



# ENERGY STAR<sup>®</sup> Program Requirements for Residential Light Fixtures

## Eligibility Criteria – Version 4.2

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- N. GU-24 Based Two-Piece Lamp: A term for a lamp-ballast unit that includes a ballast with the GU-24 base type paired with a standard pin based lamp. The ballast and lamp are separable, with the ballast designed to accept replacement pin based lamps.
- O. IEC: International Electrotechnical Commission.
- P. IESNA: Illuminating Engineering Society of North America.
- Q. ILAC: International Laboratory Accreditation Cooperation (NVLAP MRA Signatory).
- R. Input Power: The actual total power used by all lamp(s) and ballast(s) of the light fixture during operation, as measured in watts (W).
- S. Lamp: A generic term for a man-made source of light. By extension, the term is also used to denote sources that radiate in regions of the spectrum adjacent to the visible. In lighting parlance, the lamp is the replaceable light-generating component of a luminaire, usually a standardized element with a standard base, such as a screw base, pin base, or bayonet base, for mechanical and electrical coupling. [From IEEE Dictionary]
- T. Lamp Ballast Platform: A pairing of one ballast with one or more lamps that can operate simultaneously on that ballast. A unique platform is defined by the manufacturer and model number of the ballast and lamp(s) and the quantity of lamps that operate on the ballast. A lamp ballast platform also may refer to a lamp with an integral ballast.
- U. Lamp Current Crest Factor: For 60Hz operation, the ratio of peak lamp current to the root mean square (RMS) lamp current. For high-frequency (HF) operation, the highest peak lamp current of the modulation envelope (when evaluated over a full line voltage cycle) to the root mean square (RMS) of the lamp current.
- V. Lampholder: A component of a fixture, which supplies power to the lamp and also holds the lamp in place.
- W. Light Emitting Diode (LED): A pn junction semiconductor device that emits incoherent optical radiation when biased in the forward direction. The output is a function of its physical construction, material used, and exciting current and may be in the ultraviolet, the visible, or in the infrared regions of the spectrum (from IESNA RP-16-05 Addendum a).
- X. LED Array: An assembly of LED packages, or dies on a printed circuit board or substrate, possibly with optical elements and additional thermal, mechanical, and electrical interfaces that are connected to the load side of LED driver. The LED array does not contain a power source, does not include an ANSI standardized base, and is not connected directly to the branch circuit [from IESNA RP-16-05 revision draft, March 2008].
- Y. LED Control Circuitry: Electronic components located between the power source and the LED package (or LED array, LED module) designed to limit voltage and current, to dim, to switch, or otherwise control the electrical energy to the LED package (or LED array, LED module). The circuitry does not include a power source [from IESNA RP-16-05 revision draft, March 2008].
- Z. LED Driver: A power source with integral LED control circuitry designed to meet the specific requirements of an LED package, or an LED array, or an LED module, or an LED lamp [from IESNA RP-16-05 revision draft, March 2008].
- AA. LED Light Engine: A subsystem of an LED luminaire that includes one or more LED packages, or an LED array, or an LED module; an LED driver; electrical and mechanical interfaces; and an integral heat sink to provide thermal dissipation. An LED light engine may be designed to accept additional components that provide aesthetic, optical, and environmental control (other than thermal dissipation). An LED light engine is designed to connect to the branch circuit. [from IESNA RP-16-05 revision draft, March 2008].
- BB. LED Luminaire: A complete LED lighting unit consisting of a light source and driver together with parts to distribute light, to position and protect the light source, and to connect the light source to a branch circuit. The light source itself may be an LED package, an LED array, an LED module, or an LED lamp. The LED luminaire is intended to connect directly to a branch circuit [from IESNA RP-16-05 revision draft, March 2008].



























































































