f1.7

SNAPLITE

Projection Lenses

BULLETIN NO. 222

More Light • Sharper Pictures • Higher Contrast •

The Finest...The Fastest
Short Focal Length Lenses

SUPER SNAPLITE f/1.7

Catalog No. BX 290
2½" through 4" E. F.

f/1.7 . . . in focal lengths from 2½" through 4".

6 ELEMENTS . . . high magnification, wire sharp projection, superb definition, high light uniformity.

COATED OPTICS . . . throughout. For high contrast and less light loss.

ONE-PIECE MOUNT . . . aluminum, sealed against dirt, dust, oil or moisture.

ANODIZED FINISH . . . a part of the aluminum barrel itself, never wears off. No rusting, chipping or peeling.

Now, for today's critical new projection processes, a truly fast f/1.7 lens in those focal lengths where such speed is really necessary. These superb lenses offer the fastest speed of any known 35mm projection lens . . . f/1.7. This exceptional speed results in exceptionally uniform screen illumination and gives as a bonus wire sharp projection and top definition. Today's need for increased illumination, a more critical image and a more even distribution of light at the outer margins of the screen, have created a need for a new fine fast lens. Thus, the new Super Snaplite f/1.7 provides you with more uniform light with no increases in current or carbon consumption . . . this means operating economies for you year after year.

Super Snaplite f/1.7 lenses are available in focal lengths from 2½" through 4" in ¼" steps. The speed of f/1.7 is maintained in all of these focal lengths. All glass-to-air optical surfaces are treated with a hard durable anti-reflection coating for even greater screen brilliance and image contrast. These lenses have a sealed one-piece mount.

Fittings are available to adapt Super Snaplite f/1.7 lenses to all currently manufactured professional projectors.

The Finest...The Fastest Short Focal Length Lenses

SUPER SNAPLITE f/1.7X

An extended barrel lens for use on projectors where the lens mount interferes with the light path of standard short focal length lenses.

Catalog No. BX 294
2" through 3"

f/1.7X . . . in focal lengths from 2" through 3".

MULTIPLE ELEMENTS . . . high magnification, wire sharp projection, superb definition, high light uniformity.

COATED OPTICS . . . throughout for high contrast and less light loss.

ONE-PIECE MOUNT . . . aluminum, sealed against dirt, dust, oil or moisture.

ANODIZED FINISH . . . a part of the aluminum barrel itself, never wears off. No rusting, chipping or peeling.

The Super Snaplite f/1.7X is an extended barrel lens for use in those projectors where the lens mount interferes with the light path of standard short focal length lenses. This interference is evidenced by vignetting of the picture.

Now, for today's critical new projection processes, a truly fast f/1.7 lens in those focal lengths where such speed is really necessary. These superb lenses offer the fastest speed of any known 35mm projection lens . . . . f/1.7. This exceptional speed results in exceptionally uniform screen illumination and gives as a bonus wire sharp projection and top definition. Today's need for increased illumination, a more critical image and a more even distribution of light at the outer margins of the screen, have created a need for a new fine fast lens. Thus, the new Super Snaplite f/1.7X provides you with more uniform light with no increase in current or carbon consumption . . . this means operating economies for you year after year.

