



# Lightweight Zoom

The one that has it all



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Shooting styles have become more mobile in the last decade, driving the creation of ever smaller and lighter equipment for Steadicam, handheld and remote work. Modern cameras like the ARRICAM Lite and the ARRIFLEX 235 allow the cinematographer to place the viewer right in the middle of the action with fast and dynamic movements. Zoom lenses, on the other hand, have been improving in optical quality at the cost of increased size and weight. ARRI and Zeiss have now used their combined experience and cutting edge technologies to create a compact lightweight cine zoom of the highest optical performance: the 15.5 - 45 mm, T2.6 Lightweight Zoom LWZ-1.

The Lightweight Zoom LWZ-1 is the only compact zoom that combines outstanding optical image quality - inherited from the Master Primes - with smooth mechanics and light weight. 4.4 Lbs (2kg) of radical spherical and aspherical lens elements, exotic glass materials and the T\* XP anti-reflex coating ensure a sharp, high resolution image that covers the entire Super 35 frame and perfectly matches the other ARRI/Zeiss lenses.

The Lightweight Zoom is the ideal lens for shooting in confined spaces like airplanes, car interiors or elevators. It is also great when a lightweight camera is needed for action sequences, and for applications where size and weight are at a premium, including Steadicam, handheld, remote heads, car rigs, motorcycle rigs, bicycle mounts, body mounts and underwater shoots. In addition, small size and light weight afford a more efficient shooting pace.

## Main Features

### ■ Compact, Lightweight Zoom

- 15.5 - 45 mm, T2.6, 4.4 lbs/2 kg
- ideal for Steadicam, handheld and remote work

### ■ Smooth & Robust Mechanics

### ■ Matches other ARRI/Zeiss Lenses

- can be easily intercut with Master Primes, Ultra Primes, Variable Primes and Ultra 16 lenses

### ■ Highest Optical Performance Despite Compact Build

- high contrast and resolution
- T\* XP coating ensures flare resistance for deeper, richer blacks
- best image geometry in its class, even at close focus
- minimized chromatic aberration
- covers Super 35 through the entire zoom range







## SMALL, LIGHT & OPTICALLY SUPERB

The Lightweight Zoom is the only lens in its class that does not sacrifice optical or mechanical quality for compact size and light weight. It forms a high contrast and high resolution image with almost no chromatic aberration or geometric distortion over the entire zoom range, at all focus settings. It covers the whole Super 35 frame over the entire zoom range, while displaying minimal breathing. Creating such a lens was only possible by using innovative new technologies.

Radically shaped spherical glass surfaces have been employed for the first time in a cine lens. These lens surfaces have a very strong curvature; some are almost half-sphere shaped. Although they are difficult to grind, tricky to polish and demand precise attention during coating, mastering these manufacturing techniques has brought the reward of incomparable optical performance at substantially reduced weight.

Additionally, some of the same optical components and techniques that made the Master Primes so successful have been used in the Lightweight Zoom, including large diameter aspherical lens elements and exotic glass materials. Incorporating aspherical glass surfaces in a lens design requires ultra-high precision and a complex holographic measuring process, which was developed specifically for the Master Primes and now benefits all new ARRI/Zeiss lenses designs.

The aspherical lens element not only keeps weight down, but also reduces spherical aberration (the inability to focus all light rays from a point source onto a point on film) and keeps the image geometry free of distortions. Straight lines stay straight, from infinity to close focus and over the entire zoom range.

**MATCH MAKER**

Like all the other modern ARRI/Zeiss lenses, the Lightweight Zoom has been Super Color Matched. Its optical characteristics and color balance have not only been optimized to create a pleasing color balance on modern film stocks, but are also precisely matched to each other.

The Lightweight Zoom can be easily intercut with Master Primes, Ultra Primes, Variable Primes and Ultra 16 lenses, so the cinematographer is able to concentrate on creating a look rather than matching lenses in post.

**SMOOTH MECHANICS**

All mechanical parts have been engineered with the smooth feel and robust construction ARRI and Zeiss are famous for. Precision ball bearings ensure easy focusing and zooming at all temperature and humidity conditions. Chamfered precision gears mesh smoothly with the gears on follow focus units and lens motors. The backbone of the lens is a lightweight yet sturdy inner skeleton with special weight reducing construction.

**FAMILIAR, FAST & SAFE HANDLING**

The design of focus, zoom and iris scales has been matched to the other ARRI/Zeiss lenses, so that assistants can work with familiar controls. The front diameter of 114 mm is the same as that of the Master Primes, and an ergonomic grip makes working the lens by hand comfortable. When manual zooming is required, a zoom stick can be attached in four positions on the zoom barrel.

For those who need to get closer than the close focus distance of 0.45m/18 inches from the film plane, the Lightweight Zoom accepts the Master Diopters. The Master Diopters are a series of three diopters (+0.5, +1, +2) that can be quickly attached and removed from the lens, delivering unprecedented sharpness and contrast without the optical aberrations of traditional diopters.

