MOST USEFUL LENS FOCAL LENGTHS FOR VIDEO AND FILM

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Focal lengths go from 8mm all the way to 300mm and beyond. To a beginner the choices are overwhelming. Here's my simple list of essential focal lengths to help you get started in film or video.

I have about 15 years of filmmaking experience in all genres - feature films and short films, corporate

video, commercials and documentaries. If I knew what I know now I could have saved a bucket load of money on unnecessary lenses.

One gotcha you have to be aware of is, depending on what camera you're shooting with, the focal length "number" will change. Don't let that throw you off. I'll explain at the end. For clarification, the focal length I'll primarily talk about is in the 35mm equivalent.

But don't worry. In this document I'll include the focal length for all major camera standards. Just pick the one you are planning to use and get on with shooting. No calculations needed! The product links are affiliate links. I get a commission every time you purchase using these links. It won't cost you anything extra.

If you're confused on whether to pick primes or zooms, I've got you covered there as well. Let's get started!

14mm

The ‘landscape’ lens

1” Sensor	Micro Four Thirds	Super 35mm or APS-C	Full frame 36mm x 24mm	Arri Alexa 65
5mm	7mm	9mm	**14mm**	21mm

Why you need this focal length:

For gorgeous landscapes:

Timelapses of landscapes, stars, etc.:

To get a large building in frame for a master shot:

Get a great overhead shot of a ballroom or hall:

It's hard to find anything smaller, and if you increase the focal length you just don't get the necessary width. Remember, this is a rectilinear lens, not fisheye!

What aperture is good?

Anything above f/2.8 (T2.8) is fine. There's no danger of shallow depth of field here!

The Samyang 14mm lens (Amazon, B&H) is a great example that is also cheap.

28mm

The bread and butter wide-angle lens

1” Sensor	Micro Four Thirds	Super 35mm or APS-C	Full frame 36mm x 24mm	Arri Alexa 65
10mm	14mm	19mm	**28mm**	40mm

Why you need this focal length:

When you’re in tight spaces and need a wide shot, this is a most useful focal length. Sure, you could go wider or narrower, but then you’re back to buying everything.

A 28mm lens is a decent place to start. It will cover you for landscapes when 14mm is too wide, and also for indoor shots when you need the width.

This is what a typical 28mm shot looks like:

Imagine what you can do with a dramatic low angle shot like this:

Or an overhead shot:

Or sports, when the action races past you in wide angle, it makes for one great shot:

What aperture is good?

For low light situations you might want to get an f/2.8 (T2.8) or better, and it will also help you separate the foreground a bit if it's close enough.

Canon, Sony and Nikon make affordable 28mm lenses in f/2.8 or better, check it out: (Amazon, B&H)

50mm

The bread and butter lens, period

1" Sensor	Micro Four Thirds	Super 35mm or APS-C	Full frame 36mm x 24mm	Arri Alexa 65
18mm	25mm	33mm	**50mm**	75mm

Why you need this focal length:

This is my favorite focal length because it is the sweet spot between distortion (doesn't distort faces too much) and width (it isn't so tight you can't use it in small rooms).

Excellent for mid shots:

And even close ups:

Notice how the subject stands out from the background and yet isn't that distorted. If you want to start with one lens, this is it. Now you know why

every manufacturer makes a 50mm f/1.8 nifty-fifty for cheap!

What aperture is good?

You might want to get an f/2 or better. The larger the aperture, the more options you have (of course, the price increases as well).

A simple 50mm f/1.8 is a great start, and won't break the bank. Check it out – (Amazon, B&H)

85mm

The beauty lens

1" Sensor	Micro Four Thirds	Super 35mm or APS-C	Full frame 36mm x 24mm	Arri Alexa 65
31mm	42mm	55mm	**85mm**	125mm

Why you need this focal length:

It makes people look great! Anything longer and you'll find it too difficult to use in small spaces. This is the perfect length to achieve great close ups like this:

Or, if you have the space and want to go wider, the out of focus areas are buttery smooth:

What aperture is good?

Try to get an f/2 or better. To get images like the ones above, you really need an f/1.4.

Luckily, most manufacturers make an 85mm f/1.8 or so that is really worth the price – (Amazon, B&H)

200mm

The indie "savior" lens

1" Sensor	Micro Four Thirds	Super 35mm or APS-C	Full frame 36mm x 24mm	Arri Alexa 65
75mm	100mm	135mm	**200mm**	300mm

Why you need this focal length:

Now I'll be honest up front. A 200mm isn't going to be cheap, but it's damn important to the indie filmmaker. It's not mission critical, but you'll be surprised by the number of times you'll have the sudden urge for it.