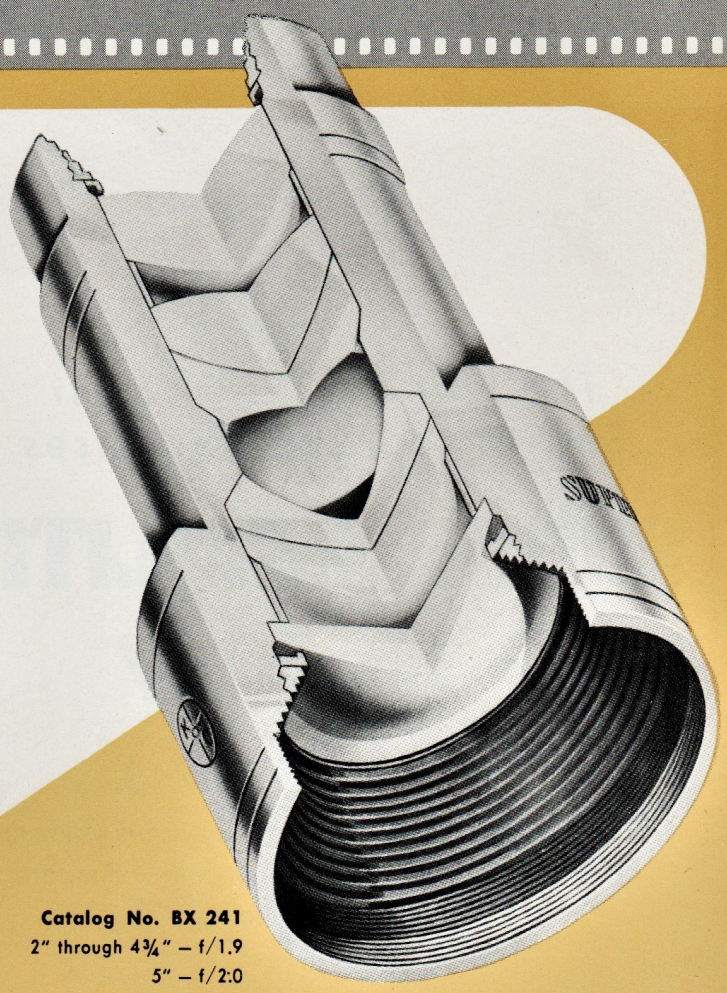
Super Snaplite f/1.7X lenses are available in focal lengths from 2" through 3" in ¼" steps. The speed of f/1.7 is maintained in all of those focal lengths. All glass-to-air optical surfaces are treated with a hard durable anti-reflection coating for even greater screen brilliance and image contrast. The lenses have a sealed one-piece mount.

Sharper Pictures • Higher Contrast • Better Definition

Brighter...Sharper...
Clearer Pictures
with the

f/1.9
SUPER SNAPLITE

A True ANASTIGMAT
Projection Lens



Catalog No. BX 241
2" through 4¾" – f/1.9
5" – f/2:0

ANASTIGMAT . . . six elements for wide-angle, high-magnification, wire-sharp projection.

f/1.9 . . . magnificent screen brilliance.

COATED OPTICS . . . give greater light, sparkling contrast.

SEALED LENSES . . . keep out light-robbing dust and oil.

ANODIZED FINISH . . . cannot flake or peel off.

To meet the exacting requirements of wider-angle projection and higher magnifications, and still maintain utmost image quality, Kollmorgen Optical Corporation offers the Super Snaplite f/1.9 projection lens. This exceptional speed results in more uniform screen illumination and gives greater picture brilliance without extra current consumption — an important factor in year-after-year operating economy. Full advantage is taken of modern lamp housings with their high-operation reflectors or condensers.

Exhibitors who demand top quality in projection equipment can obtain no finer lens than the Super Snaplite f/1.9. For the Super Snaplite f/1.9 is a true anastigmat — of quality comparable to finest camera lenses. Anastigmats combine virtually perfect flatness of field with great covering power. In terms of image quality, this means that sides and corners of the picture are virtually as wire-sharp and free from color fringes as the portions near the center. This is of particular importance in extreme high-magnification or wide-angle projection.

Super Snaplite f/1.9 lenses are available in focal lengths from 2" through 5" in ¼" steps. Speed of f/1.9 is maintained in all focal lengths from 2" through 4¾". In addition, all glass-to-air optical surfaces are treated with a hard, durable, anti-reflection coating for even greater screen brilliance and image contrast. Lenses are sealed in the one-piece mount against entrance of moisture, dust or oil. Further, the anodized finish is an integral part of the metal, it cannot chip or peel off.

