

FUJINON PL MOUNT

35mm PL Mount Zoom Lens

Digital Cinema cameras with high-resolution imaging devices that rival the quality of film, have begun production for theatrical release. It has long been desired to improve upon the optical characteristics and performance of the lens to meet the quality of these cameras.

Fujinon engineers exhaustively developed the PL series utilizing the expertise gained from the lens design process honed over many years, thus a whole new "35mm PL Mount Zoom Lens" series has been developed based upon this knowledge.



High resolution throughout the zoom range

Prime lenses have long been the choice for optimal performance, thus various fixed focal length lens had to be employed for shooting. The Fujinon PL lens series, with high resolution throughout zoom range make a compelling argument for utilizing one zoom lens in place of multiple primes. This will ultimately save time and money in all productions.

High performance at wide apertures

Compared to a general broadcast video lens, the Fujinon PL lenses have a large diameter front element, providing a very fast T-Stop, combined with a large imager, bring extraordinary depth and realism to the screen.

Ultimate high performance

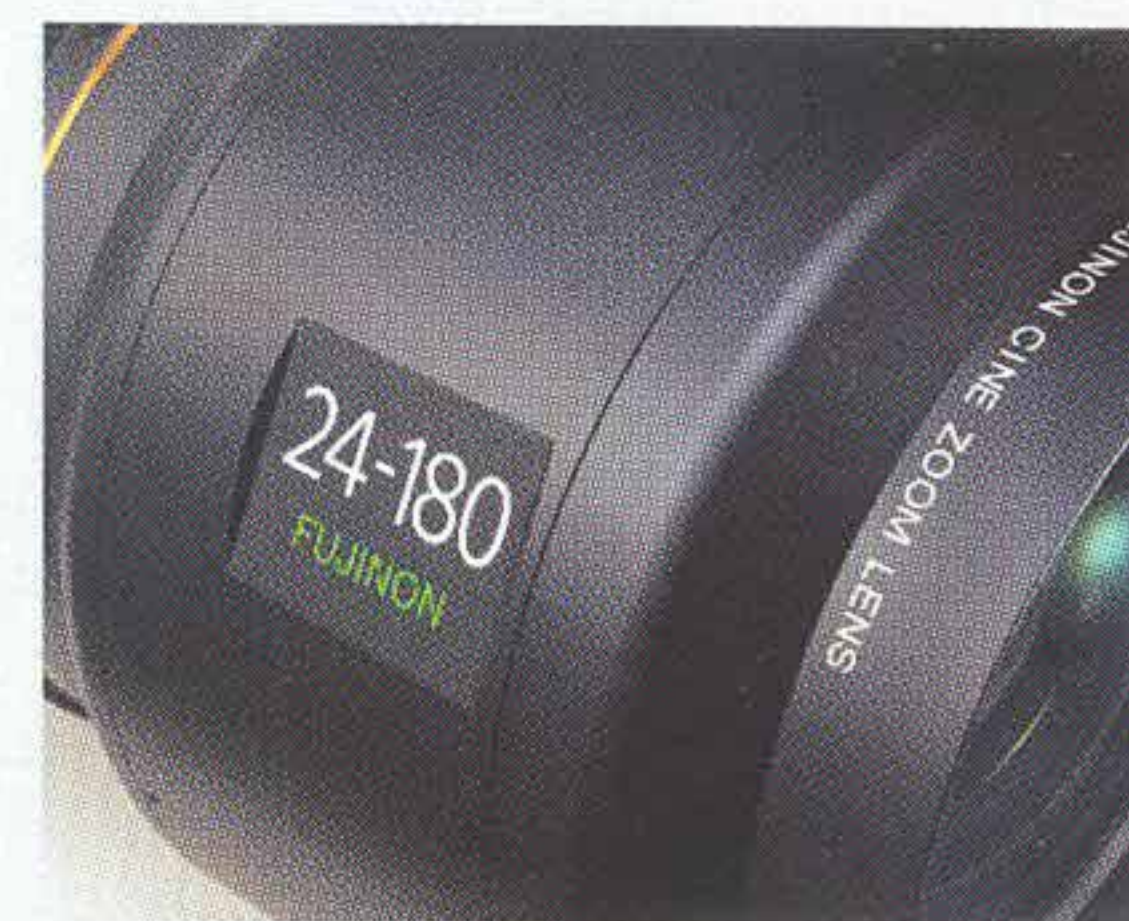
FUJINON's experience gained from the design and implementation of our Cine Super e series lenses helped form the basis of the PL series. Customers provided valuable feedback from the many theatrical features and TV commercials shot using the cine super lenses.

