

LED BUYER'S GUIDE

Lumens vs Watts

What actually tells you a bulb is bright,
and why watts stopped being a reliable clue

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Lumens vs Watts: The LED Buyer's Cheat Sheet

What actually tells you a bulb is bright, and why watts stopped being a reliable clue.

The one-line answer

A watt measures energy: it's what your electric meter counts. A lumen measures light: it's how much brightness the bulb actually throws into the room. If you want to know how bright a bulb will look, check the lumens. Watts just tell you what it costs to run.

Why watts used to work, and why they don't anymore

Old incandescent bulbs were all roughly the same efficiency, so a 60-watt bulb was always brighter than a 40-watt one. That habit stuck around. LEDs broke it. A 9-watt LED can match a 60-watt incandescent, because LEDs turn far more of their energy into light instead of heat.

Incandescents put out roughly 12 to 18 lumens per watt. LEDs typically hit 75 to 110. That gap is the entire reason the old shortcut stopped working.

LED equivalent wattage chart

Use this as a starting point. Brands vary slightly, so always check the lumens printed on the box.

Old incandescent	Approx. lumens	LED equivalent wattage
40W	~450 lm	4-5W
60W	~800-900 lm	8-10W
75W	~1,100 lm	10-13W
100W	~1,500-1,600 lm	14-20W
150W	~2,600 lm	20-25W

How many lumens does a room actually need?

Space	Lumens (total)
Bedrooms & living rooms	1,500-3,000 lm
Kitchens & home offices	3,000-6,000 lm
Garages & workshops	6,000-10,000+ lm

If a room feels dim, don't reach for a higher-watt bulb out of habit. Check the lumens instead.

Quick math worth knowing

- 800 lumens ~ 7 to 10 watts on a modern LED (around 80 lm/W). The same brightness on an old incandescent needed 50 to 60 watts.
- A 600-watt incandescent or halogen source puts out roughly 9,000 to 10,000 lumens. A modern LED reproduces that using about 80 to 95 watts, less than a sixth of the power.
- To estimate LED wattage from an old incandescent number, divide by about 7. A 60W incandescent lands around 8-10W in LED form.

How to shop without getting fooled

- Check lumens first, watts second. Lumens are brightness, watts are running cost.
- Do the lumens-per-watt math yourself: divide lumens by watts. 80 to 120 is solid for a modern LED.
- Don't assume higher watts means brighter. That link is broken on LEDs.
- Look for the FTC Lighting Facts label. It's required on most bulbs sold in the US and lists lumens on the front.

The bottom line

Watts tell you what a bulb costs to run. Lumens tell you what it actually looks like once it's on. Shop by lumens, and you won't overpay for the wrong bulb again.

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Sources: Federal Trade Commission Lighting Facts label requirements ([ftc.gov](https://www.ftc.gov)); U.S. Department of Energy lighting efficacy data.