Fittings are available to adapt Super Snaplite f/1.9 lenses to all currently manufactured professional projectors.

Uniform Illumination · Sealed Construction

The Ultimate in Long-Throw Projection

4 INCH DIAMETER f/1.9 SUPER SNAPLITE

Catalog No. BX 265
5" through 7", f/1.9
over 7" slightly slower

f/1.9 . . . In focal lengths from five up to and including seven inches.

COATED OPTICS . . . For higher contrast and even brighter pictures.

SIX ELEMENTS . . . For the sharpest pictures ever projected with long focal length lenses.

ONE-PIECE . . . No threaded joint to admit moisture, dust or oil.

SEALED CONSTRUCTION . . . Under normal use, does not need to be taken apart for cleaning.

ANODIZED FINISH . . . No flaking, chipping or peeling to impair performance.

NOTE: Four inch diameter Super Snaplite projection lenses are available on special order only. Make and model of projector MUST be specified on each order.

The four inch diameter Super Snaplite f/1.9 brings to the longer focal length field the unsurpassed sharpness, the unexcelled uniformity of illumination, and the unmatched brilliance for which the standard size Super Snaplite f/1.9 have become famous.

Four inch diameter Super Snaplites are available, to order, in focal lengths from five through seven inches, in quarter inch steps. In all these focal lengths the true effective speed of f/1.9 is maintained. Four inch diameter Super Snaplites are also available, to special order, in focal lengths longer than seven inches, at somewhat slower speeds.

In all focal lengths the same design and construction features that have proved themselves in standard size Super Snaplites have been incorporated in four inch diameter Super Snaplites. The lens mount is of one piece high strength aluminum alloy, with no threaded joints to loosen up, impair alignment or leak oil. Front and rear lens elements are sealed with special gaskets so that under normal conditions the lens need never be taken apart for cleaning. The mount bears a gold anodized finish, an integral part of the metal, which cannot chip, flake or peel off. All glass-to-air optical surfaces are given a hard, durable anti-reflection coating for greater contrast, utmost screen brilliance.

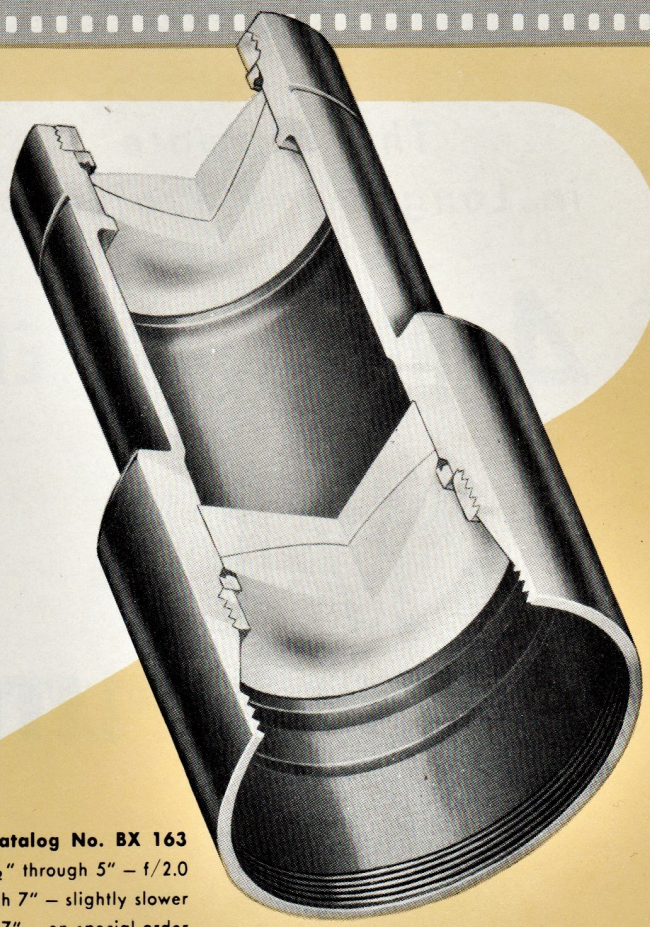
Because of the large size of the optical elements, this lens can be used only in projectors equipped wtih four inch diameter lens holders. To assure proper fit, complete information on make and model projector *must* accompany each order.

