



Compact Primes

Welcome to the Family



Compact Primes

The Compact Primes are a new set of high quality PL mount lenses for digital and film cameras. They are based on the award-winning optics of ZF still photography lenses, which ARRI and ZEISS have further optimized and built into completely new lens housings designed specifically for cinematography. Benefiting from the uncompromising standards of motion picture equipment manufacturing, the Compact Primes are an affordable set of primes that deliver high image quality as well as the ergonomics and robust construction demanded by the rigors of life on the set.

CINEMATIC PRO-STYLE ON A BUDGET

Main Features

■ Affordable PL Mount Lenses

- for all PL mount digital and film cameras
- covers up to full format still image size (36 x 24 mm)

■ Advanced Optical Performance

- modern lens design
- high resolution and contrast
- great flare suppression through T* coating and internal light traps
- low distortion
- color matched
- unique 14-blade iris for natural, circular out-of-focus highlights

■ Cine Style Housing

- PL mount: positive locking and solid
- cine quality housing is robust and reliable
- strong precision construction - stable with lens motors
- calibrated lens scales
- focus ring turns in standard cine lens direction
- standard housing dimensions for all focal lengths
- standard focus and iris gear positions
- compact and lightweight for handheld and Steadicam





Welcome to the Family

The long and highly successful collaborative relationship between ARRI and Zeiss has resulted in an expansive family of products including the Master Primes, Ultra Primes, Ultra 16 lenses, Master Diopters and the Lightweight Zoom LWZ-1 - lenses that have raised the bar of cinematography optics to unprecedented heights.

The newest member of this family, the Compact Primes, are made specifically for a growing niche in the market: they offer professional quality on a budget and have been designed for both film cameras and the emerging generation of digital motion picture cameras, covering the Super 35 as well as the full frame stills format.

