

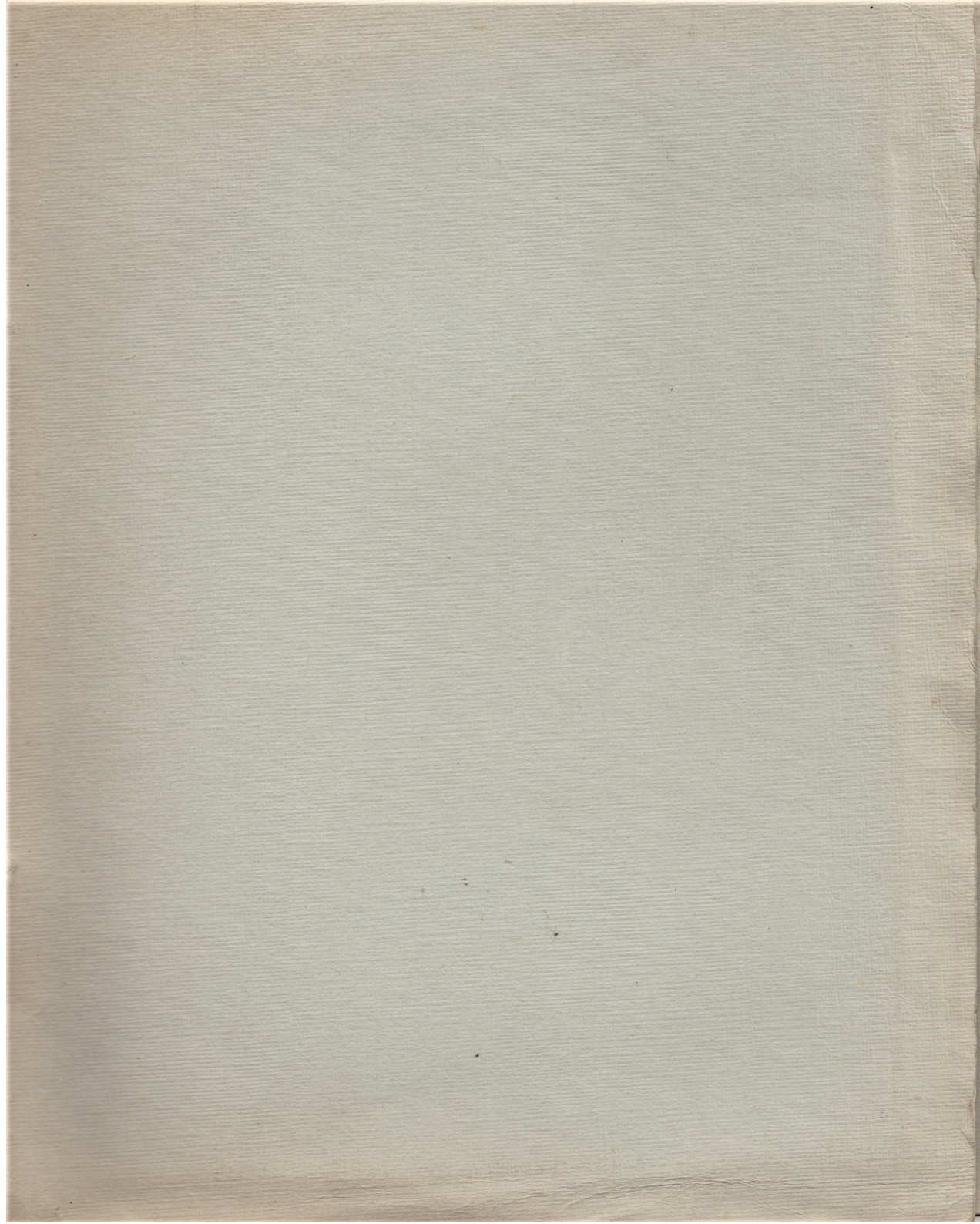
**RANK KALEE**  
**EQUIPMENT FOR MOTION PICTURE**  
**AND TELEVISION PRODUCTION**

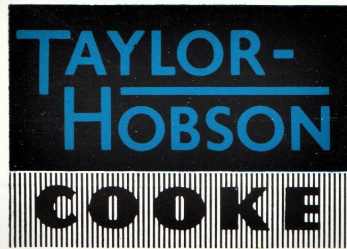
**3**



**RANK KALEE** A Division of  
The Rank Organisation

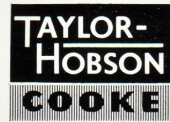
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**KINETAL LENSES  
UNMOUNTED OPTICAL  
UNITS**

**for 16mm. Professional  
Motion Picture Photography**

**KINETAL LENSES UNMOUNTED OPTICAL UNITS FOR 16mm. PROFESSIONAL  
MOTION PICTURE PHOTOGRAPHY**

In view of the widespread demand for lenses of superlative performance on 16 mm. film for a variety of industrial and scientific applications, and recognising the fact that there are many camera manufacturers who prefer to keep the manufacture of focusing mounts under their own control, Kinetallenses are manufactured as unmounted optical units, for adaptation to individual requirements.

**SALIENT FEATURES**

In designing the Kinetall optical units, the maximum possible reduction of overall bulk has been effected without loss of optical performance in any respect. Attention to these considerations ensures the widest possible range of special applications and maximum conformity with the particular optical and mechanical restrictions of a wide variety of cameras. To assist prospective users in their mounting problems, fully dimensioned drawings and comprehensive data sheets are provided.

The lens mount is finished in a durable black enamel on an efficient base anodising except where fitting considerations dictate the use of black dyed anodising only. These particular places include the bearing bores of the index ring with the corresponding fitting diameters on the body, and the optical unit mounting and rayshade mounting threads.

All cells are locked against rotation to prevent undetected unscrewing of components which would cause serious loss of optical performance.

Conforming to standard Taylor-Hobson practice, all fitting and clearing dimensions are gauged prior to despatch so that maximum advantage can be taken of specified fitting tolerances.

Since each lens is individually calibrated with regard to iris transmission, to the tolerances given on page 3 of leaflet LEN.200, it is not recommended to dismantle the lens. To ensure continued good service, lenses should be returned to the factory if necessary for correct alignment and adjustment.

Suitably designed rayshades have been provided for all lenses in the range, and provision has been made for the fitting of standard size filters.

The index ring fitting is lubricated with a temperature stable grease to ensure satisfactory working over a wide range of conditions. It is Rocol Silicone Core grease which has anti-seize characteristics down to  $-40^{\circ}\text{C}$ . and has a flash point in the region of  $+250^{\circ}\text{C}$ .



