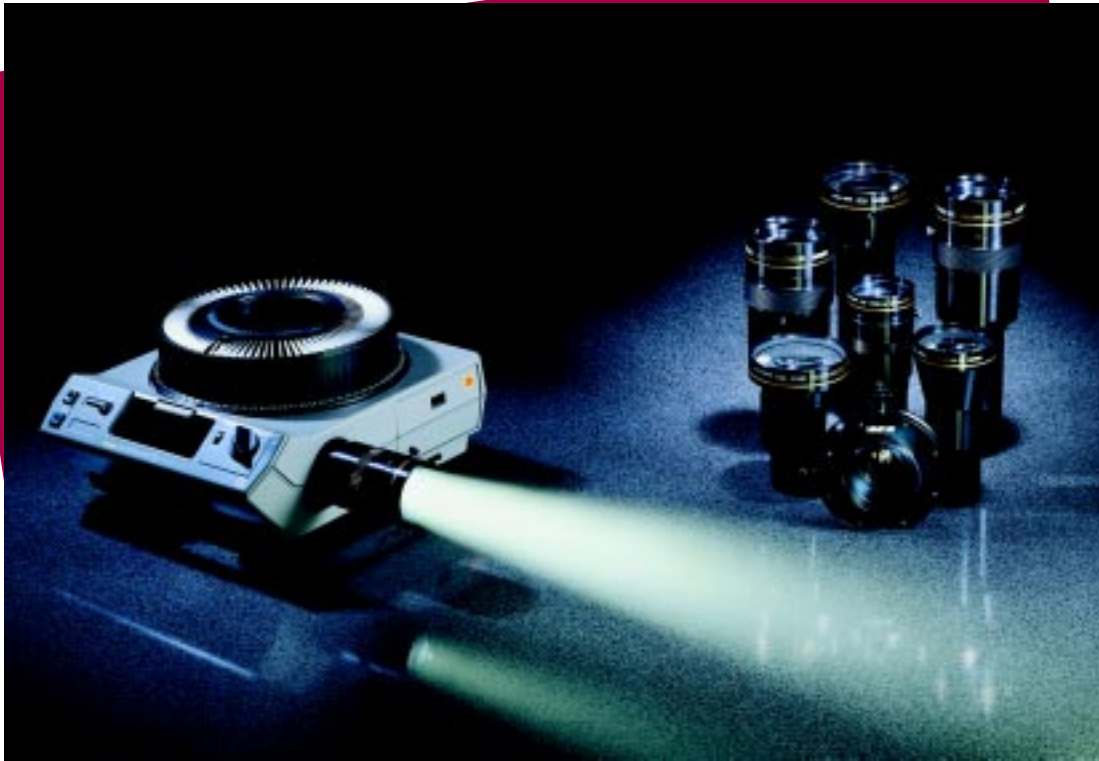


SLIDE PROJECTION LENSES



*High Definition
Lenses to Fill
Every Size Screen*

NAVITAR®

Navitar Slide Projection Lenses



Unsurpassed Quality

When you use a state-of-the-art Navitar lens for your slide presentation, you can be sure that the projected image you see on-screen is a razor-sharp, accurate likeness of your original slide image.

Don't compromise your presentation by using a cheap plastic lens. Navitar uses only the highest quality materials in the construction of our lenses. Our quality glass elements and metal barrels, combined with rigid manufacturing standards and superior, time-proven optical design, will keep your slide images sharp and bright and will eliminate the yellowish haze and image dullness produced by less expensive lenses.

We invite you to compare a Navitar lens against any one of our competitors' products.

We Guarantee Our Workmanship for the Lifetime of the Lens

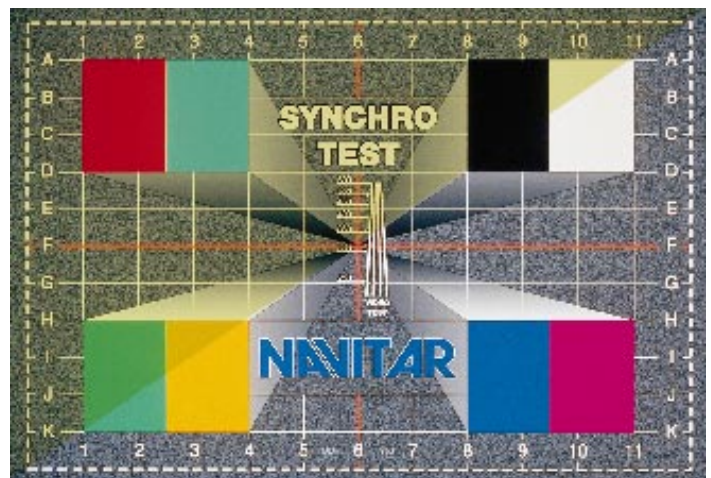
Navitar lenses are designed and manufactured in the USA to be the best in the world. In fact, we have so much confidence in the quality of our workmanship that we're willing to back our reputation with a guarantee that lasts the lifetime of the lens.