More Light • Sharper Pictures • Higher Contrast

For the Utmost in Economy

THE f/2.0 SNAPLITE

SERIES II



Catalog No. BX 163
3½" through 5" — f/2.0
5¼" through 7" — slightly slower
Above 7" — on special order

f/2.0... BLACK ANODIZED FINISH COATED OPTICS SEALED CONSTRUCTION

The Series II Snaplite is built around optics of large aperture, carefully computed to combine brilliant illumination with great freedom from aberrations. The image displays excellent contrast, definition, flatness of field and freedom from color fringes. Speed of f/2.0 is maintained in all focal lengths up through 5", at which point the size of the optics is limited by space available in projectors. Durable anti-reflection coatings increase light transmission and improve image contrast through elimination of internal reflections.

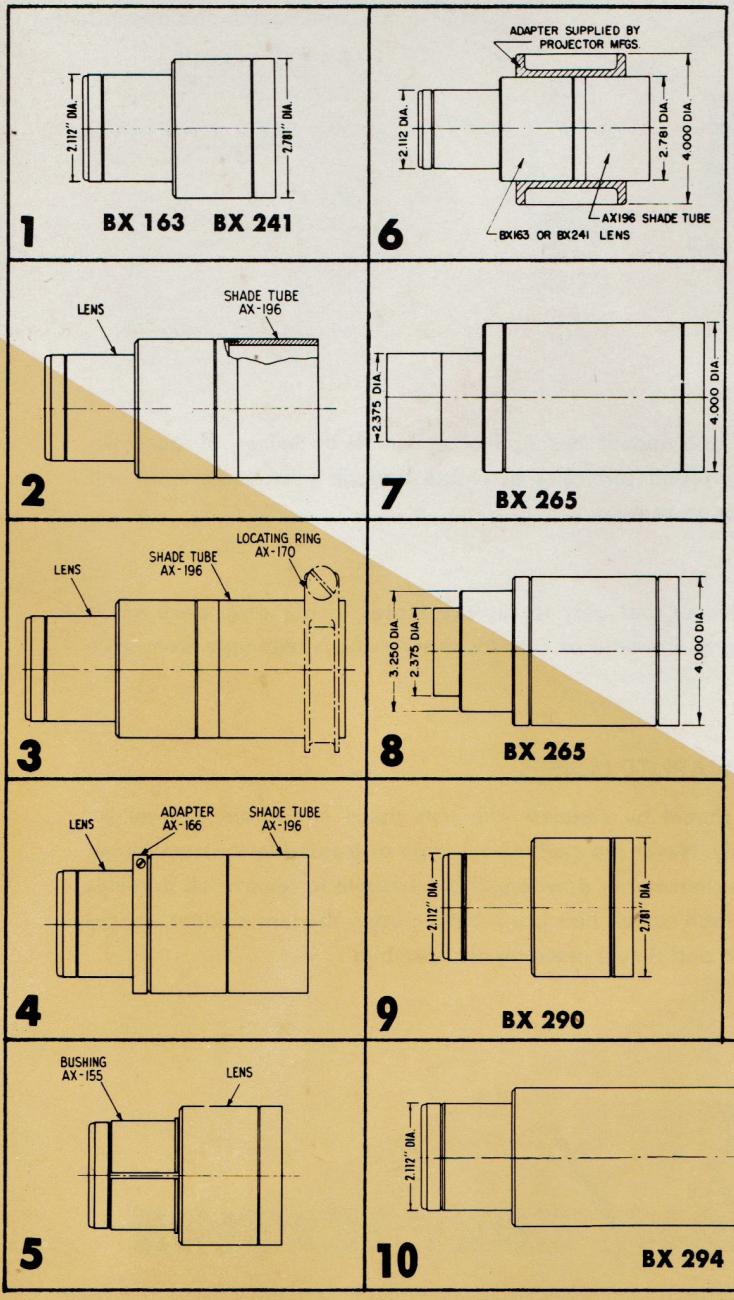
The one-piece mount and sealed lenses of Series II Snaplites assure trouble-free performance. Further, this mount is finished with a matte black anodized treatment, inside and out. An integral part of the metal, it cannot chip or peel off.