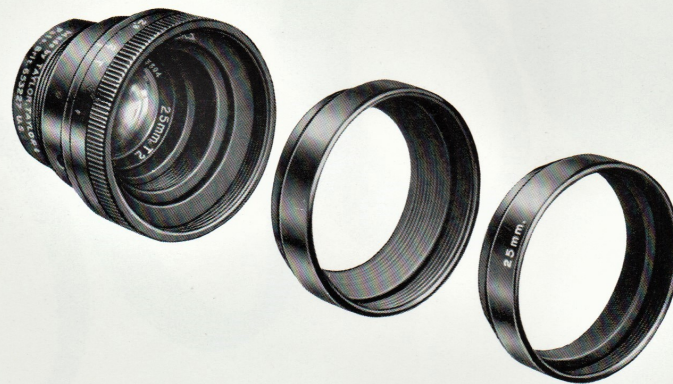
*9 mm. f/1.9 Kinetel Unmounted Optical Unit*



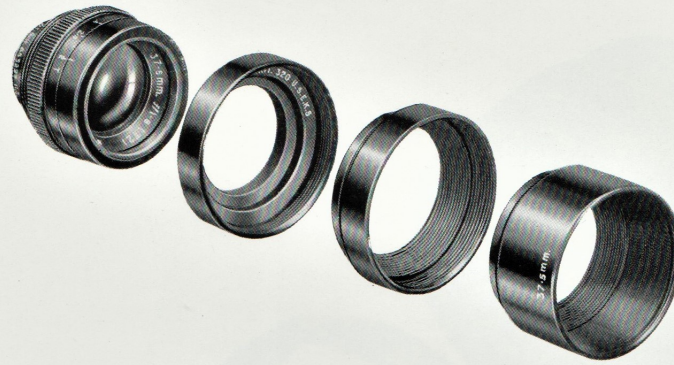
*12.5 mm. f/1.8 Kinetel Unmounted Optical Unit*



*17.5 mm. f/1.8 Kinetel Unmounted Optical Unit*



*25 mm. f/1.8 Kinetel Unmounted Optical Unit*



*37.5 mm. f/1.8 Kinetel Unmounted Optical Unit*



*50 mm. f/1.8 Kinetel Unmounted Optical Unit*



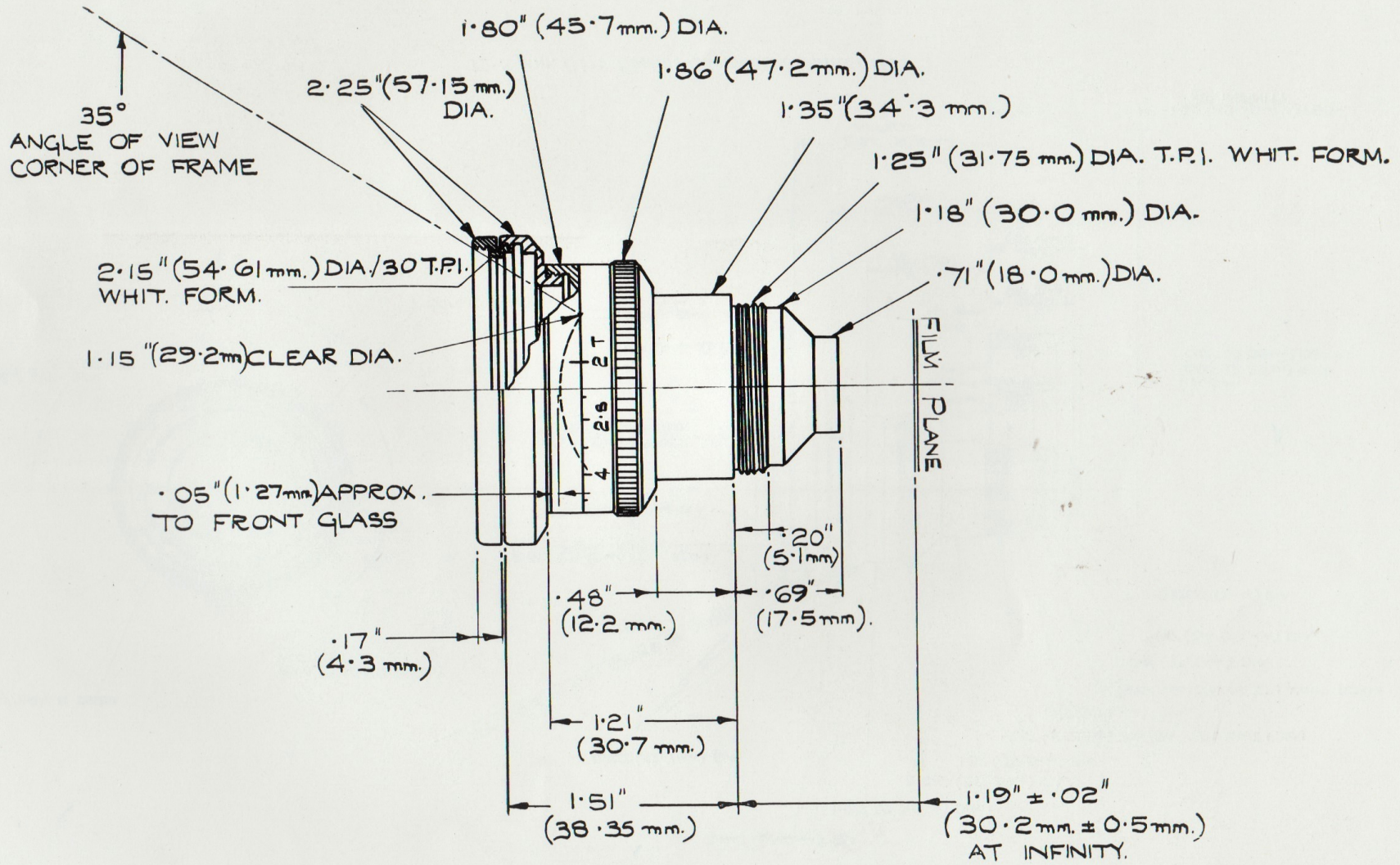
*75 mm. f/2.6 Kinetel Unmounted Optical Unit*