Designed to Let You Read the Fine Print

Navitar's unsurpassed optical quality ensures that your slides will be sharp from center to edge with optimum brightness, color fidelity and image contrast.

Our optical engineers have paid special attention to guarantee that whites are very white and blacks are very black. The resulting increase in contrast enhances on-screen resolution so that text and graphic slides are easier to read and color slides are more vibrant and alive. You'll be able to keep your audience's full attention from the beginning to the end of your presentation.

Plastic Lenses



Navitar Lenses

Navitar Lens Models

Zoom Lenses

Navitar zoom lenses let you vary your image size to completely fill the screen, no matter how unpredictable the projector-to-screen distance. With Navitar Zoom lenses, images stay sharp and bright at any point without “pin cushioning” or “barreling” distortion. A zoom lock screw allows precise positioning required in multi-image presentations.



Fixed Focal Lenses

Navitar fixed focal length lenses come in 10 models ranging from 25mm (1”) to 355mm (14”) and provide razor sharpness with maximum image brightness throughout the entire image area of your screen, from edge to edge.



Keystone Correction Lenses

When two or more projectors must be used for a multi-image slide show, the tilting off-axis of the projectors causes a perspective distortion called “keystoning.” Navitar Keystone correcting lenses are ideal for these tight throw, rear screen situations, because they adjust to provide perfect registration and eliminate keystoning without image distortion.

With their 6.35 image shift, Navitar’s XY-PC lenses eliminate keystoning and deliver absolutely perfect registration in both the Kodak Ektagraphic III and Ektapro slide projectors. Navitar’s PC lenses shift 3.8mm off-axis in any direction, making them your choice when you need to use the projector’s auto focus feature.



Lens Support Brackets

Navitar support brackets stabilize long focal length and zoom lenses. Their streamlined design requires no special drilling or tapping of the projector. Support brackets are required for use with lenses having a focal length of 228mm and longer, as well as with the 150-230mm and 200-300mm zoom lenses.

For Kodak Ektagraphic III series slide projectors, you will need Navitar’s NSX-III support bracket for Kodak’s Ektapro Series, you will need the Navitar NSX-PRO support bracket.



Navitar Lens Models

Catalog#	Focal Length		Speed	Length		Front Dia.		Elements
	(mm)	(inches)		(mm)	(inches)	(mm)	(inches)	
Fixed Focal Length								
GNW-1028	25	1	f/2.8	159	6.25	97	3.8	9
GNW-3828	38	1.5	f/2.8	135	5.31	92	3.67	11
GNW-5028	50	2	f/2.8	102	4.03	75	2.97	8
GNW-6028	60	2.35	f/2.8	110	4.32	74	2.9	8
GNT-7028	178	7	f/2.8	160	6.31	72	2.87	4
GNT-8028	203	8	f/2.8	177	6.98	72	2.87	7
GNT-9028	228	9	f/2.8	215	8.48	88	3.48	4
GNT-10028	254	10	f/2.8	224	8.81	88	3.48	7
GNT-12028	300	12	f/2.8	254	10	88	3.48	7
GNT-14040	355	14	f/4.0	269	10.58	88	3.48	7
Zoom Lenses								
GNZ-2435	55-100	2.25-4	f/3.5	159	6.25	90	3.54	9
GNZ-2528	70-125	2.75-5	f/2.8	181	7.12	63	2.47	10
GNZ-4835	100-200	4-8	f/3.5	174	6.87	63	2.47	10
GNZ-150230	150-230	6-9	f/3.5	220	8.68	82	3.23	9
GNZ-200300	200-300	8-12	f/3.5	265	10.42	82.	3.23	12
Keystone Correction Lenses (XY-PC Lenses)								
GNK-3828	38	1.5	f/2.8	135	5.31	93	3.67	11
GNK-5028	50	2	f/2.8	112	4.39	70	2.74	8
GNK-6028	60	2.35	f/2.8	100	3.97	70	2.74	8
Keystone Correction Lenses (Original PC Lenses)								
KC-3828	38	1.5	f/2.8	135	5.32	92	3.67	11
KC-5028	50	2	f/2.8	113	4.44	91	3.6	8
KC-6028	60	2.35	f/2.8	120	4.72	91	3.6	8