Series II Snaplite lenses are stocked in focal lengths from 3½" through 7" in ¼" steps. The same fittings used with Super Snaplite lenses adapt them to currently manufactured professional projectors.

INFORMATION FOR ORDERING FITTINGS

When ordering lens fittings please specify:

1. Fitting Numbers (as given in table at right)
2. Make of projector
3. Model of projector
4. Focal length of lens



PROJECTOR		SUPER SNAPLITE f/1.9 (BX241) SUPER SNAPLITE f/1.7 (BX290) SNAPLITE SERIES II (BX163) STANDARD BARREL			
Make	Model	Fittings	Fig. No.	Notes	Recommended f/1.7 Lens Number
Ballantyne	"W"	None			290
Ballantyne	"W" Large lens mount	AX-155	5		290
Ballantyne	"G" (Gardiner with reg. lens mount)	None			290
Ballantyne	"G" (Gardiner with large lens mount)	AX-155	5		290
Ballantyne	4" dia. mount	AX-196	6		290
Brenkert	BX-40, BX-80 BX-60, BX-62	AX-196 AX-170*	3		294
Brenkert	RCA 100	AX-196	6		290
Century	C, CC, K Super	AX-196 AX-166	4		290
Century	C, CC, K Super (Using 2 clamp rings)	AX-196 AX-166	4		294
Century	K (or Kaplan)	None	1		290
Century	K with C-62 modification	AX-155	5		290
Century	4" dia. mount	AX-196	6		290
Holmes	Type 8, Educator	AX-196	2	Will take lenses 5" E.F. and longer only	290
Holmes	Type G.P.	AX-196	2		290
Holmes	Type D	AX-196	2	Will take lenses 5" E.F. and longer only	290
International Projector Corp.	Simplex E-7	AX-196 AX-170*	3		294
International Projector Corp.	Simplex, Regular	None †	1		290
International Projector Corp.	Simplex, with C-62 modifications	AX-155	5		290
International Projector Corp.	Simplex International	None	1	Will take lenses 4" E.F. and longer only	290
International Projector Corp.	Simplex Semi-professional	AX-196 AX-170*	3	Will take lenses 4" E.F. and longer only	294
International Projector Corp.	Super Simplex	AX-196 AX-170*	3		294
International Projector Corp.	XL	AX-196	6		290
Motiograph	AA	AX-196	2		294
Motiograph	F	None	1		290
Motiograph	HU, HK, K Deluxe	AX-155	5		290
Motiograph	4" dia. mount	AX-196	6		290
Powers		AX-196	2	Will take lenses 5" E.F. and longer only	290
Powers	With heavy duty focusing front	AX-196	2	Will take lenses 5" E.F. and longer only	294
Wenzel	Pro-4, Pro-6	None †	1		290
Wenzel	Pro-4 with large lens mount	AX-155	5		290
Wenzel	4" dia. mount	AX-196	6		290

* Not regularly furnished, but can be supplied if desired.

† .0065" shims furnished at no cost when this projector is specified.