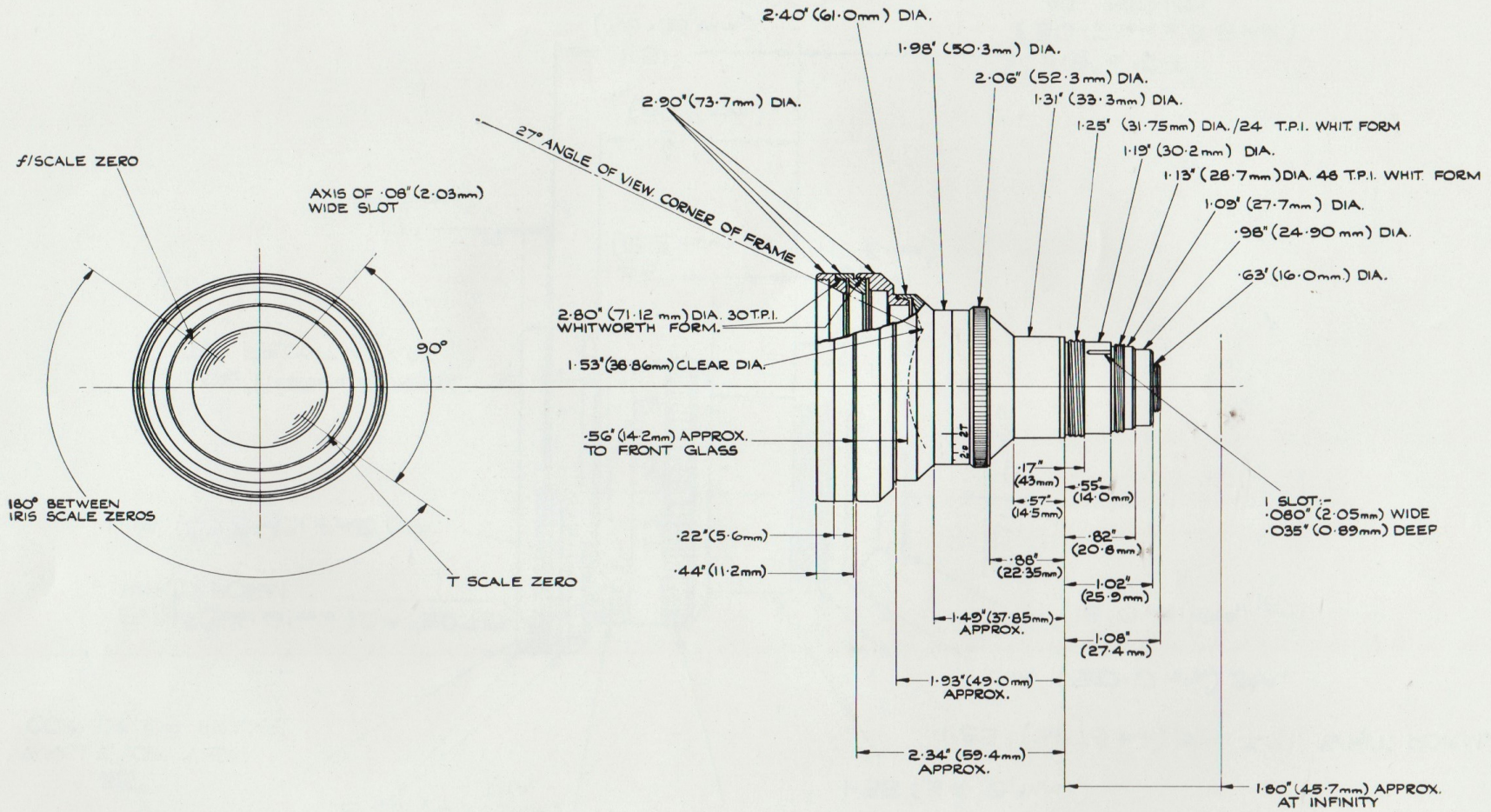
100 mm. f/2.6 Kinetal Unmounted Optical Unit



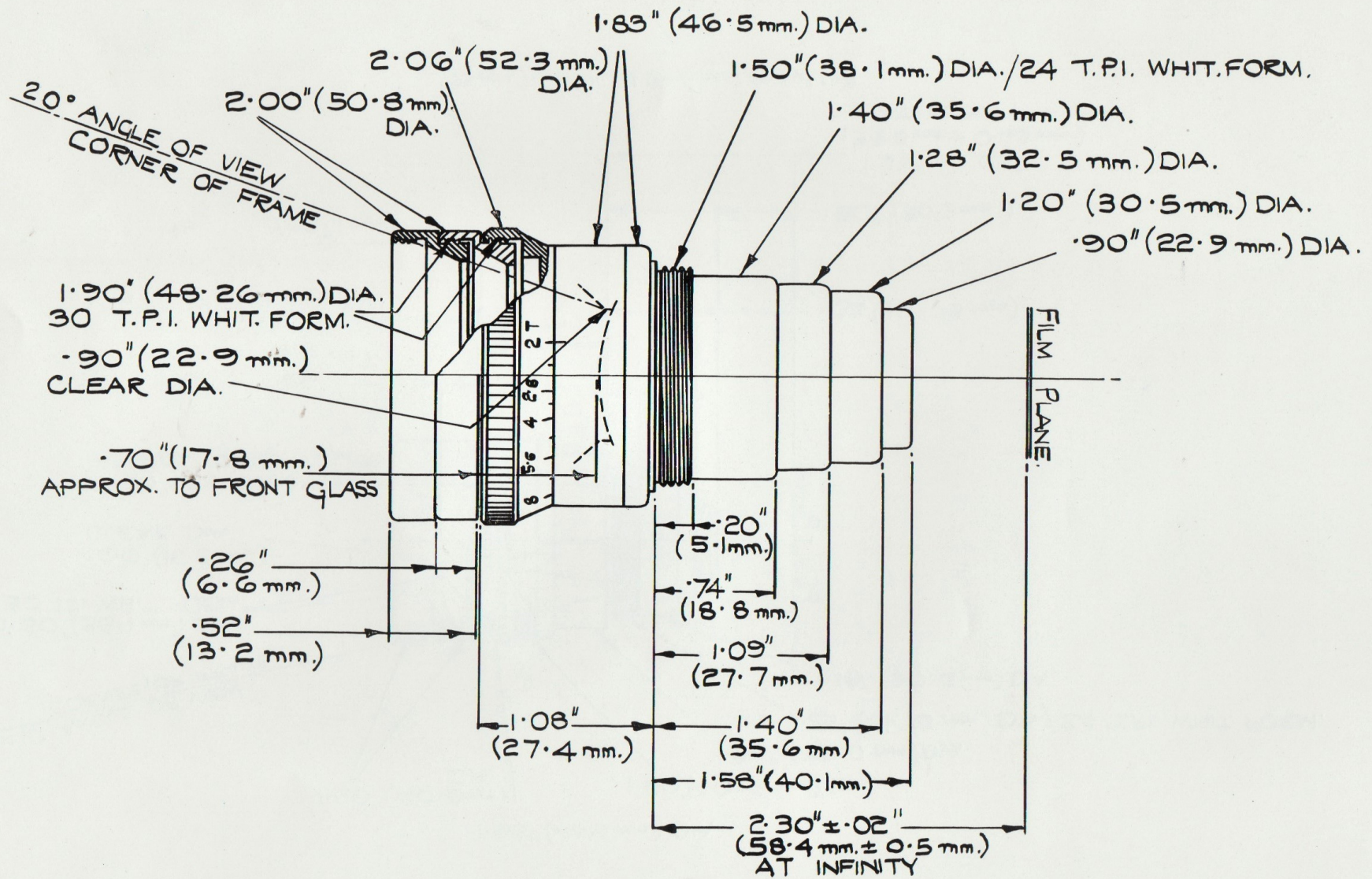
*150 mm. f/3.8 Kinetal Unmounted Optical Unit*



