



LiElectro
Flash You Need

Christmas String Lights

The 2026 quick guide

Fresh fire, injury, energy and spending data,
plus the math for running costs and circuit loads.

The numbers behind the lights

Lights cause a small slice of holiday fires, but it's the slice you control. These are the latest figures we could find, each with its year and source.

143

home fires a year began with Christmas trees (2020 to 2024 average). They caused 7 civilian deaths and 13 injuries a year, with \$15 million in damage.

NFPA, via International Fire & Safety Journal

35%

of Christmas tree home fires happen in January, when trees are at their driest and the decorations are mostly over.

NFPA, January 2025 release

41%

of home tree fires involved electrical distribution or lighting equipment. Another 20% were started by lamps or bulbs.

NFPA, 2018 to 2022 data

14,900

people were treated in ER for holiday decorating injuries in the 2023 season. That's about 160 a day, and nearly half were falls.

CPSC, November 2024

82¢ vs \$2.74

to light a 6 ft tree with mini lights for 12 hours a day over 40 days. LED is the 82¢.

U.S. Department of Energy benchmark

\$1.013T

is the NRF forecast for U.S. retail sales across Nov 1 to Dec 31, 2026, up 4.2% from \$972 billion in 2025.

NRF, October 15, 2026

What the data says

Tree fires are rare. Still, lighting equipment shows up in about 2 of every 5 of them, and the risk peaks in January, not December. A tree left up for a few extra weeks is the bigger gamble.

On the cost side, LED has won the argument. A full tree of LED mini lights costs under a dollar to run for the whole season.

Note on dates: the national holiday lighting energy estimate from DOE and EIA is from 2008 data (about 6.6 billion kWh a year, and about 5.97 billion kWh saved if every household used LED). We couldn't find a newer national figure, so treat it as a benchmark.

What your lights cost to run

The math takes 10 seconds: watts × hours per day × days ÷ 1,000 = kWh. Multiply the kWh by the rate on your power bill.

Setup	Watts	kWh for season	Cost at \$0.15/kWh
1 LED mini-light strand	5 W	1.2	\$0.18
1 LED café string (50 ft)	20 W	4.8	\$0.72
2 LED café strings plus tree	50 W	12	\$1.80
Old incandescent set	200 W	48	\$7.20
Full LED yard display	500 W	120	\$18.00

Example assumes 6 hours a day for 40 days at \$0.15 per kWh. Swap in your own rate.

Hours move the bill more than anything else. Run the lights 3 hours instead of 6 and the cost halves. A plug-in timer is the cheapest fix.

ENERGY STAR certified holiday lights use about 75% less energy than standard incandescent strings and come with a warranty of at least 3 years. DOE has said a good LED string could still be in use 40 holiday seasons from now. One DOE-based estimate puts 10 seasons of running costs near \$18 for LED against more than \$120 for incandescent.

Know your circuit before you chain strings

A standard 15 amp household circuit at 120 volts can deliver 1,800 watts. For lights that stay on for hours, plan to stay under 80% of that, which is **1,440 watts**.

To find the draw of your setup, divide total watts by 120. A 1,000 W display pulls about 8.3 amps.

Three limits apply at once and the lowest one wins: the circuit, the extension cord's amp rating, and the max-connect number printed on the box. That circuit may also feed a garage freezer or other outlets, so count those loads too.

Outdoor tip: outdoor outlets should be GFCI protected. If one trips after rain, unplug the connection, let it dry, then reset it.

Safety checklist

Lighting equipment is involved in 41% of home tree fires, and falls lead the injury numbers. These checks go after both.

- ☐ **Find a lab mark.** Buy lights tested by a recognized lab such as UL, ETL or CSA. CPSC recommends it.
- ☐ **Match the set to the spot.** Indoor-only sets stay indoors. Outdoor spots need a set rated for outdoor use.
- ☐ **Test on the floor first.** Look for cracked sockets, frayed cord and bare wire. CPSC says to discard damaged sets.
- ☐ **Stay under the limits.** Check the wattage and max-connect numbers on the box before you daisy-chain.
- ☐ **Switch off at bedtime.** NFPA advises turning tree lights off when you leave or go to sleep. A timer does it for you.
- ☐ **Keep heat away.** About 1 in 5 tree fires involve a heat source too close to the tree. Keep it 3 ft from heaters, fireplaces and candles.
- ☐ **Water the tree, then remove it.** 35% of tree fires happen in January. Haul it out when the needles start to drop.
- ☐ **Respect the ladder.** Nearly half of decorating injuries are falls. Use a spotter and keep your belt buckle between the rails.

Troubleshooting in 2 minutes

Symptom	Likely cause	Fix
Half the string is dark	One loose or dead bulb in a series section	Press every bulb in firmly, then swap in a spare one at a time.
Whole string is dead	Blown plug fuse or tripped GFCI	Open the fuse door on the plug and replace with the same rating. Reset the GFCI.
Flickering	Loose socket or damp contact	Unplug, reseal the bulb, dry the connection.
Dim at the far end	Too many strands on one run	Split the run across two outlets.
Remote does nothing	Dead battery, or the receiver sits in the plug box	Replace the battery and aim the remote at the plug.
Solar set quits early	Panel in shade or a cloudy week	Move the panel to full sun and wipe off dirt.

Your season plan

Four checkpoints keep the work spread out and the risk low.

When	Do this
Early November	Unbox and test every string on the floor. Swap dud bulbs and fuses. Measure each run and add up watts per outlet.
Mid November	Hang in dry weather and plug in last. Set the timer to 3 to 6 hours.
December	Recheck connections after the first heavy rain or wind. Water the tree every day.
Early January	Take the tree out before it dries and the lights down on the next dry day. January holds about 35% of tree fires.

Storage that saves next year's headaches

- Wind each string around a flat piece of cardboard or a reel. Tangles cause most of the stress on sockets.
- Bag one string per bag. Write the length and where it hangs on a label.
- Tuck the spare bulbs and fuses into a zip bag with the set.
- Store in a dry, room-temperature spot. Garages swing hot and cold, and that cracks cords over time.

Read the box in 30 seconds

Lab mark	UL, ETL or CSA on the box and the plug
Where it's rated	Indoor, outdoor, or both
Max watts	And the max number of sets you can connect
Fuse rating	Printed on the plug's fuse door. Buy spares that match
Warranty	ENERGY STAR sets carry at least 3 years
Spare bulbs	Included or easy to buy for that socket type

Rule of thumb: if you can't find the watts, the lab mark or the max-connect number, put the set back and pick another.

Sources and notes

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3. CPSC, holiday decorating injuries (about 14,900 ER visits in the 2023 season, about 160 a day), Nov 19, 2024
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6. DOE LED benchmarks (75% less energy, 40 seasons, 348 TWh potential savings) as summarized by Statista
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9. 10-season cost estimate (\$18 LED vs \$120+ incandescent), reported from DOE data
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10. ENERGY STAR holiday lights (75% less energy, 3-year minimum warranty), via Black Hills Energy
blackhillsenergy.com/node/1352

About the numbers: all figures are U.S. national estimates. Fire data covers 2018 to 2024 and injury data covers the 2023 season, which are the newest releases we found. The \$0.15/kWh rate and usage hours in the cost table are examples, not averages. The 3 ft heat clearance and the 80% circuit guideline are standard safety practice.