PROJECTOR		SUPER SNAPLITE (BX265) 4" Diameter Barrel		
Make	Model	Fig. No.	Note	Recommended f/1.7 Lens Number
Ballantyne	4" dia. mount	8	Shade — Tube AX-196 required if BX-163, BX-290 or BX-241 lenses are used. See Fig. No. 6	290
Brenkert	RCA 100	8		290
Century	4" dia. mount	7		290
International	XL	7		290
Motiograph	4" dia. mount	8		290
Wenzel	4" dia. mount	8		290

SCREEN CHART

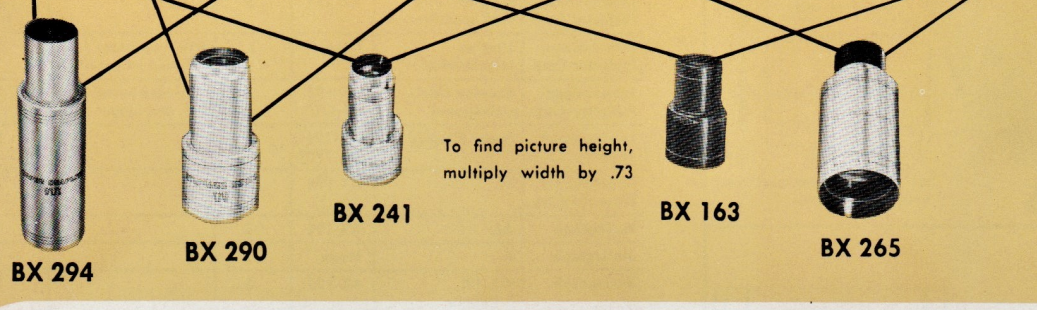
FIGURES IN TABLE SHOW PROJECTION DISTANCE IN FEET
FROM PROJECTOR APERTURE TO CENTER OF SCREEN

All figures are based on standard aperture of .825" x .600"