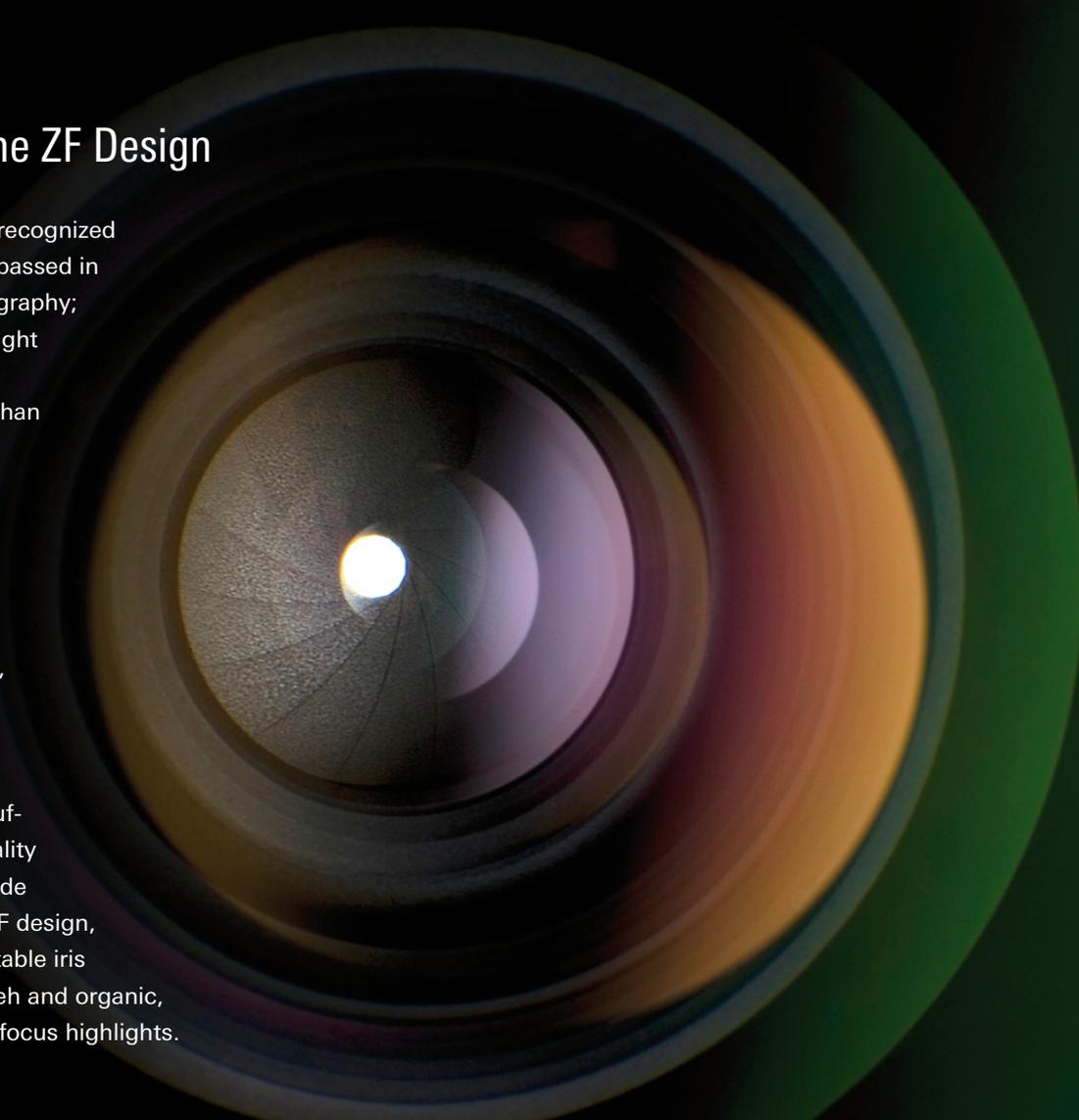


Compact Primes

Improving on the ZF Design

The Zeiss ZF lenses are recognized as being optically unsurpassed in the world of stills photography; they have superb stray light suppression and a more three dimensional look than other professional stills lenses.

The Compact Primes take the very best elements of the ZF lenses and improve upon them, with tighter mechanical and optical tolerances, a more precise optical adjustment during manufacturing and stricter quality control. A unique 14-blade iris, not present in the ZF design, ensures precisely repeatable iris settings, a pleasing bokeh and organic, perfectly circular out-of-focus highlights.





Ultra 16 Lenses



Ultra Primes



Master Primes



Master Macro 100



Lightweight Zoom LWZ-1



Master Diopters

Consistently Sharp, Punchy Images

In terms of their optical quality, the Compact Primes are equally at home on the new crop of digital motion picture cameras as they are on film cameras. The modern lens design and the cine manufacturing process produce high resolution, high contrast and excellent color rendition for consistently sharp, punchy images. New manufacturing techniques greatly reduce geometric distortion, a feature especially important for special effects productions.

The T* lens coating, special internal light traps and proprietary matte black paint on the lens housing interior result in excellent flare suppression for images with high contrast, clearly defined highlights and deep, rich blacks.

To speed up grading in post, all Compact Primes are closely color matched, not only to each other but also to the Master Primes, Ultra Primes, Ultra 16 lenses, Master Diopters and Lightweight Zoom LWZ-1. This means the cinematographer is able to concentrate on creating a look rather than matching lenses.





The positive locking (PL) lens mount, used on all ARRI cine lenses, ensures a safe and solid connection between lens and camera.

Made for the Set

When you hold a Compact Prime in your hand, you can immediately feel that it is a lens made for the rough world of professional filmmaking. The housing is rugged and durable, and its solid construction helps when using lens motors. Compact Primes will remain rock-steady in the PL mount; they will not wobble like many stills lenses do when used for cine work.

The experience gained in designing professional cinematography lenses over the last 90 years has been applied to the design of the Compact Primes. Their handling on the set and in the rental house has been ergonomically optimized for a fast and safe production workflow. The calibrated focus ring turns in the direction all other cine lenses turn and the purposefully chosen larger diameter provides a substantial rotating circumference for more precise focusing and plenty of room for clear lens markings.

Fast and easy lens changes are ensured since all Compact Primes have the same dimensions and have the focus and iris rings in the same position. When you take off one focal length and put on another, you don't have to waste any time adjusting accessories before you carry on shooting.