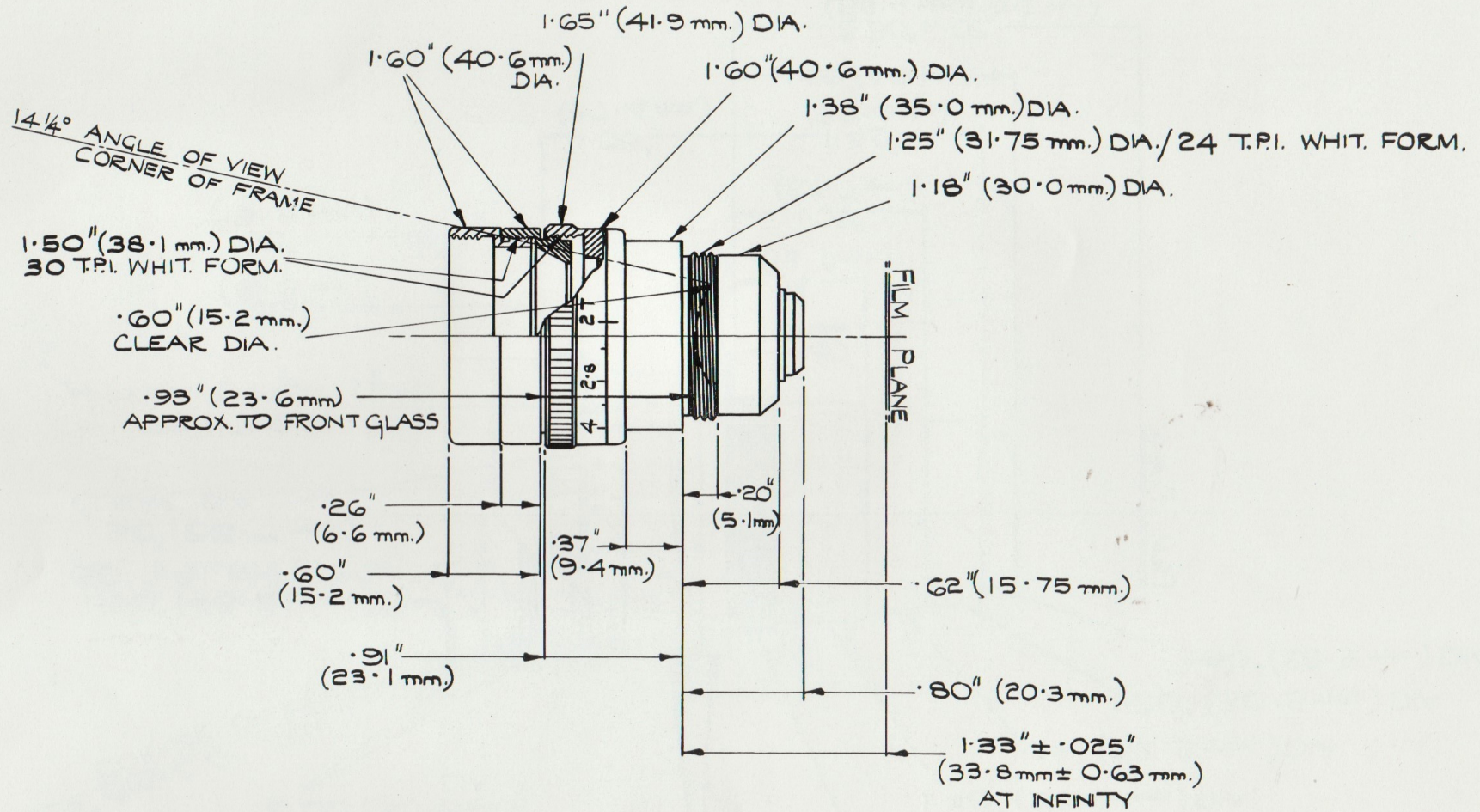
9 mm. f/1.9 Kinetel Unmounted Optical Unit



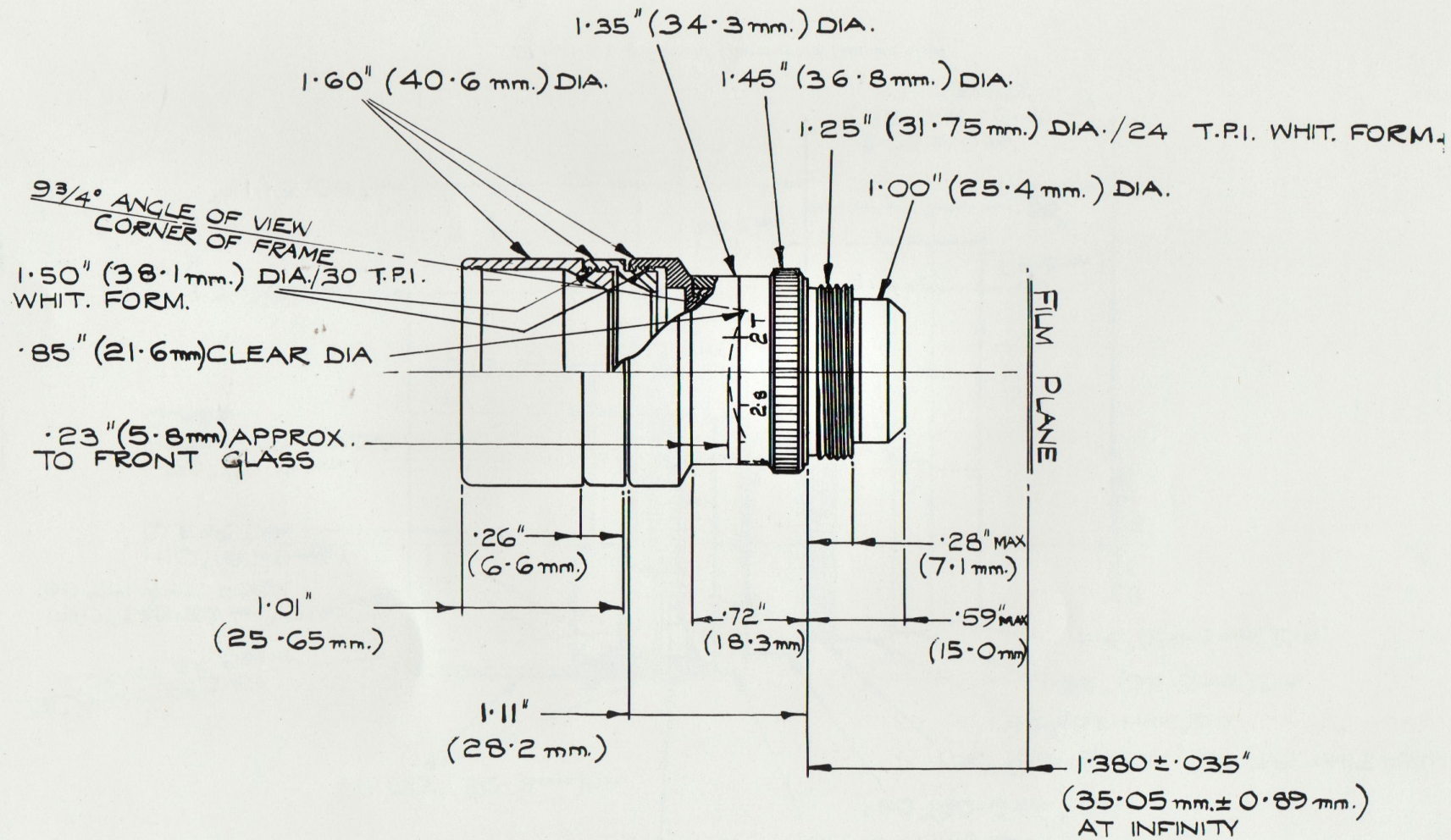
12.5 mm. f/1.8 Kinetal Unmounted Optical Unit



