

**FLD+ Standard Lens Specifications**

**FLD+ Lens Compatibility:-**

FLD+ lens options fit & are recommended for use on the following F series products: F35, FL35, FS35, F90-4K13. They also fit, but are not optimised for the F32, FL33, FS33 & F90-W13.

**Lens Description, Part Number & Throw Ratio:-**

Focus, Zoom (where applicable) and Iris (where applicable) adjustment on all lens options is motorised.

Projector Model	Lens Part Number	Lens Description	Lens Additional Description
<b>F35, FL35, FS35 &amp; F90-K13</b>	R9801295	FLD+ 0.65:1 (EN47)	0.66:1 (SX+) 0.61:1 (1080 / WUXGA) 0.65:1 (Panorama / WQXGA / 4K UHD)
	R9801220	FLD+ Long Focus 0.80-1.21:1 (EN45)	0.81-1.22:1 (SX+) 0.75-1.13:1 (1080 / WUXGA) 0.80-1.21:1 (Panorama / WQXGA / 4K UHD)
	R9801221 EN / R9801287 NV	FLD+ Short Focus 0.80-1.21:1 (EN46) / FLD+ IR Short Focus 0.80-1.21:1 (NV46)	0.81-1.22:1 (SX+) 0.75-1.13:1 (1080 / WUXGA) 0.80-1.21:1 (Panorama / WQXGA / 4K UHD)
	R9801226	FLD+ 0.80:1 (EN42)	0.81:1 (SX+) 0.75:1 (1080 / WUXGA) 0.80:1 (Panorama / WQXGA / 4K UHD)
	R9801230 EN / R9801286 NV	FLD+ 1.20-1.70:1 (EN43) / FLD+ IR 1.20-1.70:1 (NV43)	1.20-1.70:1 (SX+) 1.12-1.58:1 (1080 / WUXGA) 1.20-1.70:1 (Panorama / WQXGA / 4K UHD)
	R9801216 / R9802222	FLD+ 1.70-2.50:1 (EN41) / FLD+ IR 1.70-2.50:1 (NV41)	1.71-2.52:1 (SX+) 1.58-2.33:1 (1080 / WUXGA) 1.70-2.50:1 (Panorama / WQXGA / 4K UHD)
	R9801211	FLD+ 2.50-4.60:1 (EN44)	2.50-4.60:1 (SX+) 2.33-4.30:1 (1080 / WUXGA) 2.50-4.60:1 (Panorama / WQXGA / 4K UHD)

## Sales Support - Projection

### Lens Shift Parameters:-

Lens Shift values provided assume 0% is on axis, that 100% shift equals half of image height / width.

Resolution / Axis	FLD+ 0.65:1 (EN47)	FLD+ 0.80-1.21:1 (EN45)	FLD+ 0.80-1.21:1 (EN/NV46)	FLD+ 0.80:1 (EN42)	FLD+ 1.20-1.70:1 (EN/NV43)	FLD+ 1.70-2.50:1 (EN/NV41)	FLD+ 2.50-4.60:1 (EN44)
<b>SX+</b> Vertical Horizontal	+/- 50% +/- 30%	+/- 30% +/- 20%	+/- 30% +/- 20%	+/- 0% +/- 0%	+/- 84% +/- 52%	+/- 106% +/- 70%	+/- 106% +/- 70%
<b>1080</b> Vertical Horizontal	+/- 72% +/- 28%	+/- 50% +/- 18%	+/- 50% +/- 18%	+/- 0% +/- 0%	+/- 114% +/- 48%	+/- 146% +/- 60%	+/- 146% +/- 60%
<b>WUXGA</b> Vertical Horizontal	+/- 60% +/- 26%	+/- 34% +/- 14%	+/- 34% +/- 14%	+/- 0% +/- 0%	+/- 100% +/- 44%	+/- 120% +/- 60%	+/- 120% +/- 60%
<b>Panorama</b> Vertical Horizontal	+/- 164% +/- 42%	+/- 130% +/- 32%	+/- 130% +/- 32%	+/- 52% +/- 10%	+/- 212% +/- 78%	+/- 212% +/- 78%	+/- 212% +/- 78%
<b>WQXGA</b> Vertical Horizontal	+/- 80% +/- 36%	+/- 50% +/- 24%	+/- 50% +/- 24%	+/- 0% +/- 0%	+/- 116% +/- 56%	+/- 146% +/- 70%	+/- 144% +/- 70%

### Lens Weight:-

Parameter	FLD+ 0.65:1 (EN47)	FLD+ 0.80-1.21:1 (EN45)	FLD+ 0.80-1.21:1 (EN/NV46)	FLD+ 0.80:1 (EN42)	FLD+ 1.20-1.70:1 (EN/NV3)	FLD+ 1.70-2.50:1 (EN/NV41)	FLD+ 2.50-4.60:1 (EN44)
<b>Weight (kg)</b>	5.40	3.04	3.14	2.70	2.84	2.54	3.08

## Sales Support - Projection

### Lens optical performance characteristics:-

Parameter	FLD+ 0.65:1 (EN47)	FLD+ 0.80-1.21:1 (EN45)	FLD+ 0.80-1.21:1 (EN/NV46)	FLD+ 0.80:1 (EN42)	FLD+ 1.20-1.70:1 (EN/NV3)	FLD+ 1.70-2.50:1 (EN/NV41)	FLD+ 2.50-4.60:1 (EN44)
<b>Working F#</b>	2.1	2.4-3.29	2.4-3.29	2.1	2.4-2.7	2.1-2.5	2.1-2.93
<b>Iris / Iris F#</b>	Yes 2.1-6.0	Yes 2.4-6.5	Yes 2.4-6.5	Yes 2.1-6.5	Yes 2.4-6.5	Yes 2.1-6.5	Yes 2.1-6.5
<b>Zoom Ratio</b>	-	1.51	1.51	-	1.42	1.47	1.85
<b>Focal Length (mm)</b>	12.6	15.85-23.93	15.98-23.99	16.12	23.95-34.02	33.70-49.54	49.52-91.60
<b>Focus Range (M)</b>	0.5 - 4.0	5.0 - 30	0.7 - 7	0.7 - 7	1.5 - 15	1.5 - 15	2.5-25
<b>MTF</b>	66 lp/mm	66 lp/mm	66 lp/mm	66 lp/mm	66 lp/mm	66 lp/mm	66 lp/mm

Pre-determined custom Focus Range adjustment is available on all lens options. Please refer to the Sales Support - Projection F Series Lens Focus Range Matrix document for further details.

Lateral Colour and Optical Distortion information is available upon request.

#### Disclaimer

Values subject to change without notice.

Tolerances are typically +/- 5% due to optical variation.