Lens Product Comparison



	Compact Primes	Ultra Primes	Master Primes
Cine quality robust housing	√	√	√
Standard housing dimensions	√	√	√
Standard focus/iris ring position	√	√	√
Calibrated lens scales	√	√	√
Round iris for natural out of focus bokeh	√	√	√
Flare suppression ⁽¹⁾	++	++	+++
Consistent performance across whole T-stop range	+	++	+++
Resolution	+	++	+++
Evenly illuminated field	+	++	+++
Close focus performance	+	++	+++
Image geometry ⁽²⁾	+	+	+++
Breathing ⁽³⁾	+	+	+++
Color matched	√	√	√
Super color matched		√	√
Linear iris scales		√	√
Constant widest T-stop		√	√
Lens Data System ⁽⁴⁾		√	√
Extended T-stop range			√
Reversible focus scales (m/ft)			√
Temperature stabilized torque			√
Permadur™ gear surface			√
Widest Aperture ⁽⁵⁾	T1.5 to T3.6	T1.9	T1.3
Number of lenses available	7	16	15
Widest/longest focal length (in mm)	18 - 85	8 - 180	14 - 150
Image area covered	full format still image (24 x 36 mm, 9.45" x 14.17")	ANSI Super 35 (24.9mm x 18.7mm, 0.980" x 0.7362")	ANSI Super 35 (24.9mm x 18.7mm, 0.980" x 0.7362")

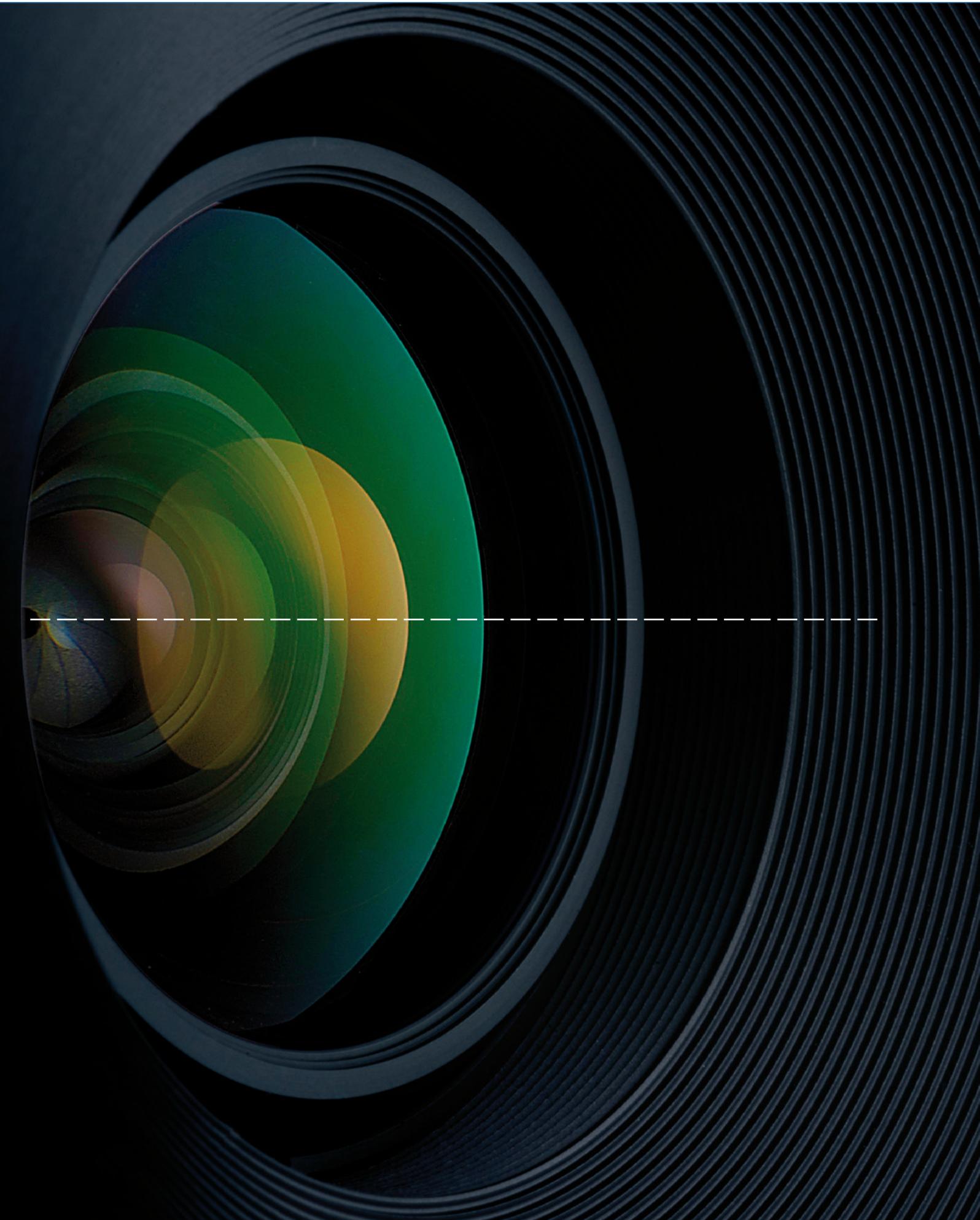
⁽¹⁾ The Compact Primes and Ultra Primes contain a number of flare suppressing measures, including the T* lens coating, internal light traps and housing interiors painted with several types of proprietary black paints with different refractive indices. These measures ensure a high contrast image with clearly defined highlights and deep, rich blacks. For the absolute minimum in flares and internal reflections, the Master Primes are equipped with the T*XP lens coating and additional, strategically placed light traps.