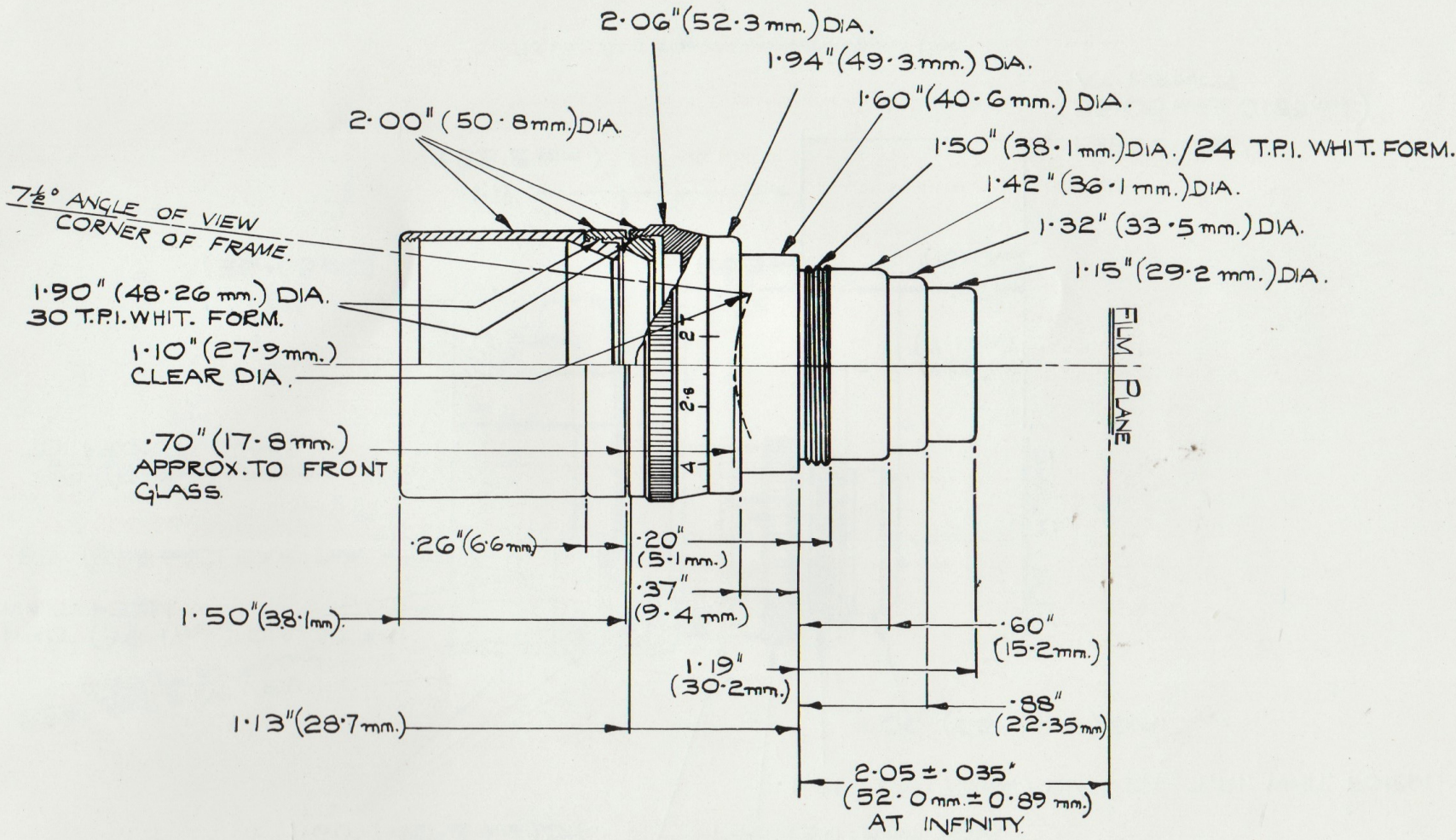
17.5 mm. f/1.8 Kinetel Unmounted Optical Unit



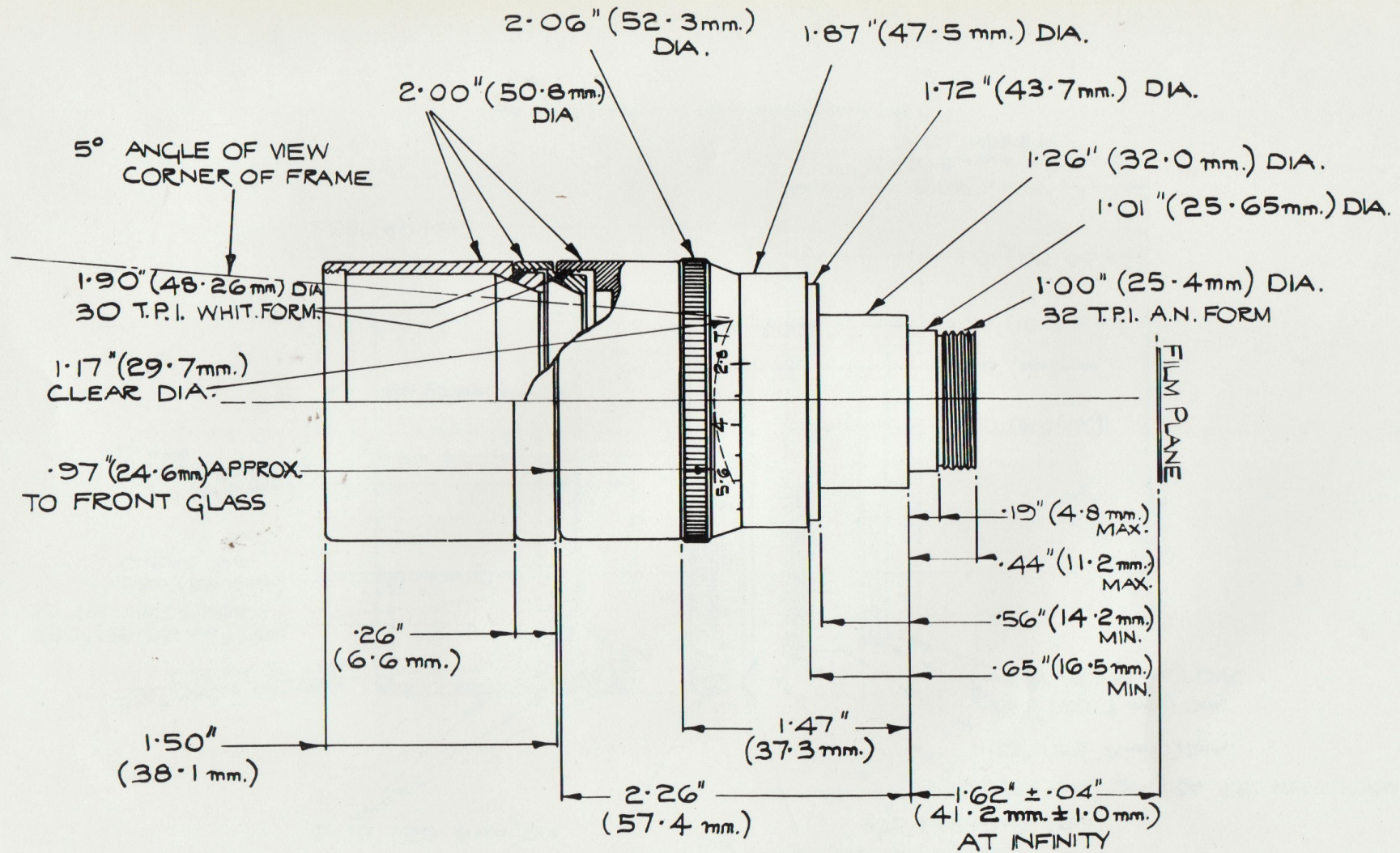
25 mm. f/1.8 Kinetal Unmounted Optical Unit



