C.. Total of 240 hours.

- Maintained light output:
  - No less than 70% for color lamps
  - No less than 50% for white phosphor based lamps
- Failed lamps: < 3%

Packaging

- Indicate product suitability
- Product description: # lamps, length, rated wattage
- French and English (Canadian requirement)
- Correlated Color temperature for white light strings
  - Soft white: <3500 CCT
  - Pure-white: 3500-5000 CCT
  - Blue-white: >5000 CCT

Impact for Canada

- National retail sales of holiday lights in Canada have been estimated to be between $300 million and $400 million dollars annually[1].
- Converting only **40%** of the 10 million strings sold in Canada from incandescent to LED would result in annual energy savings of approximately **220 GWh.**
- This new comer into the ENERGY STAR line-up is an important strategic move for ENERGY STAR, particularly in regard to the emergence of white-light LEDs in general illumination applications around the world.

[1] 1 Source: 1993 BC Hydro Holiday Lighting Market Assessment Report

Current Market Interest

- The success of the past three years' promotional campaigns have boosted the sales for LED strings, especially in British Columbia.
  - Mail-in rebates.
  - In-store instant rebates
  - Trade-ins

- The addition of an ENERGY STAR® symbol will increase the awareness that these products are an energy-efficient alternative to traditional incandescent strings.

Current Market State

- Market is about to be transformed in Canada regarding DLS.
- 9 major chains, representing a 90% share of the market, have converted their stock:
  - Some exclusively carry the LED products as decorative light strings.
  - Others stock at least 50% LED DLS.

Consumer Outreach

- We are carrying out two surveys on DLS: Retailers and End-Users.
  - Better address barriers
  - Test common messages to be used across the country
- Notification to all ENERGY STAR Participants on DSL specifications.
- General POP material, training material for retailers, ...

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Process to Qualify DLS

1. Developing qualification process with ICF Consulting Canada
   - Specifications
   - QPI / Reporting
   - Manufacturer Commitment
   - Process outline
   - ENERGY STAR logo use guidelines
2. Web listing