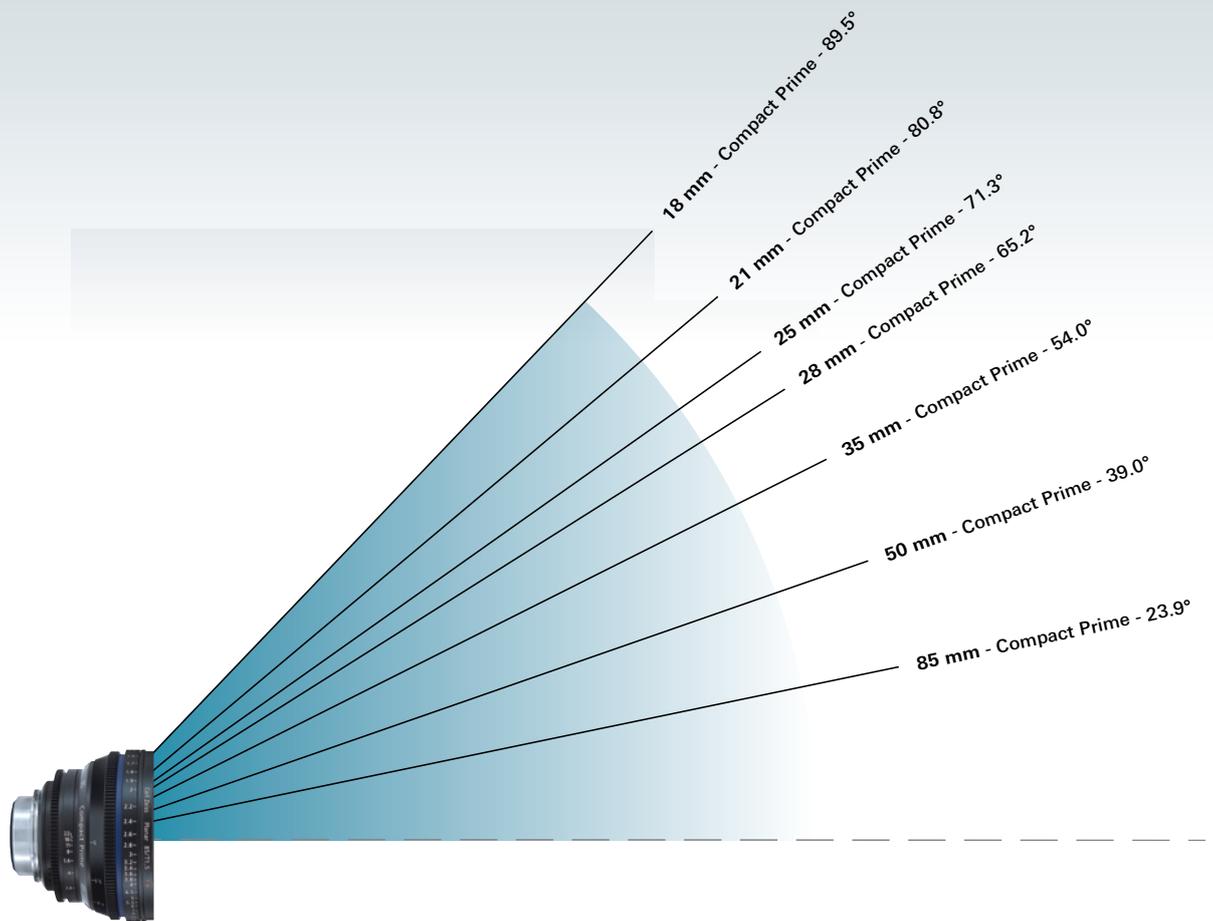
⁽²⁾ Master Primes contain special moving elements (Dual Floating Elements, patent pending) and aspherical lens surfaces to eliminate geometric distortion. This is especially noticeable on wide angle lenses.

