

FAQ

Century Film & Video

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1. What is Angle of View?

Angle of view is a measure of how much of the scene a lens can view. A fisheye lens can see as much as 180 degrees and a telephoto lens might see as narrow an angle as 5 degrees. It is important to distinguish horizontal angle of view from the vertical angle of view.

2. What is an Achromat Diopter?

An achromat diopter is a highly corrected two element close up lens that provides extremely sharp images edge to edge without prismatic color effects.

3. How is an Achromat different from a standard close up lens?

Standard close-up lenses, or diopters, are single element lenses that allow the camera lens to focus more closely on small objects. Single element diopters accomplish this, although the image may not be uniformly sharp from edge to edge and some color fringing may be visible.

4. What is a matte box?

A matte box is a professional light control system, offering lens shade functions, filter holders (usually rotatable) and accessories such as French Flags, side flages and eyebrows.

5. What is a lens shade?

A simple device that shades the lens from stray light, improving contrast and reducing internal reflections and lens flare. A sophisticated lens shade may have a simple provision for mounting a filter.

6. When do you need a lens shade or a matte box?

To minimize stray light hitting or entering the lens. Properly shading the lens can increase contrast and image quality.

7. What is aspect ratio?

The ratio of width to height of an image. This is a commonly used method of identifying different video formats.

8. What is 4:3?

This is the aspect ratio of standard broadcast television worldwide. Pronounced as: "four by three".

9. What is 16:9?

This is a widescreen video format aspect ratio. HD video is 16:9. Pronounced as "sixteen by nine".

10. What is anamorphic video?

This is a process to capture 16:9 widescreen video using a standard 4:3 camera. The video is captured using a cylindrical anamorphic lens to squeeze the image and the resulting imagery is unsqueezed during post production.

11. What is the difference between the Mark I and Mark II fisheye lenses?

The MKI fisheye was designed for cameras such as the Sony VX1000 Mini DV camera. Many professional users objected to the amount of vignetting present in the MKI Ultra Fisheye. The MKII fisheye was designed for newer cameras such as Sony VX2000/PD150 and the Canon GL1/2, which have larger lenses, requiring a larger fisheye. Vignetting was eliminated in the Mark II design.

12. What is anti-reflection coating?

Thin film anti-reflection coatings greatly reduce the light loss due to reflection in multi-element lenses. Reducing these reflections results in a dramatic reduction of lens flare and increased contrast.

13. How should I clean my lens?

See our lens cleaning page.

14. Why should I use a bayonet Mount?

Most DV cameras have lenses that use plastic parts, including the accessory thread on many lenses. Mounting and unmounting an accessory lens many times can result in damage to those threads. By utilizing the bayonet on the front of the camera that was originally intended by the manufacturer to secure the lens shade, accessory lenses can be mounted more quickly and reliably, without damaging your camera lens.

15. How much does my accessory lens weigh?

See the Specification charts.

16. What is hyperfocal distance?

Depth of field is the zone of acceptable focus in front of and behind the point of best focus. If a lens is focused at infinity, the depth of field beyond the focus point (beyond infinity) is wasted. For a particular lens, aperture and film format size, the depth of field can be maximized by focusing the lens at the hyperfocal distance. The hyperfocal distance is the point of focus chosen so that the depth of field extends from a near point to infinity. As you stop down the lens, the depth of field increases and therefore the hyperfocal distance is closer to the camera.

17. What is the Hyperfocal distance of my lens?

That depends on the lens focal length, film format size and lens aperture you are using. You can use our Depth of Field Calculator spreadsheet (requires Excel) to calculate hyperfocal distance for your various requirements.

18. What is a T-Stop?

A T-Stop is just an f-stop adjusted for light Transmission (T for Transmission). Transmission is affected by both absorption and reflection within a lens. It won't matter as much on a short camera lens for photography, especially if you're metering through the lens. In cinematography, especially in the film days, they NEVER metered through the lens. That's changing now with digital cameras, where you can see images on a monitor and see the exposure on a scope. In any case, the problem in the film days was that a short prime lens marked f2.8 or a LONG zoom lens marked f2.8, would give radically different exposure because there's a LOT more glass in that long zoom lens. That glass absorbs light and each element reflects light, especially when there's an air gap. So meter with your incident light meter, shoot with a short lens, every-thing's fine. Put the big long lens on the camera and suddenly the negative is nearly a stop under exposed. Bad for your career as a camera operator. So to correct this, lenses were marked in T-stops (T for transmission), to compensate for lenses with more glass, better or worse AR coating, etc.. See an explanation of the T-Stop/F-Stop relationship here:

19. What is a PL mount?

The PL Mount is arguably the standard lens mount for cinematography today. Compared to standard DSLR mounts, the PL Mount is a very robust and solid mount. It's absolutely rock solid and can hold a very long lens without any movement or vibration.

About the Schneider Group:

The Schneider Group specializes in developing and producing high-performance lenses for industrial optics, photography and film as well as cinema projection lenses, filter systems and precision mechanics. The group comprises Jos. Schneider Optische Werke, founded in Bad Kreuznach in 1913, and its subsidiaries Pentacon (Dresden), Schneider-Optics (New York, Los Angeles), Schneider Asia Pacific (Hongkong) and Schneider Optical Technologies (Shenzhen). The company's main brand is "Schneider-Kreuznach". It has around 620 employees worldwide, with 390 based in its German headquarters. For years now the group has been a world market leader in the area of high-performance lenses.

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