We Make Every Size and Type of Lens

Navitar's lenses meet any of today's toughest projections requirements. With a wide selection of fixed focal, zoom and keystone correction lenses, Navitar has the correct size lens to fill your screen whether you're presenting in an auditorium, conference room, lecture hall or boardroom. Navitar lenses are compatible with Kodak Ektagraphic, Ektapro and Carousel slide projectors as well as most other brands such as Telex, Elmo Simda and Yokogawa.

Image Shift Calculator for Keystone Correction Lenses

Screen		XY-PC Lenses			PC Lenses		
Width	Height	38mm	50mm	60mm	38mm	50mm	60mm
		1.5"	2"	2.35"	1.5"	2"	2.35"
24"	16"	4.46"	4.46"	4.46"	2.67"	2.67"	2.67"
36"	24"	6.69"	6.69"	6.69"	4.01"	4.01"	4.01"
40"	27"	7.43"	7.43"	7.43"	4.46"	4.46"	4.46"
50"	33.5"	9.29"	9.29"	9.29"	5.57"	5.57"	5.57"
60"	40"	11.14"	11.14"	11.14"	6.69"	6.69"	6.69"
70"	47"	13"	13"	13"	7.8"	7.8"	7.8"
7'	4'8.5"	15.6"	15.6"	15.6"	9.36"	9.36"	9.36"
8'	5'4.5"	17.83"	17.83"	17.83"	10.7"	10.7"	10.7"
9'	6'5"	20.06"	20.06"	20.06"	12.04"	12.04"	12.04"
10'	6'8.5"	22.29"	22.29"	22.29"	13.37"	13.37"	13.37"
12'	8.5"	26.75"	26.75"	26.75"	16.05"	16.05"	16.05"
14'	9'4.5"	31.2"	31.2"	31.2"	18.72"	18.72"	18.72"
16'	10'8.5"	35.66"	35.66"	35.66"	21.4"	21.4"	21.4"
18'	12'5"	40.12"	40.12"	40.12"	24.07"	24.07"	24.07"
20'	13'5"	44.58"	44.58"	44.58"	26.75"	26.75"	26.75"

Projection Calculator

These charts will enable you to select the Navitar lenses best suited to your audio visual requirements. These projection chart calculations are based on a 35mm slide format with an aperture that is 1.346 inches wide and 0.902 inches high. Measurements are made from the film plane to the screen. With Navitar fixed focus lenses, the tolerance in the projection focal length is +/-1%. Closer matching tolerances are available on request.

Zoom Lenses

Width	Height	2.25"-4" 55-10mm Zoom	2.75"-5" 70-125mm Zoom	4"-8" 100-200mm Zoom	6"-9" 150-230mm Zoom	8-12" 200-300mm Zoom
12"	8"	2'1"-3'6"	2'6" - 4'6"	3'8" - 7'4"	5'6" - 8'3"	7'4" - 11'
18"	12"	2'11"-4'11"	3'7" - 6'4"	5'2" - 10'4"	7'9" - 11'7"	10'4" - 15'5"
24"	16"	3'9"-6'5"	4'7" - 8'2"	6'7" - 13'3"	9'11" - 14'11"	13'3" - 19'11"
36"	24"	5'4"-9'3"	6'7" - 11'10"	9'7" - 19'2"	14'5" - 21'7"	19'2" - 28'9"
40"	27"	5'10"-10'3"	7'4" - 13'	10'7" - 21'2"	15'11" - 23'10"	21'2" - 31'9"
50"	33.5"	7'2"-12'8"	9' - 16'1"	13'1" - 26'1"	19'7" - 29'5"	26'1" - 39'2"
60"	40"	8'7"-15'1"	10'8" - 19'1"	15'6" - 31'1"	23'4" - 34'11"	31'1" - 46'7"
70"	47"	9'11"-17'6"	12'5" - 22'2"	18' - 36'	27' - 40'6"	36' - 54'
7'	4'8.5"	11'9"-20'10"	14'10" - 26'5"	21'5" - 42'11"	32'3" - 48'4"	42'11" - 64'5"
8'	5'4.5"	13'4"-23'9"	16'10" - 30'1"	24'5" - 48'11"	36'8" - 55'	48'11" - 73'4"
9'	6'5"	15'-26'8"	18'11" - 33'9"	27'5" - 54'10"	41'2" - 61'8"	54'10" - 82'3"
10'	6'8.5"	16'7"-29'7"	20'11" - 37'5"	30'5" - 60'9"	45'7" - 68'4"	60'9" - 91'2"
12'	8'5"	19'10"-34'6"	25' - 44'8"	36'4" - 72'8"	54'6" - 81'9"	72'8" - 109'
14'	9'4.5"	23'-41'2"	29'2" - 52'	42'3" - 84'7"	63'5" - 95'1"	84'7" - 126'10"
16'	10'8.5"	26'3"-46'11"	33'3" - 59'4"	48'3" - 96'5"	72'4" - 108'6"	96'5" - 144'8"
18'	12'5"	29'5"-52'9"	37'4" - 66'8"	54'2" - 108'4"	81'3" - 121'10"	108'4" - 162'6"
20'	13'5"	32'8"-58'6"	41'5" - 73'11"	60'1" - 120'2"	90'2" - 135'3"	120'2" - 180'4"