⁽³⁾ Master Primes contain special moving elements (Dual Floating Elements, patent pending) that virtually eliminate breathing (an unwanted shift in image size when focus is changed).

⁽⁴⁾ The Ultra Primes are available both in a non-LDS and in an LDS version.

⁽⁵⁾ All Ultra Primes have a widest aperture of T1.9 except for the extreme wide angle lenses: UP8R (T2.8), UP10 (T2.1) and UP12 (T2). All Master Primes have a widest aperture of T1.3 except the Master Macro 100 (T2.0).





Horizontal Angle of View

Ranging from 18 to 85 mm, the seven focal lengths currently available in the Compact Prime series cover all applications from wide angle to telephoto. The graphic above shows the horizontal angle of view of the Compact Primes in comparison.

Compact Prime
T2.1/28

Compact Prime
T2.9/25

Compact Prime
T3.6/18

Compact
T2.9



Technical Data

Name	Type ⁽¹⁾	Lens Mount ⁽²⁾	Aperture	Close focus ⁽³⁾	Magnification ratio ⁽⁴⁾	Length ⁽⁵⁾	Front diameter ⁽⁶⁾
Compact Prime T3.6/18 mm	Distagon T*	PL	T3.6 - T22	0.30 m / 12"	1 : 11.7	80 mm / 3.1"	114 mm / 4.5"
Compact Prime T2.9/21 mm	Distagon T*	PL	T2.9 - T22	0.24 m / 10"	1 : 5.0	80 mm / 3.1"	114 mm / 4.5"
Compact Prime T2.9/25 mm	Distagon T*	PL	T2.9 - T22	0.17 m / 7"	1 : 2.3	80 mm / 3.1"	114 mm / 4.5"
Compact Prime T2.1/28 mm	Distagon T*	PL	T2.1 - T22	0.24 m / 10"	1 : 4.7	80 mm / 3.1"	114 mm / 4.5"
Compact Prime T2.1/35 mm	Distagon T*	PL	T2.1 - T22	0.30 m / 12"	1 : 5.3	80 mm / 3.1"	114 mm / 4.5"
Compact Prime T1.5/50 mm	Planar T*	PL	T1.5 - T22	0.45 m / 18"	1 : 6.7	80 mm / 3.1"	114 mm / 4.5"
Compact Prime T1.5/85 mm	Planar T*	PL	T1.5 - T22	1.00 m / 3'3"	1 : 9.9	80 mm / 3.1"	114 mm / 4.5"

(1) T* is the trademark of the ZEISS anti-reflection lens coating that reduces veiling glare and other internal reflections.

