

# UNDERSTANDING ISO BLUEPRINT

In digital photography ISO measures the sensitivity of the image sensor. Along with shutter speed and aperture, ISO affects exposure of images. Simply speaking, ISO is a camera setting that brightens or darkens a photo. If we increase ISO number, our photos will grow progressively brighter.

ISO is measured in numbers such as 100, 200, 400, 800, etc. Generally speaking, the lower the number the less noise. Higher numbers mean that your camera will digitally amplify the light captured by the sensor, which allows us to shoot in low light without a flash. The cost of doing so is more noise.

Many photographers understand the basics of ISO, but they aren't sure which ISO value to actually pick in a certain situation. In practice, there's a reason why cameras allow such a wide range of ISO settings - different situations call for different ISOs.

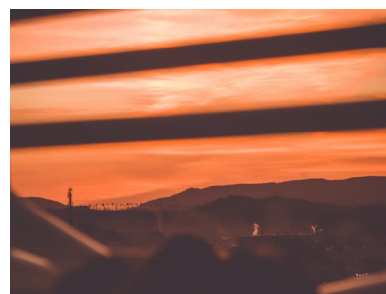


**100 ISO** is generally accepted as a standard ISO and it gives crisp shots with little to no noise.

Situations where you need to push ISO to higher settings include shooting indoor sports events, concerts, art galleries, churches and various parties. These events usually have **low light conditions** and increasing the ISO can help you capture the scene properly.



*low ISO*



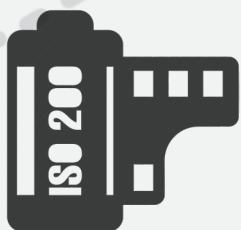
*high ISO*

When choosing the ISO you should ask yourself the following questions:

- Is the subject **well lit**?
- Do you want a **noisy** or "**grainy**" photo?
- Will I use a **tripod**?
- Is my subject **moving** or **stationary**?

## 1 CHOOSING ISO

When you override the default settings and choose a specific ISO you'll notice that it impacts other settings - aperture and shutter speed.



Because of this, you should learn the correlation between aperture, shutter speed and ISO, also known as the exposure triangle.

### TIP:

If you bumped your ISO up from 100 to 400 you'll notice that you can shoot at higher shutter speeds and smaller apertures.

## 2 ISO & EXPOSURE

ISO values correspond to exposure stops, with an increase of one stop being a doubling of the sensitivity.



The relationship of ISO value to exposure stops is very straightforward: ISO 200 is a one-stop increase (doubling of sensitivity) over ISO 100. ISO 6,400 is six stops above ISO 100.

### TIP:

Modern digital cameras have ISO settings that range between 100 (low sensitivity) to 12,800 or greater (high sensitivity).

## THE ESSENTIALS

### 3 HIGH ISO & NOISE

A higher ISO translates to a noisy or "grainy" image, not unlike a higher ISO film has more grain than one with a lower ISO.



Luckily, on cameras with larger sensors, ISO can be raised quite high before it starts to significantly impact image quality.

### TIP:

A lower ISO won't just make less noise, it will also produce better colors and wider dynamic range (more details in shadows and highlights).