E.g., sometimes you need a great shot of the moon:

Or, you want to park the car far away with a long lens to get the action you can't get any other way:

See what I mean? You be the judge!

What aperture is good?

Anything beyond f/2.8 (T2.8) is fine. If you don't want shallow depth of field you have to stop down pretty hard!

All manufacturers make a great 200mm lens. An f/4 would be cheaper, and a zoom might be more affordable than a prime. You really can't go wrong here – (Amazon, B&H).

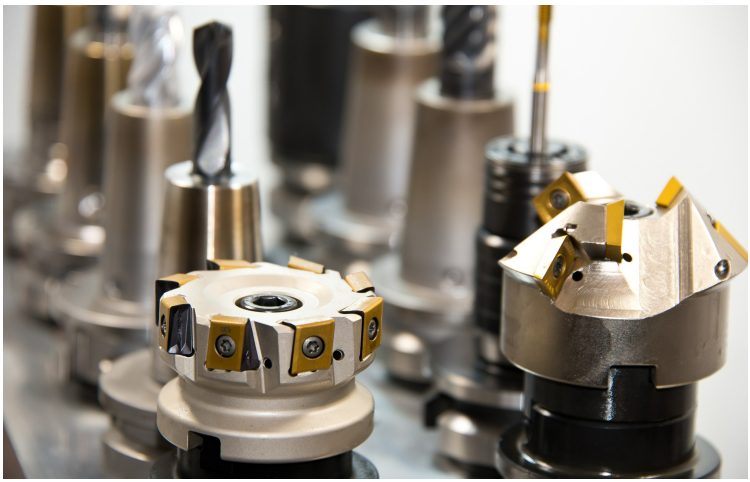
50/60mm MACRO or EXTENSION TUBE

The 'up close' lens

1" Sensor	Micro Four Thirds	Super 35mm or APS-C	Full frame 36mm x 24mm	Arri Alexa 65
22mm	30mm	40mm	**60mm**	90mm

Why you need this focal length:

Most lenses don't focus closer than a foot. Telephoto lenses typically don't focus closer than 3-4 feet. But you'll always want to take a super close up of something, maybe a clue or a detail:



If you want close-ups of insects or flowers, you'll need a 90/100mm macro lens instead. But I've found, for general filmmaking, the 50/60mm focal length is more useful first.

You can also buy a macro extension tube (Amazon, B&H) if you want to save money. It looks like this:

When you insert the extension tube between the lens and camera body, it allows the lens to focus closer.

The problem is it's not very robust. It's great for learning to shoot macro. But if you're serious about cinematography you might want to consider investing in a dedicated macro lens.

What aperture is good?

Anything beyond f/2.8 (T2.8) is fine. When you get close, even f/8 gives you shallow depth of field! All manufactures make a decent 50/60mm macro lens – (Amazon, B&H).

PRIMES vs ZOOMS

Now if you're a beginner, you'll be thinking: Should I go for a zoom lens or should I go for primes?

There are a few considerations here:

1. Do you hate changing lenses? Then zooms are a great option.
2. Do you want super shallow depth of field with an aperture of f/2 or better? Then primes are the only way to go.
3. Do you only have money for one lens, maybe the kit lens? Then a zoom is the way to go.
4. You don't know what you want? Then get a kit zoom lens.

If you need a 14mm lens, you'll most likely be looking at a prime lens. From 28 to 85 you could make do with a 24-70mm zoom lens. It'll get you close enough.

List out what is really important, and prioritize. Don't kid yourself, and look at things objectively. I started out with an 18-55mm kit lens for a Canon 550D (the equivalent in 35mm is 28-90mm). So if you're a total newcomer get a kit lens and start shooting.

If your camera sensor isn't part of the list, what do you do?

MY SENSOR ISN'T ON THE LIST!

The focal lengths for each sensor are derived from the 35mm equivalent by a "crop factor".

To get the crop factor, find the horizontal length of the sensor in your camera. It will be in millimeters (mm).

E.g., the horizontal length of the Arri Alexa 65mm camera is 54.12mm.

You divide 36mm by the width. In this case, it's 36/54.12 = 0.67. This is the crop factor. Then you divide the focal length (in the full frame column) with this crop factor. E.g., for a 50mm lens, you divide 50 by 0.67 and you get 75mm approximately.

To find the width of the sensor, check the specifications of your camera on the manufacturer's website, or ask around in forums. It's not that hard to find!

If you want to understand some of the terms used in this guide, check out the following articles:

1. What is the 35mm Equivalent and Why is it Confusing?
2. Why are there Four Crop Factors, and Do we need all of them?
3. The Focal Lengths and Lenses used by Great Directors

I hope you've found this guide useful. Feel free to ask me any questions, I'll be happy to help.

Now go film something!