Fixed Focal Lenses

Width	Height	1" 25mm	1.5" 38mm	2" 50mm	2.35" 60mm	7" 178mm	8" 203mm	9" 228mm	10" 254mm	12" 300mm	14" 355mm
12"	8"	1'3"	1'4.5"	1'10"	2'2"	6'5"	7'4"	8'3"	9'2"	11'	12'10"
18"	12"	1'8"	1'11"	2'7"	3'	9'	10'4"	11'7"	12'10"	15'5"	18'1"
24"	16"	2'0"	2'6"	3'4"	3'11"	11'7"	13'3"	14'11"	16'7"	19'11"	23'3"
36"	24"	2'9"	3'7"	4'10"	5'8"	16'9"	19'2"	21'7"	24'	28'9"	33'8"
40"	27"	3'0"	4'	5'4"	6'3"	18'6"	21'2"	23'10"	26'6"	31'9"	37'1"
50"	33.5"	3'8"	4'11"	6'6"	7'9"	22'10"	26'1"	29'5"	32'8"	39'2"	45'9"
60"	40"	4'3"	5'10"	7'9"	9'2"	27'2"	31'1"	34'11"	38'10"	46'7"	54'5"
70"	47"	4'11"	6'9"	9'	10'8"	31'6"	36'	40'6"	45'	54'	63'1"
7'	4'8.5"	5'9"	8'1"	10'9"	12'8"	37'7"	42'11"	48'4"	53'8"	64'5"	75'3"
8'	5'4.5"	6'6"	9'2"	12'3"	14'5"	42'9"	48'11"	55'	61'1"	73'4"	85'8"
9'	6'5"	7'3"	10'3"	13'9"	16'2"	48'	54'10"	61'8"	68'7"	82'3"	96'1"
10'	6'8.5"	8'0"	11'5"	15'2"	17'11"	53'2"	60'9"	68'4"	76'	91'2"	106'6"
12'	8'5"	9'7"	13'7"	18'2"	21'5"	63'7"	72'8"	81'9"	90'10"	109'	127'3"
14'	9'4.5"	11'1"	15'10"	21'2"	25'	74'	84'7"	95'1"	105'8"	126'10"	148'1"
16'	10'8.5"	12'7"	18'1"	24'1"	28'6"	84'5"	96'5"	108'6"	120'7"	144'8"	168'11"
18'	12'5"	14'1"	20'4"	27'1"	32'	94'9"	108'4"	121'10"	135'5"	162'6"	189'8"
20'	13'5"	15'7"	22'6"	30'1"	35'6"	105'2"	120'2"	135'3"	150'3"	180'4"	210'6"