(2) Positive locking 54 mm stainless steel lens mount

(3) Close focus is measured from the film/sensor plane

(4) Magnification ratio is the relationship of the size of an object on film (first number) to the size of that object in real life (second number)

(5) Lens length is measured from the lens mount to the front of the lens housing

(6) Diameter of the lens/matte box interface. Maximum lens housing diameter for Compact Primes is 116 mm

Prime
/21Compact Prime
T2.1/35Compact Prime
T1.5/50Compact Prime
T1.5/85

Weight	Angle of view H, V, D				Entrance pupil ⁽¹²⁾
	Full format still ⁽⁷⁾ ID = 43.30 mm ⁽¹¹⁾	ANSI Super 35 ⁽⁸⁾ ID = 31.14 mm ⁽¹¹⁾	DIN Super 35 ⁽⁹⁾ ID = 30.00 mm ⁽¹¹⁾	Normal 35 ⁽¹⁰⁾ ID = 27.20 mm ⁽¹¹⁾	
0.9 kg / 2.0 lbs	89.5° - 67.1° - 99.1°	69.0° - 54.3° - 81.5°	67.1° - 52.6° - 79.4°	62.5° - 47.3° - 73.9°	82.3 mm / 3.24"
1.0 kg / 2.2 lbs	80.8° - 59.0° - 90.4°	60.9° - 47.3° - 72.8°	59.1° - 45.8° - 70.8°	54.8° - 41.0° - 65.5°	105.6 mm / 4.16"
0.9 kg / 2.0 lbs	71.3° - 50.8° - 81.4°	52.5° - 40.4° - 63.5°	50.8° - 39.0° - 61.6°	47.0° - 34.9° - 56.7°	87.5 mm / 3.44"
1.0 kg / 2.2 lbs	65.2° - 45.9° - 75.0°	47.4° - 36.3° - 57.7°	45.8° - 45.0° - 56.0°	42.3° - 31.3° - 51.3°	88.7 mm / 3.49"
1.0 kg / 2.2 lbs	54.0° - 37.2° - 63.2°	38.5° - 29.3° - 47.4°	37.2° - 28.3° - 45.8°	34.3° - 25.2° - 41.9°	80.7 mm / 3.18"
0.9 kg / 2.0 lbs	39.0° - 26.3° - 46.3°	27.3° - 20.6° - 33.9°	26.3° - 19.8° - 32.7°	24.2° - 17.7° - 29.8°	55.0 mm / 2.17"
0.9 kg / 2.0 lbs	23.9° - 16.1° - 28.6°	16.7° - 12.6° - 20.7°	16.1° - 12.1° - 20.0°	14.8° - 10.8° - 18.2°	37.8 mm / 1.49"

⁽⁷⁾ Horizontal (H), vertical (V) and diagonal (D) angles of view for a full format still camera aperture (aspect ratio 1.5:1, dimensions 36mm x 24mm / 9.45" x 14.17")

⁽⁸⁾ Horizontal (H), vertical (V) and diagonal (D) angles of view for an ANSI Super 35 Silent camera aperture (aspect ratio 1.33:1, dimensions 24.9mm x 18.7mm / 0.980" x 0.7362")

⁽⁹⁾ Horizontal (H), vertical (V) and diagonal (D) angles of view for a DIN Super 35 Silent camera aperture (aspect ratio 1.33:1, dimensions 24mm x 18mm / 0.944" x 0.7087")

⁽¹⁰⁾ Horizontal (H), vertical (V) and diagonal (D) angles of view for a Normal 35 Academy camera aperture (aspect ratio 1.37:1, dimensions 22mm x 16mm / 0.8661" x 0.6299")

⁽¹¹⁾ The image diameter (ID) is the diameter of the image circle needed for the respective format. Each Compact Prime is designed for the largest ID given here (full format still).

⁽¹²⁾ The distance from the entrance pupil to the film/sensor plane. Positive numbers indicated an entrance pupil in front, negative numbers indicated an entrance pupil behind the film/sensor plane. The entrance pupil (often mistakenly called "nodal point") is the center of perspective; moving the camera/lens system around the center of the entrance pupil prevents parallax errors. While largely irrelevant for live action, this measurement is important for special effects work.

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