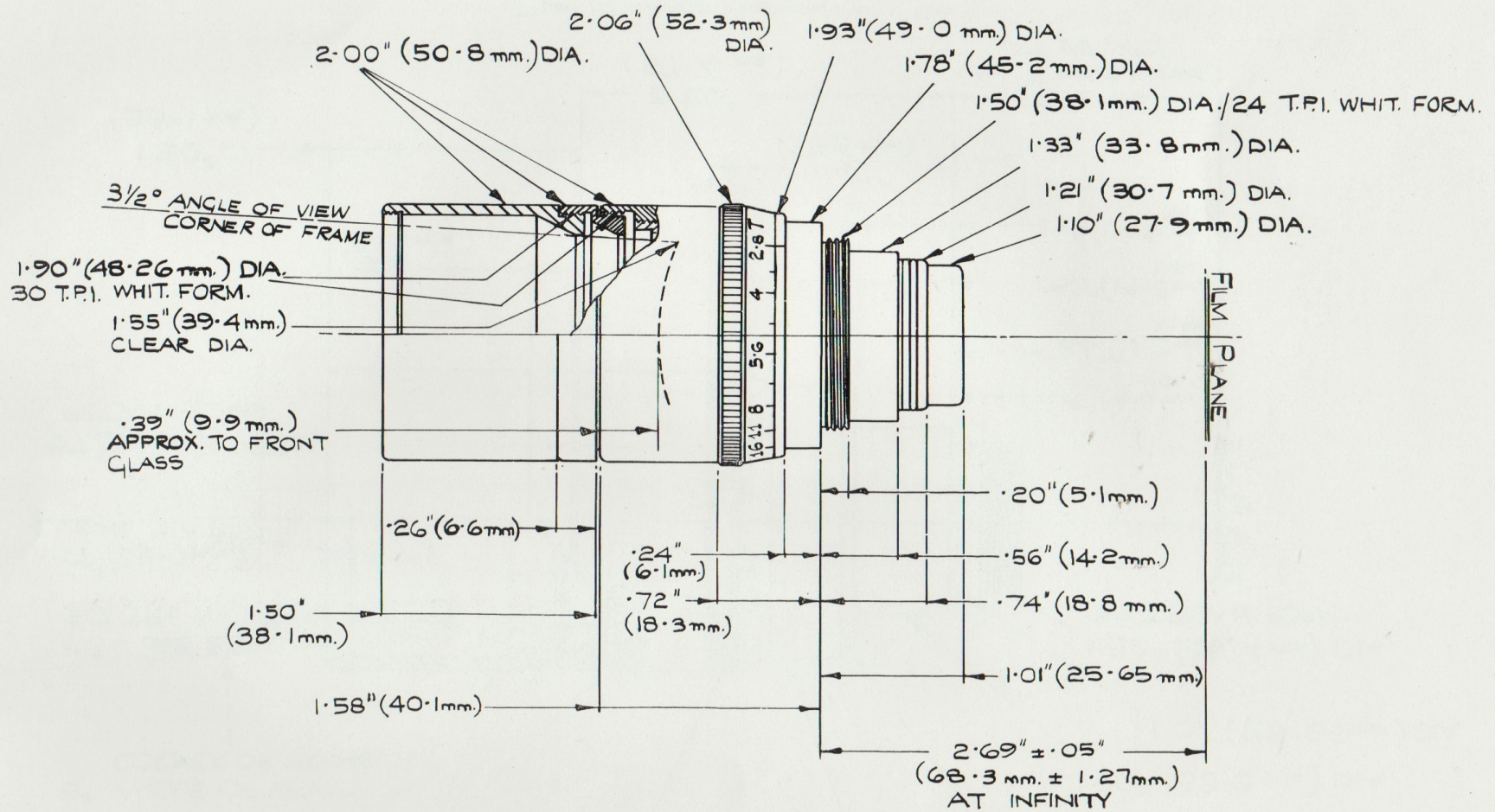
37.5 mm. f/1.8 Kinetal Unmounted Optical Unit



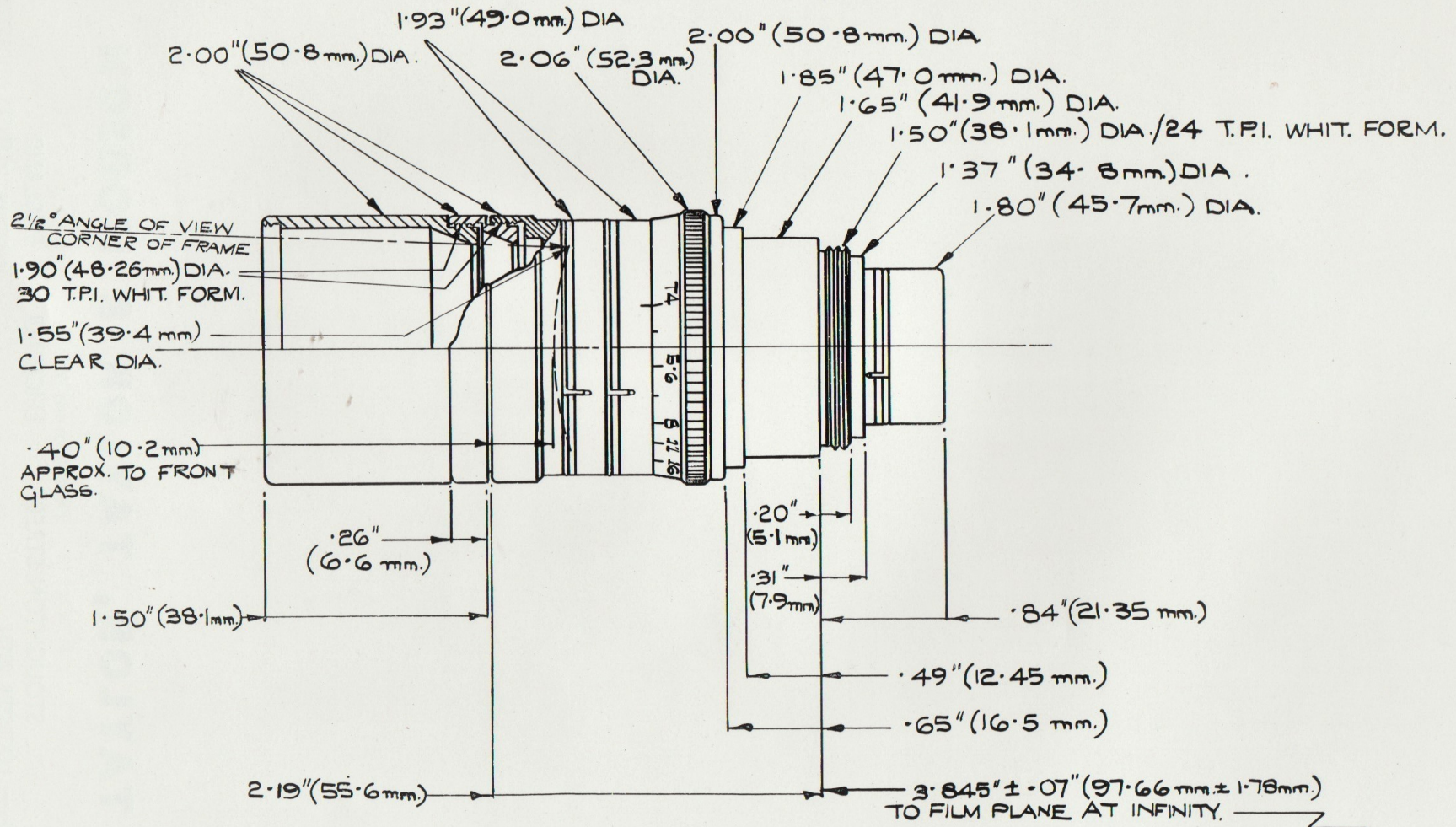
50 mm. f/1.8 Kinetak Unmounted Optical Unit