Metric Charts

Projection Calculator for Fixed Focal Lenses

Width (Meters)	Height (Meters)	25mm	38mm	50mm	60mm	178mm	203mm	228mm	254mm	300mm	355mm
.5	.34	.54	.72	.87	1.05	2.89	3.41	3.72	4.16	5.08	5.99
1	.67	.91	1.27	1.6	1.92	5.49	6.42	7.05	7.85	9.49	11.21
2	1.34	1.66	2.38	3.07	3.67	10.69	12.47	13.73	15.23	18.34	21.68
3	2.01	2.41	3.49	4.53	5.42	15.89	18.52	20.41	22.61	27.19	32.16
4	2.68	3.16	4.60	5.99	7.18	21.10	24.56	27.09	30.00	36.04	42.64
5	3.35	3.91	5.72	7.45	8.93	26.30	30.61	33.78	37.38	44.89	53.11
6	4.02	4.66	6.83	8.91	10.68	31.51	36.66	40.46	44.77	53.74	63.59
7	4.69	5.41	7.94	10.38	12.44	36.71	42.71	47.14	52.15	62.59	74.07
8	5.36	6.16	9.05	11.84	14.19	41.92	48.76	53.82	59.54	71.44	84.54
9	6.03	6.91	10.16	13.30	15.94	47.12	54.81	60.51	66.92	80.29	95.02
10	6.70	7.66	11.27	14.76	17.69	52.33	60.86	67.19	74.31	89.14	105.50

Projection Calculator for Zoom Lenses

Width (Meters)	Height (Meters)	50mm-100mm	70mm-125mm	100mm-200mm	150mm-230mm	200mm-300mm					
.5	.34	0.96	1.63	1.22	2.04	1.77	3.37	2.55	3.81	3.49	5.32
1	.67	1.76	3.06	2.24	3.86	3.29	6.24	4.78	7.15	6.52	9.92
2	1.34	3.37	5.94	4.29	7.52	6.33	11.99	9.25	13.84	12.58	19.12
3	2.01	4.98	8.82	6.34	11.18	9.37	17.74	13.71	20.54	18.65	28.32
4	2.68	6.59	11.71	8.40	14.84	12.41	23.50	18.18	27.23	24.72	37.53
5	3.35	8.19	14.59	10.45	18.50	15.45	29.25	22.65	33.93	30.79	46.73
6	4.02	9.80	17.47	12.50	22.16	18.49	35.01	27.11	40.62	36.86	55.94
7	4.69	11.41	20.35	14.55	25.82	21.54	40.76	31.58	47.32	42.93	65.14
8	5.36	13.02	23.23	16.60	29.48	24.58	46.52	36.05	54.02	49.00	74.35
9	6.03	14.63	26.11	18.65	33.14	27.62	52.27	40.51	60.71	55.06	83.56
10	6.70	16.23	28.99	20.71	36.80	30.66	58.03	44.98	67.41	61.13	92.76

Image Shift Calculator for Keystone Correction Lenses

Screen		XY-PC Lenses			PC Lenses		
Width	Height	38mm	50mm	60mm	38mm	50mm	60mm
1	.67	.19	.19	.19	.11	.11	.11
2	1.34	.37	.37	.37	.22	.22	.22
3	2.01	.56	.56	.56	.33	.33	.33
4	2.68	.74	.74	.74	.44	.44	.44
5	3.35	.93	.93	.93	.56	.56	.56
6	4.02	1.12	1.12	1.12	.67	.67	.67
7	4.69	1.30	1.30	1.30	.78	.78	.78
8	5.36	1.49	1.49	1.49	.89	.89	.89
9	6.03	1.67	1.67	1.67	1.00	1.00	1.00
10	6.7	1.86	1.86	1.86	1.11	1.11	1.11

Other Presentation Products from Navitar

Navitar's audio visual products have an international reputation for unsurpassed quality and excellence and are currently sold in over 30 countries around the world. In addition to its line of slide projection lenses, Navitar manufactures a complete line of audio visual products, including Xenon high intensity slide projectors and BrightLight lamp modules. Navitar also offers its own unique line of video transfer products - VideoMate (slide-to-video), MicroMate (microscope-to-video) and ScanMate (document-to-video).

VideoMate Slide-to-Video Transfer Systems

Navitar's VideoMate slide-to-video transfer systems allow users to convert 35mm slides into high resolution video images and present them on a TV monitor or video projector, record them on a VCR or capture them with an image capture board on a computer. A variety of VideoMate models are available, each offering its own unique combination of features. VideoMates are ideal for use in auditoriums, boardrooms and classrooms, or in distance learning and other videoconferencing applications.

Xenon High Intensity Slide Projectors

Navitar's Xenon slide projectors are six times brighter than conventional slide projectors, making them invaluable in situations where the projection distance is greater than 35 feet or ambient light conditions are uncontrollable. Xenon slide projectors bring slides to life with such color brilliance, that you can even make your slide presentations with the room lights on! Slide presentations are more effective, because visuals have stronger impact and the audience isn't lost in the depths of darkened room.