LENS FOCAL LENGTH, INCHES

PICTURE WIDTH - FEET

	2	2¼	2½	2¾	3	3¼	3½	3¾	4	4¼	4½	4¾	5	5¼	5½	5¾	6	6¼	6½	6¾	7
10	24.6	27.6	30.7	33.8	36.9	39.9	43.0	46.1	49.2	52.2	55.3	58.4	61.4	64.5	67.6	70.7	73.7	76.8	79.9	82.9	86.0
15	36.7	41.3	45.9	50.5	55.0	59.6	64.2	68.8	73.4	78.0	82.6	87.2	91.7	96.3	100.9	105.5	110.1	114.7	119.3	123.9	128.4
20	48.8	54.9	61.0	67.1	73.2	79.3	85.4	91.5	97.6	103.7	109.8	115.9	122.0	128.1	134.2	140.4	146.5	152.6	158.7	164.8	170.9
25	60.9	68.6	76.2	83.8	91.4	99.0	106.6	114.3	121.9	129.5	137.1	144.7	152.3	160.0	167.6	175.2	182.8	190.4	198.1	205.7	213.3
30	73.1	82.2	91.3	100.5	109.6	118.7	127.9	137.0	146.1	155.3	164.4	173.5	182.7	191.8	200.9	210.0	219.2	228.3	237.4	246.6	255.7
35	85.2	95.8	106.5	117.1	127.8	138.4	149.1	159.7	170.4	181.0	191.7	202.3	213.0	223.6	234.2	244.9	255.5	266.2	276.8	287.5	298.1
40	97.3	109.5	121.6	133.8	146.0	158.1	170.3	182.4	194.6	206.8	218.9	231.1	243.3	255.4	267.6	279.7	291.9	304.1	316.2	328.4	340.6
45	109.4	123.1	136.8	150.5	164.1	177.8	191.5	205.2	218.8	232.5	246.2	259.9	273.6	287.2	300.9	314.6	328.3	342.0	355.6	369.3	383.0
50	121.5	136.7	151.9	167.1	182.3	197.5	212.7	227.9	243.1	258.3	273.5	288.7	303.9	319.1	334.2	349.4	364.6	379.8	395.0	410.2	425.4
55	133.7	150.4	167.1	183.8	200.5	217.2	233.9	250.6	267.3	284.0	300.7	317.5	334.2	350.9	367.6	384.3	401.0	417.7	434.4	451.1	467.8
60	145.8	164.0	182.2	200.5	218.7	236.9	255.1	273.4	291.6	309.8	328.0	346.2	364.5	382.7	400.9	419.1	437.4	455.6	473.8	492.0	510.3
65	157.9	177.6	197.4	217.1	236.9	256.6	276.3	296.1	315.8	335.6	355.3	375.0	394.8	414.5	434.2	454.0	473.7	493.5	513.2	532.9	552.7
70	170.0	191.3	212.5	233.8	255.0	276.3	297.6	318.8	340.1	361.3	382.6	403.8	425.1	446.3	467.6	488.8	510.1	531.3	552.6	573.9	595.1
75	182.2	204.9	227.7	250.5	273.2	296.0	318.8	341.5	364.3	387.1	409.8	432.6	455.4	478.1	500.9	523.7	546.5	569.2	592.0	614.8	637.5
80	194.3	218.6	242.8	267.1	291.4	315.7	340.0	364.3	388.5	412.8	437.1	461.4	485.7	510.0	534.2	558.5	582.8	607.1	631.4	655.7	680.0
85	206.4	232.2	258.0	283.8	309.6	335.4	361.2	387.0	412.8	438.6	464.4	490.2	516.0	541.8	567.6	593.4	619.2	645.0	670.8	696.6	722.4
90	218.5	245.8	273.1	300.5	327.8	355.1	382.4	409.7	437.0	464.3	491.7	519.0	546.3	573.6	600.9	628.2	655.5	682.9	710.2	737.5	764.8
95	230.6	259.5	288.3	317.1	346.0	374.8	403.6	432.4	461.3	490.1	518.9	547.8	576.6	605.4	634.2	663.1	691.9	720.7	749.6	778.4	807.2
100	242.8	273.1	303.4	333.8	364.1	394.5	424.8	455.2	485.5	515.9	546.2	576.5	606.9	637.2	667.6	697.9	728.3	758.6	789.0	819.3	849.7



To find picture height, multiply width by .73

Screen Chart Formulae

1. For projection of Standard .825" x .600" film

A = Aspect Ratio
F = Focal length in inches
H = Picture Height in inches
P = Projection Distance in inches
W = Picture Width in inches

$$F = \frac{.825 \times P}{W}$$

$$W = \frac{.825 \times P}{F}$$

$$P = \frac{F \times W}{.825}$$

$$H = \frac{W}{A}$$

2. For projection of .912" wide film with anamorphic attachment

$$F = \frac{.912 \times 2 \times P}{W}$$

$$W = \frac{.912 \times 2 \times P}{F}$$

$$P = \frac{F \times W}{.912 \times 2}$$

$$H = \frac{W}{A}$$

Repair Service

We overhaul, repair and recoat the optical elements of lenses of our own manufacture *only*. This repair service is available through your dealer who will furnish estimate of cost on request.

Loan Lenses

We will supply loan lenses, but only to replace lenses of our own make while undergoing repairs by us. Estimate of cost for this service is available from your dealer.

Care and Cleaning of SNAPLITE and SUPER SNAPLITE LENSES

All SNAPLITE Lenses should be cleaned with lens tissue and grain alcohol (or liquid lens cleaner) only. Never use cloth of any type or *treated* lens tissue. Never use soap, water, glass cleaners, or powders. It is advisable to remove all particles of dust or grit with a clean camels hair brush before using the lens cleaner. Lenses are hermetically sealed and should never be disassembled.

KOLLMORGEN Optical CORPORATION

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