Both a special low dispersion glass, as well as a high refractive index glass are arranged to achieve optimal balance. The zoom mechanism suppresses aberration change from the WIDE side to TELE end by adopting our exclusive floating method.

PL series lenses feature a special new EBC coating to reduce flare and ghosts to improve image quality.

In addition, the contrast performance is rich, the resolution - superb. The net results are lenses with excellent overall balance.

The Fujinon PL lenses are consistent at every focal length, object distance and T stop combination.



Focus rotation 280 degrees

Fujinon PL mount cine lenses adopt a lead-cam method in order to achieve 280 degrees of focus rotation angle, instead of the traditional helicoid screw, which is used in ENG lenses for its' focus lens mechanism. Super precise machining technology and careful assembling techniques provide precise focusing. A large barrel diameter provides for excellent results when pulling focus.

Constant T-No.

Changes in the T-No. when zooming is considered undesirable in cinematography, Therefore demand for constant T-No. Fujinon's PL mount Cine lens series maintains a constant T-No., from the wide end to telephoto end. (HK5.3x75 : T-No. 2.8-3.8)

Line Up

		WIDE							
Angular field of view		79°	67°	53°	29°	18°	16°	7.4°	3.2°
Focal length (mm)	35mm	14.5	18	24	45	75	85	180	400
	2/3"	5.8	7.2	9.6	18	30	34	72	160
HK3.1×14.5		14.5—45mm							
HK4.7×18			18—85mm						
HK7.5×24				24—180mm					
HK5.3×75					75—400mm				

Color matching

In cinematography, lenses are chosen for each scene according to focal length, making it extremely important that all lenses have the same color-balance.

Fujinon's PL mount cine lens series are designed and manufactured to exhibit the same transmission characteristics by using various glass materials in ideal balance and by adoption of our New EBC Coating, optimized for each optical element. This eliminates time spent for color adjustment in post, and contributes to overall savings, as well as image performance.

Temperature shift control technology

Materials have been carefully selected as to minimize flange back shift over a wide temperature range. Due to the nature of HD cameras, Fujinon has employed a method for users to perform flange focal adjustment without the need of special tools.

No shims are required.



Best performance with replacement lens mount.

Fujinon PL mount lenses can achieve high optical performance with both film cameras and digital cameras. For users seeking the best performance, the lenses are equipped with a unique new mechanism to replace the lens mount. The PL lenses can readily be optimized to get the best optical properties possible.

New development of 9 iris blades

In order to improve the depiction of a more natural out of focus image, Fujinon has developed a new 9 blade iris for the PL mount cine lenses. Images of bright objects, not in critical focus, will look more natural and pleasing to the eye.