75 mm. f/2.6 Kinetel Unmounted Optical Unit



100 mm. f/2.6 Kinetel Unmounted Optical Unit



150 mm. f/3.8 Kinetel Unmounted Optical Unit

# **TAYLOR, TAYLOR & HOBSON**

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COOKE KINETAL UNMOUNTED OPTICAL UNITS

	9 mm.	
Equivalent focal length $\pm 1\%$	9 mm.	0.355 in.
Number of lens elements	9 (7 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\pm$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal		45.0° 60.0° 70.0°
Distance of the front node from the front surface:	27.1 mm.	to rear 1.067 in.
Distance of the rear node from the rear surface:	5.18 mm.	to rear 0.204 in.
Clear diameter of front glass	29.2 mm.	1.15 in.
Clear diameter of rear glass	7.87 mm.	0.31 in.
Optical back focal distance	14.20 mm. $\pm$ 0.15 mm.	0.559 in. $\pm$ 0.006 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
f/stop apertures engraved in white f/stop tolerance	1.9 - 2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from f/1.9 to f/22	$92^\circ \pm 5^\circ$	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	48.3 mm. 60.2 mm.	1.90 in. 2.37 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	47.2 mm. 57.15 mm.	1.86 in. 2.25 in.
Mechanical back focal distance	30.2 in. $\pm$ 0.5 mm.	1.19 in. $\pm$ 0.02 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	30.7 mm.	1.21 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	43.4 mm.	1.71 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	51.05 mm. 5.21 mm. to 5.59 mm.	2.010 in. 0.205 in. to 0.220 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	<i>British</i> 420	<i>U.S.</i> E.K.7
Nett weight unmounted lens	0.135 kg.	4 $\frac{3}{4}$ oz.

COOKE KINETAL UNMOUNTED OPTICAL UNITS

	12.5 mm.	
Equivalent focal length $\pm 1\%$	12.5 mm.	0.50 in.
Number of lens elements	9 (7 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\times$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal		33.0° 45.0° 54.0°
Distance of the front node from the front surface:	39.38 mm.	to rear 1.55 in.
Distance of the rear node from the rear surface:	6.61 mm.	to rear 0.26 in.
Clear diameter of front glass	38.25 mm.	1.505 in.
Clear diameter of rear glass	11.4 mm.	0.448 in.
Optical back focal distance	19.3 mm. $\pm$ 0.13 mm.	0.761 in. $\pm$ 0.005 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
$f$ / $f$ stop apertures engraved in white $f$ / $f$ stop tolerance	1.8 - 2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from $f/1.9$ to $f/22$	$90^\circ \pm 5^\circ$	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	76.45 mm. 98.0 mm.	3.01 in. 3.86 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	52.3 mm. 73.7 mm.	2.06 in. 2.90 in.
Mechanical back focal distance	45.7 mm. $\pm$ 0.25 mm.	1.80 in. $\pm$ 0.01 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	49.0 mm.	1.93 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	71.1 mm.	2.80 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	63.75 mm. 5.46 mm. to 6.60 mm.	2.510 in. 0.215 in. to 0.260 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	<i>British</i> 2.50 in. diam.	<i>U.S.</i> E.K.8
Nett weight unmounted lens	0.241 kg.	8½ oz.

COOKE KINETAL UNMOUNTED OPTICAL UNITS

	17.5 mm.	
Equivalent focal length $\pm 1\%$	17.5 mm.	0.689 in.
Number of lens elements	9 (7 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\times$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal	24.0° 33.0° 40.0°	
Distance of the front node from the front surface:	29.62 mm.	to rear 1.166 in.
Distance of the rear node from the rear surface:	2.03 mm.	to rear 0.08 in.
Clear diameter of front glass	22.85 mm.	0.90 in.
Clear diameter of rear glass	11.58 mm.	0.456 in.
Optical back focal distance	19.53 mm. $\pm$ 0.18 mm.	0.769 in. $\pm$ 0.007 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
f/stop apertures engraved in white f/stop tolerance	1.8 - 2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from f/1.9 to f/22	90° $\pm$ 5°	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	67.55 mm. 80.8 mm.	2.66 in. 3.18 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	52.3 mm. 50.8 mm.	2.06 in. 2.00 in.
Mechanical back focal distance	58.4 mm. $\pm$ 0.5 mm.	2.30 in. $\pm$ 0.02 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	27.4 mm.	1.08 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	41.2 mm.	1.62 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	41.6 mm. 4.57 mm. to 4.96 mm.	1.638 in. 0.180 in. to 0.195 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	<i>British</i> 370	<i>U.S.</i> E.K.6
Nett weight unmounted lens	0.191 kg.	6 $\frac{3}{4}$ oz.

COOKE KINETAL UNMOUNTED OPTICAL UNITS

	25 mm.	
Equivalent focal length $\pm 1\%$	25 mm.	0.984 in.
Number of lens elements	6 (4 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\times$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal		17.0° 23.0° 29.0°
Distance of the front node from the front surface:	5.77 mm.	to rear 0.227 in.
Distance of the rear node from the rear surface:	10.80 mm.	to front 0.425 in.
Clear diameter of front glass	15.25 mm.	0.60 in.
Clear diameter of rear glass	9.20 mm.	0.362 in.
Optical back focal distance	14.29 mm. $\pm$ 0.25 mm.	0.563 in. $\pm$ 0.01 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
f/stop apertures engraved in white f/stop tolerance	1.8 - 2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from f/1.9 to f/22	$88^\circ \pm 5^\circ$	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	43.4 mm. 58.7 mm.	1.71 in. 2.31 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	41.9 mm. 40.6 mm.	1.65 in. 1.60 in.
Mechanical back focal distance	33.80 mm. $\pm$ 0.63 mm.	1.33 in. $\pm$ 0.025 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	23.1 mm.	0.91 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	38.9 mm.	1.53 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	30.5 mm. 4.18 mm. to 4.95 mm.	1.20 in. 0.165 in. to 0.195 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	British 320	U.S. E.K.5
Nett weight unmounted lens	0.092 kg.	3¼ oz.

COOKE KINETAL UNMOUNTED OPTICAL UNITS

	37.5 mm.	
Equivalent focal length $\pm 1\%$	37.5 mm.	1.477 in.
Number of lens elements	6 (4 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\times$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal	11.5° 16.0° 19.5°	
Distance of the front node from the front surface:	8.56 mm.	to rear 0.337 in.
Distance of the rear node from the rear surface:	16.27 mm.	to front 0.641 in.
Clear diameter of front glass	21.60 mm.	0.850 in.
Clear diameter of rear glass	13.66 mm.	0.538 in.
Optical back focal distance	21.23 mm. $\pm$ 0.38 mm.	0.836 in. $\pm$ 0.015 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
f/stop apertures engraved in white f/stop tolerance	1.8 - 2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from f/1.9 to f/22	$90^\circ \pm 5^\circ$	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	33.3 mm. 68.8 mm.	1.31 in. 2.71 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	36.8 mm. 40.6 mm.	1.45 in. 1.60 in.
Mechanical back focal distance	35.05 mm. $\pm$ 0.89 mm.	1.380 in. $\pm$ 0.035 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	18.3 mm.	0.72 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	54.4 mm.	2.14 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	30.5 mm. 4.18 mm. to 4.95 mm.	1.20 in. 0.165 in. to 0.195 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	<i>British</i> 320	<i>U.S.</i> E.K.5
Nett weight unmounted lens	0.099 kg.	3½ oz.

