

Christie M RGB Series lens throw ratios

The following table details the information required to calculate the lens throw ratios for the Christie M RGB Series projectors.

Lens	Throw distance formula		Vertical and horizontal offset (%)		Min/Max screen widths			
	Imperial (in)	Metric (cm)	4K	4K+	Imperial (in)	Metric (cm)		
Fixed lenses								
0.37:1 ultra short throw fixed - ILS1 P/N: 118-131106-XX	TD = 0.381 x W - 3.2	TD = 0.381 x W - 8.2	+/- 128% V	+/- 124 % V	187	587	475	1484
			+/- 72% H	+/- 60% H				
0.67:1 fixed - ILS1 P/N: 118-100110-XX	TD = 0.701 x W + 6.7	TD = 0.701 x W + 17.1	+/- 35% V	+/- 22% V	54	577	138	1405
			+/- 12% H	+/- 9% H				
1.1:1 fixed - ILS1 P/N: 118-100117-XX	TD = 1.141 x W + 7.8	TD = 1.141 x W + 19.8	+/- 128% V	+/- 114% V	100	530	254	1346
			+/- 72% H	+/- 55% H				
Zoom lenses								
0.8-1.16:1 zoom - ILS1 P/N: 118-130105-XX	TD_MIN = 0.863 x W + 8.8	TD_MIN = 0.863 x W + 22.4	+/- 128% V	+/- 95% V	59	522	150	1325
	TD_MAX = 1.244 x W + 8.8	TD_MAX = 1.244 x W + 22.3	+/- 72% H	+/- 43% H				
1.16-1.49:1 zoom - ILS1 P/N: 118-100111-XX	TD_MIN = 1.158 x W + 7.8	TD_MIN = 1.158 x W + 19.9	+/- 128% V	+/- 82% V	74	502	188	1275
	TD_MAX = 1.495 x W + 7.9	TD_MAX = 1.495 x W + 20.0	+/- 72% H	+/- 38% H				

Lens	Throw distance formula		Vertical and horizontal offset (%)		Min/Max screen widths			
	Imperial (in)	Metric (cm)	4K	4K+	Imperial (in)	Metric (cm)		
1.4-1.8:1 zoom - ILS1 P/N: 118-100112-XX	TD_MIN = 1.389 x W + 13.4	TD_MIN = 1.389 x W + 34.1	+/- 128% V	+/- 114% V	85	672	216	1706
	TD_MAX = 1.883 x W + 6.0	TD_MAX = 1.883 x W + 15.1	+/- 72% H	+/- 55% H				
1.8-2.6:1 zoom - ILS1 P/N: 118-100113-XX	TD_MIN = 1.875 x W + 4.8	TD_MIN = 1.875 x W + 12.2	+/- 128% V	+/- 114% V	59	522	150	1325
	TD_MAX = 2.569 x W + 4.8	TD_MAX = 2.569 x W + 12.2	+/- 72% H	+/- 55% H				
2.6-4.1:1 zoom - ILS1 P/N: 118-100114-XX	TD_MIN = 2.505 x W + 16.0	TD_MIN = 2.505 x W + 40.6	+/- 128% V	+/- 114% V	84	675	213	1714
	TD_MAX = 4.114 x W + 15.5	TD_MAX = 4.114 x W + 39.5	+/- 72% H	+/- 55% H				
4.1-6.9:1 zoom - ILS1* P/N: 118-100115-XX	TD_MIN = 4.081 x W + 17.2	TD_MIN = 4.081 x W + 43.6	+/- 128% V	+/- 114% V	66	764	168	1940
	TD_MAX = 6.866 x W + 17.0	TD_MAX = 6.866 x W + 43.1	+/- 72% H	+/- 55% H				
6.9-10.4:1 zoom - ILS1* P/N: 118-100116-XX	TD_MIN = 6.738 x W + 23.6	TD_MIN = 6.738 x W + 60.0	+/- 128% V	+/- 114% V	43	453	110	1150
	TD_MAX = 10.108 x W + 23.4	TD_MAX = 10.108 x W + 59.5	+/- 72% H	+/- 55% H				
Ultra high contrast lenses								
0.67:1 ultra high contrast fixed - ILS1 P/N: 118-132107-XX	TD = 0.701 x W + 6.7	TD = 0.701 x W + 17.1	+/- 35% V	+/- 22% V	54	577	138	1405
			+/- 12% H	+/- 9% H				
0.8-1.16:1 ultra high contrast zoom - ILS1 P/N: 118-133108-XX	TD_MIN = 0.863 x W + 8.8	TD_MIN = 0.863 x W + 22.4	+/- 110% V	+/- 100% V	59	522	150	1325
	TD_MAX = 1.244 x W + 8.8	TD_MAX = 1.244 x W + 22.3	+/- 35% H	+/- 32% H				
1.28-1.87:1 ultra high contrast zoom - ILS1** P/N: 163-165103-XX	TD_MIN = 1.279 x W + 6.9	TD_MIN = 1.279 x W + 17.6	+/- 128% V	+/- 90% V	197	984	500	2500
	TD_MAX = 1.880 x W + 6.9	TD_MAX = 1.880 x W + 17.5	+/- 58% H	+/- 42% H				

* Requires a lens hood extension to use with this product. The 4.1-6.9:1 zoom lens requires a 185 mm lens hood extension (P/N: 163-168106-XX) and the 6.9-10.4:1 zoom lens requires a 410 mm lens hood extension (P/N: 163-167105-XX). The lens hood is not required when Christie M 4K25-RGB and Christie M 4K+ 25-RGB are operated at 100-120 V, 12 A.

** The lens is listed in the system as 1.2-1.75:1 but its effective throw ratio for 4K and 4K+ resolution is as listed in the table.

- Throw distances measured from the center of the front feet of the projector.
- The 0.37:1 lens throw distance measured from the center of the side feet of the projector.
- All lenses are made of glass.
- Calculated throw distance (TD) values are subject to a +/- 5% tolerance for individual lens variation.
- Calculated offset values are subject to a +/- 7% centering tolerance but the boresight further increases this tolerance.
- The boresight setup changes these offsets. Offsets are for reference and change based on the boresight setup.
- Listed offset values for an axis assumes the alternative axis is at the zero (0) position.