

Depth of Field and Hyperfocus Distance

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Depth of Field (DOF) - Impact of Variables

Parameter	Focal Length	Aperture	Distance
Focal Length	Shorter = Greater DOF	Fixed	Fixed
Aperture	Fixed	Smaller = Greater DOF	Fixed
Distance to Subject	Fixed	Fixed	Longer = Greater DOF

Depth of Field – Portion of the photograph in “acceptable focus”

- Depth of Field determined by
 - Focal length
 - Aperture
 - Distance to subject
- Depth of field calculators online and for phone
 - I use Depth of Field Master online <https://www.dofmaster.com/dofjs.html>
 - And “Digital Depth of Field” app on my phone

WHAT IS HYPERFOCAL DISTANCE?

A technique to increase the depth of field & keep your landscapes sharp

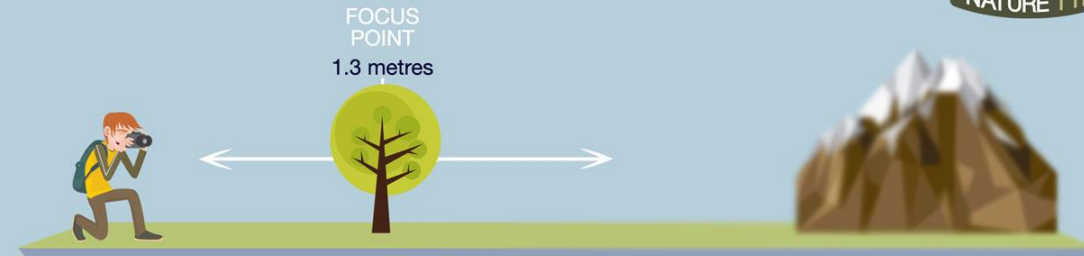


FIGURE A. Focusing on the foreground



FIGURE B. Focusing at infinity

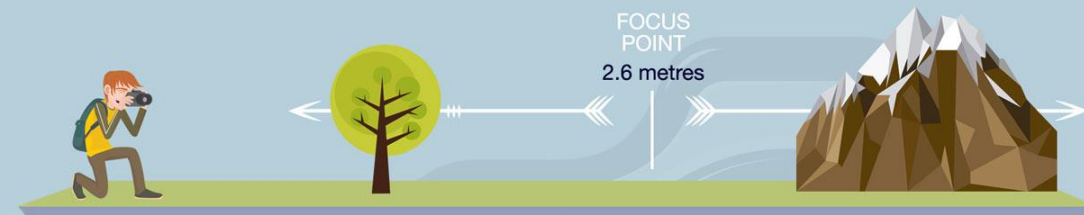


FIGURE C. Focusing at the hyperfocal distance

Hyperfocal distance is a technique used by landscape photographers to maximise the depth of field and keep as much of a scene in focus as possible.

Usually, the depth of field doesn't stretch as far towards the camera from the focal point as it does towards the background. So, the closer you focus towards the camera, the smaller the area in focus is.

To keep more of the scene in focus, you can focus further away from you. This is the principle behind hyperfocal

distance. The hyperfocal distance is the distance between the camera and the optimal point of focus for maximum depth of field.

You can use calculators to work out the hyperfocal distance of your lens at the chosen aperture. For this example, using a 28mm lens at f/16 with a 1.6x crop sensor would have a hyperfocal distance of 2.6 metres.

Figure A shows focusing close to the camera will result in less being in focus and a lot of 'wasted' depth of field.

Similarly, Figure B shows focusing to infinity results in a focused background, but the foreground still isn't in focus and there is still 'wasted' depth of field behind that point.

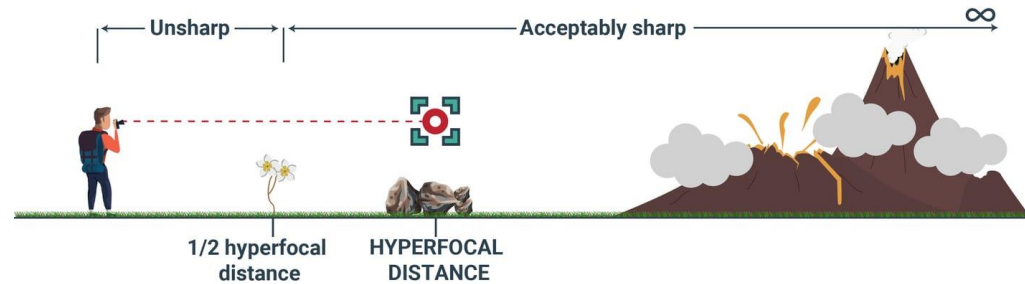
Figure C shows focusing at the hyperfocal distance. The depth of field extends from half this distance to infinity, allowing the foreground and background to be in focus at the same time.

Rule Thumb 1

- [Understanding Hyperfocal Distance in Photography-How it Works? \(capturetheatlas.com\)](https://capturetheatlas.com)
- ***Focus twice the distance as the nearest object you want in focus.***

UNDERSTANDING HYPERFOCAL DISTANCE

WHAT IS HYPERFOCAL DISTANCE?



Hyperfocal distance is the focusing distance where we achieve the maximum depth of field

When we focus our lens on the hyperfocal distance, everything from half of the hyperfocal distance out to infinity is going to be acceptably sharp

You can use a hyperfocal distance calculator or chart to calculate the hyperfocal distance according to your camera, focal length, and aperture

Rule of Thumb 1

- *For photo with a near object.*
- *Focus twice the distance to the near object.*



Rule of Thumb 2

- For photo with no near objects
- *Focus 1/3 of the way into the scene.*