The LWZ-1 accepts the Master Diopters



The new T\* XP multi-layer anti-reflex coating reduces flare and internal reflections and creates a pleasing, gentle color balance. Compared to conventional coatings it has a better transmission and a more uniform performance from optical center all the way to the edges, resulting in higher contrast and deeper, richer blacks. The lens' internal construction in combination with the

T\* XP coating ensures that it can easily handle tricky lighting situations like strong backlight, sunsets or car headlamps. The round iris opening leads to organic looking, pleasing out-of-focus highlights. Careful optical design ensures that the Lightweight Zoom stays a true T2.6 throughout the complete zoom range.

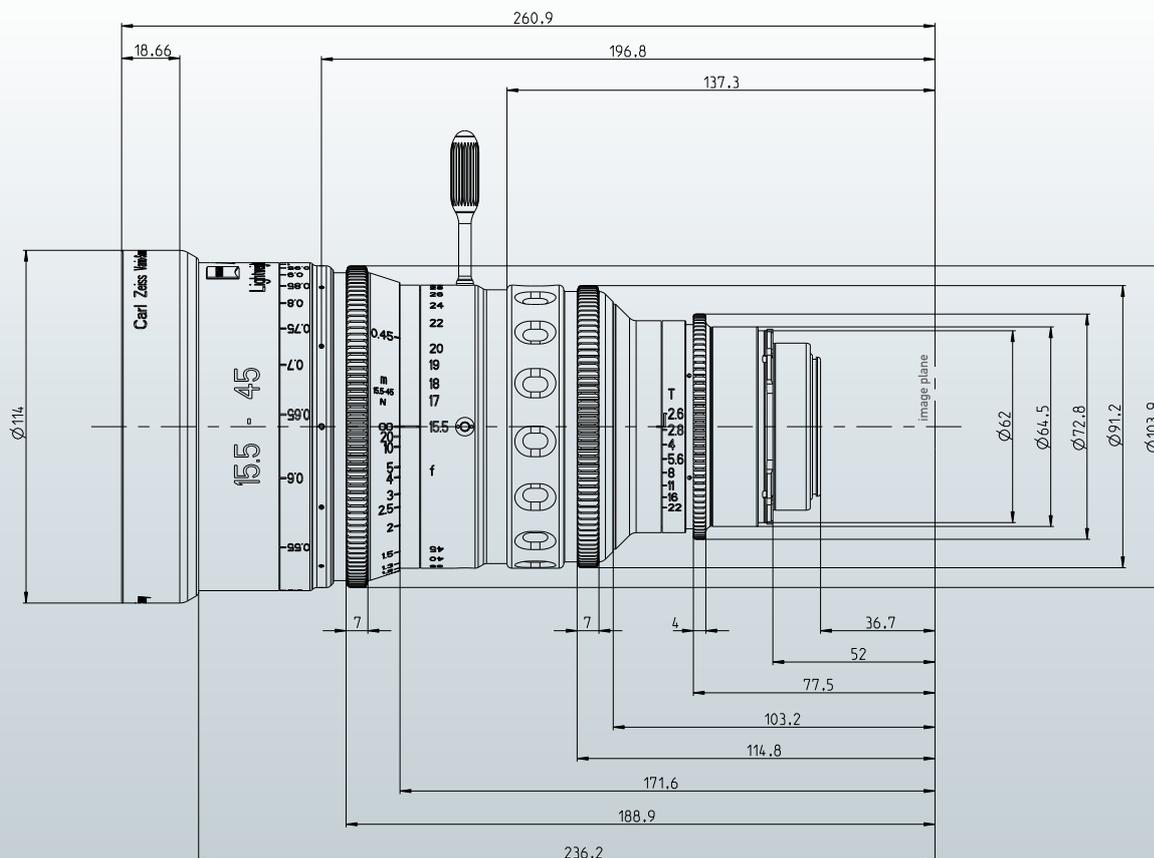


## Technical Data

Lightweight Zoom LWZ-1	
Focal Length Range	15.5 - 45 mm
Focal Length Ratio	3:1
Aperture	T2.6 - T22
Close Focus <sup>(1)</sup>	0.45 m/18 inches
Length (front to PL mount flange)	209 mm/8.2 inches
Front Diameter	114 mm/4.5 inches
Weight	around 2 kg/4.4 lbs
Horizontal Angle of View <sup>(2)</sup>	at 15.5 mm: 90.2° at 45 mm: 40.0°
Front Element	Radical aspherical lens
Lens Coating	T* XP
Coverage	The complete ANSI Super 35 image area (24.9 mm x 18.7 mm/0.980" x 0.7362")

<sup>(1)</sup> Close focus is measured from the film plane.

<sup>(2)</sup> Horizontal angle of view for an ANSI Super 35 Silent camera aperture (aspect ratio 1:1.33, dimensions 24.9 mm x 18.7 mm / 0.980" x 0.7362").



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