COOKE KINETAL UNMOUNTED OPTICAL UNITS

	50 mm.	
Equivalent focal length $\pm 1\%$	50 mm.	1.973 in.
Number of lens elements	6 (4 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\times$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal		8.5° 12.0° 14.5°
Distance of the front node from the front surface:	11.35 mm.	to rear 0.447 in.
Distance of the rear node from the rear surface:	21.74 mm.	to front 0.856 in.
Clear diameter of front glass	27.95 mm.	1.10 in.
Clear diameter of rear glass	18.29 mm.	0.72 in.
Optical back focal distance	28.39 mm. $\pm$ 0.50 mm.	1.118 in. $\pm$ 0.02 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
f/stop apertures engraved in white f/stop tolerance	1.8 - 2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from f/1.9 to f/22	86° $\pm$ 5°	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	58.9 mm. 97.0 mm.	2.32 in. 3.82 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	52.3 mm. 50.8 mm.	2.06 in. 2.00 in.
Mechanical back focal distance	52.0 mm. $\pm$ 0.89 mm.	2.050 in. $\pm$ 0.035 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	28.7 mm.	1.13 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	67.3 mm.	2.65 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	41.6 mm. 4.57 mm. to 4.96 mm.	1.638 in. 0.180 in. to 0.195 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	British 370	U.S. E.K.6
Nett weight unmounted lens	0.212 kg.	7½ oz.

COOKE KINETAL UNMOUNTED OPTICAL UNITS

	75 mm.	
Equivalent focal length $\pm 1\%$	75 mm.	2.954 in.
Number of lens elements	5 (4 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\times$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal	5.5° 8.0° 10.0°	
Distance of the front node from the front surface:	2.13 mm.	to front 0.084 in.
Distance of the rear node from the rear surface:	35.9 mm.	to front 1.414 in.
Clear diameter of front glass	29.7 mm.	1.17 in.
Clear diameter of rear glass	17.48 mm.	0.688 in.
Optical back focal distance	39.1 mm. $\pm$ 0.76 mm.	1.54 in. $\pm$ 0.03 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	2.8 - 4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
f/stop apertures engraved in white f/stop tolerance	2.6 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from f/1.9 to f/22	73° $\pm$ 5°	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	68.6 mm. 106.7 mm.	2.70 in. 4.20 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	52.3 mm. 50.8 mm.	2.06 in. 2.00 in.
Mechanical back focal distance	41.2 mm. $\pm$ 1.0 mm.	1.62 in. $\pm$ 0.04 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	57.4 mm.	2.26 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	96.0 mm.	3.78 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	41.6 mm. 4.57 mm. to 4.96 mm.	1.638 in. 0.180 in. to 0.195 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	<i>British</i> 370	<i>U.S.</i> E.K.6
Nett weight unmounted lens	0.248 kg.	8 $\frac{3}{4}$ oz.

COOKE KINETAL UNMOUNTED OPTICAL UNITS

	100 mm.	
Equivalent focal length $\pm 1\%$	100 mm.	3.943 in.
Number of lens elements	5 (4 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\times$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal		4.5° 6.0° 7.5°
Distance of the front node from the front surface:	3.94 mm.	to front 0.155 in.
Distance of the rear node from the rear surface:	47.9 mm.	to front 1.887 in.
Clear diameter of front glass	39.38 mm.	1.55 in.
Clear diameter of rear glass	22.95 mm.	0.903 in.
Optical back focal distance	52.2 mm. $\pm$ 0.5 mm.	2.055 in. $\pm$ 0.02 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	2.8 - 4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
f/stop apertures engraved in white f/stop tolerance	2.6 - 2.8 - 4 - 5.6 - 7 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from f/1.9 to f/22	82° $\pm$ 5°	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	68.3 mm. 106.4 mm.	2.69 in. 4.19 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	52.3 mm. 50.8 mm.	2.06 in. 2.00 in.
Mechanical back focal distance	68.3 mm. $\pm$ 1.27 mm.	2.69 in. $\pm$ 0.05 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	40.1 mm.	1.58 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	78.7 mm.	3.10 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	41.6 mm. 4.57 mm. to 4.96 mm.	1.638 in. 0.180 in. to 0.195 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	British 370	U.S. E.K.6
Nett weight unmounted lens	0.269 kg.	9½ oz.

COOKE KINETAL UNMOUNTED OPTICAL UNITS

	150 mm.	
Equivalent focal length $\pm 1\%$	150 mm.	5.91 in.
Number of lens elements	5 (4 components)	
Maximum Film format covered— 16 mm. Camera aperture Frame Size	10.41 mm. $\times$ 7.47 mm.	0.410 in. $\times$ 0.294 in.
Total angular coverage— Vertical Horizontal Diagonal	3.0° 4.0° 5.0°	
Distance of the front node from the front surface:	2.64 mm.	to front 0.014 in.
Distance of the rear node from the rear surface:	70 mm.	to front 2.755 in.
Clear diameter of front glass	39.38 mm.	1.55 in.
Clear diameter of rear glass	22.23 mm.	0.875 in.
Optical back focal distance	80 mm. $\pm$ 0.8 mm.	3.149 in. $\pm$ 0.03 in.
T stop apertures engraved in orange (Note: Between T 2 and T 8 half-stop lines are engraved)	4 - 5.6 - 8 - 11 - 16 - 22	
T stop tolerance	See page 3, leaflet LEN. 200	
f/stop apertures engraved in white f/stop tolerance	3.8 - 4 - 5.6 - 8 - 11 - 16 - 22 $\pm 7\%$	
Total angular rotation of iris ring from f/1.9 to f/22	86° $\pm$ 5°	
Overall length (a) without filter holder and filter retainer (b) with filter holder and filter retainer	77 mm. 115.1 mm.	3.03 in. 4.53 in.
Maximum outside diameter (a) over iris ring (b) over filter holder and retainer	52.3 mm. 50.8 mm.	2.06 in. 2.00 in.
Mechanical back focal distance	97.66 mm. $\pm$ 1.78 mm.	3.845 in. $\pm$ 0.070 in.
Maximum projection from lens seating face with filter retainer ring and rayshade removed	55.6 mm.	2.19 in.
Maximum projection lens from lens seating face with appropriate Kodak Wratten Filter, filter retainer ring and rayshade fitted	94.2 mm.	3.71 in.
Maximum filter dimension Taylor-Hobson filter retainer ring will accommodate (a) Maximum diameter (b) Thickness from	41.6 mm. 4.57 mm. to 4.96 mm.	1.638 in. 0.180 in. to 0.195 in.
Suitable Kodak Wratten metal rim circular type optical glass filter	British 370	U.S. E.K.6
Nett weight unmounted lens	0.283 kg.	10 oz.

