



Understanding LED Lighting Color, or “Kelvins”

Lighting has a significant impact on how your home looks and feels, but it can impact you as well. Lighting color, or “Kelvins” can be confusing, so I created this simple guide to help you understand how to tell the differences.

Quick Takeaways

- Lower Kelvin (2200–3000K) = Warm, relaxing, cozy → great for winding down.
- Middle Kelvin (3500–4000K) = Balanced, neutral, clean → good for focus and productivity.
- Higher Kelvin (5000–6500K) = Bright, energizing, cool → best for alertness and visibility, but not cozy.

💡 Tip: If you’re designing for homes or rentals, stick to 2700K–3000K for main living areas and 3500K–4000K for kitchens and task zones. Avoid higher Kelvins unless it’s for workshops, outdoors, or commercial use.

LED Kelvin Guide: Color Temperature & Impact

Kelvin Range	Color Name / Look	Best For Spaces	Impact on People
2200K–2700K	Warm White / Soft Glow Golden, cozy, candle-like	Bedrooms, living rooms, dining areas, spas, restaurants	Creates warmth, intimacy, and relaxation. Encourages winding down, reduces stress, supports melatonin (better sleep).
3000K	Warm White (Neutral) Softer than daylight but brighter than candlelight	Kitchens, bathrooms, retail, lobbies, offices with a cozy vibe	Balances warmth and visibility. Still comfortable, but with slightly more alertness than 2700K.
3500K–4000K	Neutral White / Cool White Balanced white with little yellow or blue	Task lighting, offices, garages, hospitals, kitchens	Neutral, clean, energizing. Improves focus, alertness, and productivity without being harsh.
5000K	Daylight Bright, crisp white with blue tones	Commercial spaces, workshops, outdoor floodlights	Mimics midday sunlight. Boosts energy, alertness, and concentration. May feel too stark for relaxation.
6000K–6500K	Cool Daylight / Bluish White Very crisp, bluish light	Industrial settings, warehouses, display lighting, security	Strongly stimulating, increases alertness. Can feel cold, clinical, or uncomfortable

at home. May
disrupt sleep if
used at night.

Kelvin Scale Visual



You may see a chart like this somewhere on the light bulb package, and this will help you select the right bulbs for your home or office.

2200 to 2700 mimics old school incandescent light. It's what most of us over 40 are "used to". Personally, I would not use higher than 3500k in my home, 4000 for workspace, but **only** if for daytime use.

Light Impact on the Brain & Body

The Kelvin number matters, and this is how it can impact your body and mind.

1. Melatonin Suppression

- Blue light, whether from LEDs or screens, **suppresses melatonin**, the hormone that regulates sleep.
- Evening exposure (especially after sunset) tricks the brain into thinking it's still daytime.

2. Circadian Rhythm Shift

- Regular exposure at night can **shift your circadian rhythm**, leading to delayed sleep onset or reduced sleep quality.

3. Alertness & Productivity

- In the **daytime**, blue-enriched light (5000K+) boosts alertness, concentration, and mood.

- This is why hospitals, schools, and offices often use 4000K–5000K lighting.

4. **Screen vs. Overhead Lighting**

- **Screens:** Blue light is closer to the eyes, prolonged, and often in dark surroundings, which amplifies its impact.
- **Room lighting:** Diffused, ambient, and less intense at eye level, so it's usually *less disruptive* — but still significant at night.

For more information, find me at www.homeeditedwa.com