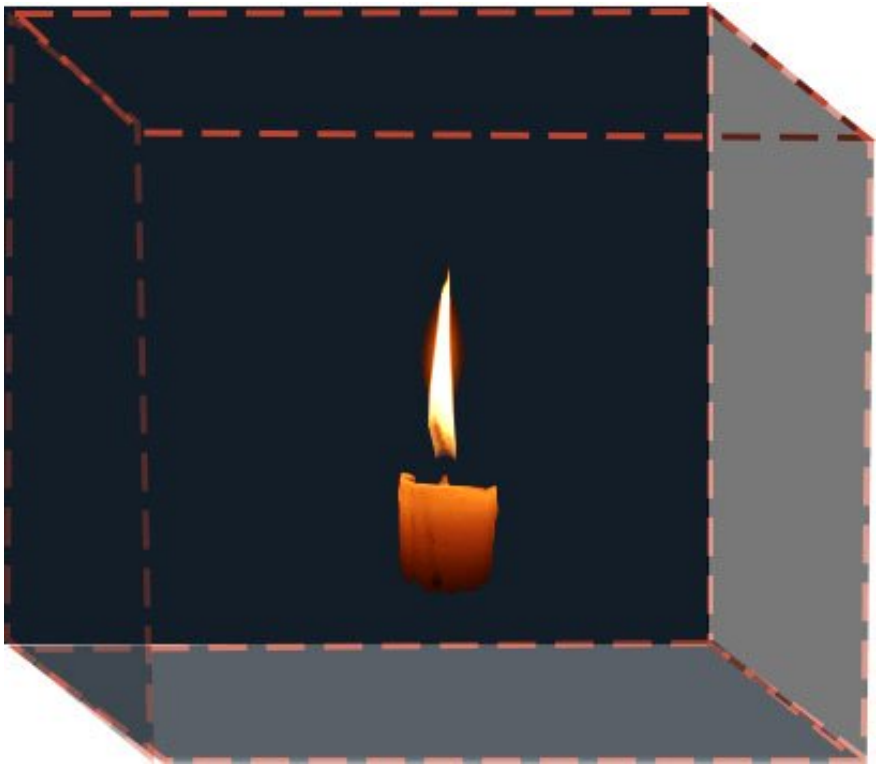
What is Nit screen brightness?

If you're looking to buy a monitor, you've probably heard of a nit unit, which indicates how much light per square meter the monitor can emit. Nit is important if you plan to use your device outdoors often.

If you're looking to buy a monitor, you've probably heard of a nit unit, which indicates how much light per square meter the monitor can emit. Nit is important if you plan to use your device outdoors often, but this is just one of many elements of a high quality display.

Calenda, Nit and Lumen

Imagine you have a candle inside a cube with a total surface area of ??1m x 1m (the equivalent of a towel or 20 iPads arranged in squares). The total amount of light emitted from that candle at the source is called a candela.



All light hitting the sides of the cube is equivalent to 1 nit, technically 1 candela / m^2. Each additional candle you add to the block adds another candela, and at the same time adds 1 nit. If 400 candles / nit are added to the block before it burns, the light per square meter will be 400 nit, creating a pretty nice laptop screen.

Because this is a measurement unit per square meter, screen size and nit are not related to each other. Cinema screens, used exclusively in dark environments, are typically around 50 nit, while smartphones, which use a lot of outdoors, tend to be at least 300 - 400 nit.

Theater projectors can emit more light (measured in lumens) than any smartphone, but the phone will capture more light in a small space. The reason why using a phone in a movie theater is so taboo is because at least 10 times more candela per square meter than a screen, the phone is basically a magnesium fire in a dark theater.

Can be summarized as follows:

1. Candela = Light from a candle
2. Nit = Light from 1 candle per square meter
3. More nit = More candles per square meter = The screen is brighter

Nits good for what?

If you've ever tried using a dimming device on a sunny day, you'll understand why nit is important. The screen needs to be brighter than the surrounding light sources so you can clearly read the information on it.

Unless that device is an HDR (High Dynamic Range) TV. These TVs can show better brightness and more realistic black. One Sony's prototype HDR TV was able to hit 10,000 nit, while most HDR models only reached a maximum of about 2,000 nit.

How much nitrate does your laptop / smartphone / TV need?

As a general rule, the more nit is better. As long as you don't maximize the brightness when you don't need it, it won't have a negative effect on the battery.

Here is the maximum number of nit you can get on popular devices:

1. Smartphone / tablet: 200 to 1000+ nit
2. Laptop / monitor: 200 to 600+ nit
3. TV: 100 to 2000+ nit

Nit is very important but not the deciding factor in screen selection, unless you specifically need something on a certain level of brightness to use HDR or outdoors.