Minimized focus breathing

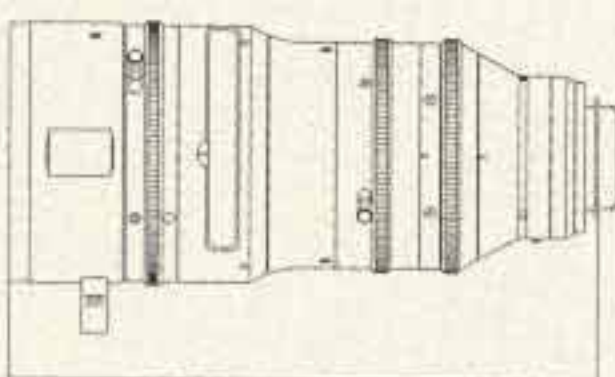
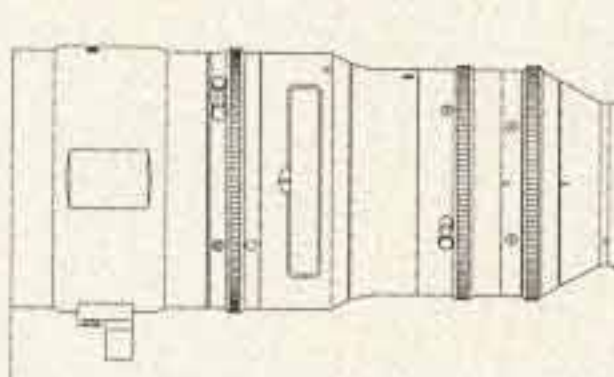
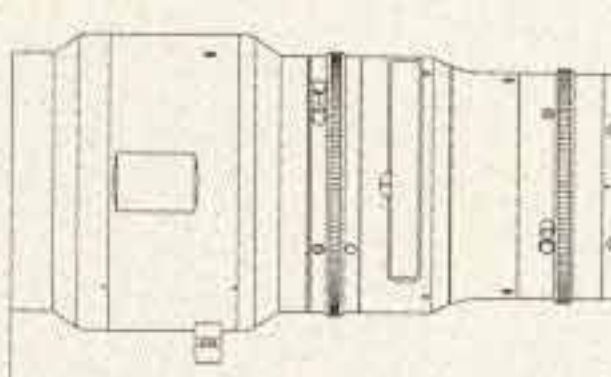
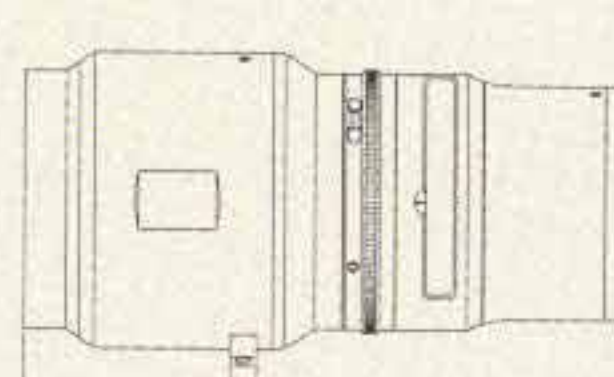
For most standard lenses, when focusing, the field of view changes as though the lens is zooming. The phenomenon is called focus breathing or pumping. Fujinon PL mount cine lenses have adopted an inner focus and floating method for the lens focus structure to eliminate the focus breathing phenomenon to a level which does not interfere the visual content of the production.

Uniformed size and shape, popular accessories can be used.

Fujinon has unified the size and shape of the Fujinon PL mount cine lens series for efficient workflow.

All Fujinon PL mount cine lens front diameters are $\Phi 136\text{mm}$, focus and iris gear diameter, thread pitch and positions are also unified. Matte-box, follow-focus and other cinematography accessories of ARRIFLEX, CROSZIEL, etc. are compatible.

Specifications

MODEL NAME	HK3.1×14.5	HK4.7×18	HK7.5×24	HK5.3×75
Application	35mmPL Mount Camera	35mmPL Mount Camera	35mmPL Mount Camera	35mmPL Mount Camera
Focal Length	14.5—45mm	18—85mm	24—180mm	75—400mm
Zoom ratio	3.1×	4.7×	7.5×	5.3×
T-No.	1 : 2.0	1 : 2.0	1 : 2.6	1 : 2.8
Iris Blades	9	9	9	9
M.O.D.from image planes	0.71m(2.3ft)	0.82m(2.7ft)	1.24m(4.1ft)	2m(6.6ft)
Object dimensions at M.O.D.	14.5mm 693×390mm	18mm 656×369mm	24mm 924×520mm	75mm 580×326mm
16 : 9 Aspect ratio*	45mm 215×121mm	85mm 139×78mm	180mm 119×67mm	400mm 113×64mm
Angular field of view	14.5mm 79° 13'	18mm 67° 23'	24mm 53° 08'	75mm 18° 11'
16 : 9 Aspect ratio*	45mm 29° 52'	85mm 16° 04'	45mm 07° 38'	400mm 3° 26'
Focus rotation	280°	280°	280°	280°
Zoom rotation	160°	160°	160°	160°
Size $\Phi \times \text{Length}$	$\Phi 136 \times 310\text{mm}$	$\Phi 136 \times 352\text{mm}$	$\Phi 136 \times 405\text{mm}$	$\Phi 136 \times 444\text{mm}$
Mass	6.5kg	6.9kg	8.9kg	8.9kg
Appearance	 310mm	 352mm	 405mm	 444mm

Feet type and Metric type are available

*Sensor Size : 24.0×13.5mm

35mm PL Mount
HK **3.1** × **14.5** — **F** Feet type
 Zoom ratio Focal length at Wide end **M** Metric type