

LOMO

Anamorphic Unit 35BAS22-2

Instruction Booklet

1. USE OF THE UNIT

Anamorphic Unit 35BAS22-2 is intended for shooting wide-screen color and b/w movies onto 35mm film using Russian cine cameras with distance between film and shutter of 19mm. The lens is designed to be used within a temperature range of -30 to +40 degrees Centigrade.

2. SPECIFICATIONS

Basic Characteristics	Value
Focal length, mm	48
Back apical focal length, mm	34.2
Geometrical relative aperture	1:2
Frame size, mm	18.6 x 21.95
Aspect ratio in the middle of the frame	0.5
Close focus distance, m	1
Dimensions, mm:	
length	165
diameter	105
Weight, kg	1.6

3. OPTICS, CONSTRUCTION AND OPERATION

3.1. Optics

Optical design of the anamorphic unit 35BAS22-2 (Figure 1) consists of the lens 1 (lens OKS1-50-1, F=50mm, f/2) and anamorphic attachment 2. The anamorphic attachment consists of two-lens spherical compensator 3 (elements 4 and 5) and two cylindrical components (6 and 7). The components of the attachment and the lens are immovable. Lens 4 of compensator 3 is moved during focusing.

3.2. Construction

The anamorphic unit consists of two assemblies – the lens and the attachment. In attachment body 8 elements 5 and 6 are fixed. Holder 9 with lens 7 is screwed into the body. Shooting distance is set by rotating ring 10 screwed to holder 12 with element 4 by means of screws 11. Ring 13 is marked with a shooting distance scale. The lens in the focusing mount is connected to the attachment body by means of bayonet nut 14.

The lens-focusing mount consists of two bushes 15 and 16, the aperture scale 17, nut 18 and the mount 19.

To change the focusing mount, unscrew screw 20, loosen screws 21, screw off mount 19, screw in the corresponding replacement mount, and then tighten screws 20 and 21.

Slider 22 is intended to mount the unit to the camera. Screws 21 and 23 are used to fix the unit after adjustment.

4. IDENTIFICATION MARKING

Nut 18 is marked with the name of the manufacturer, unit name, focal length of the lens, geometrical aperture of the unit, and the serial number of the unit (6 digits; first two digits are the year of production, and the last four digits are the number).

5. MOUNTING TO CAMERA

Adjustment of the unit upon mounting it onto a camera consists of matching the image plane of the unit with the film plane, and aligning the cylindrical elements of the attachment with the vertical side of the camera gate aperture.

5.1. Before adjusting the unit, check the factory adjustment by means of an optical bench.

5.2. To match the image plane of the unit with the film plane, mount the unit onto a camera, and place it in front of an autocollimator (it is advisable to use an autocollimator with lens focal length of 300-400mm); set 'infinity' by means of ring 10; fix a flat mirror (an aluminized one, or a polished metal plate) in the gate aperture (the polished or aluminized side should face the guides of the gate aperture); achieve a match of the unit image plane with the film plane by means of nut 18; eyepiece of the autocollimator should be set to 'infinity.' After adjustment, secure nut 18 by means of screws 21.

5.3. To align the cylindrical elements of the attachment with the vertical side of the camera gate aperture, mount any usual lens onto the camera, and align a vertical line of the focusing magnifier with the image of some vertical line; then replace the lens with the anamorphic unit taking care to not move the camera. The image of the vertical line should remain aligned with the vertical line of the focusing magnifier. If the lines are not parallel, loosen screws 20 and 23 and turn the unit due to gap between screws 23 and slider 22. Tighten screws 20 and 23 after adjustment.

6. MAINTENANCE

6.1. Protect the unit against shocks, vibration and mechanical damage.

6.2. Remove dust from the lens surface by means of a clean squirrel brush washed in ether and dried, or other approved lens cleaning means.

6.3. Clean metal parts with clean wiping cloth.

6.4. Use a lens caps to protect the optical surfaces.

6.5. Do not disassemble the unit.

7. STORAGE AND TRANSPORTATION

7.1. The unit should be stored in its packing case at a temperature of +1 to +40 degrees Centigrade, and at a relative humidity no higher than 80% at +25 degrees Centigrade.

7.2. It is permissible to transport the lens in its packing case by any mode of transport except sea. Air transport should be done in hermetically sealed heated compartments.

Figures

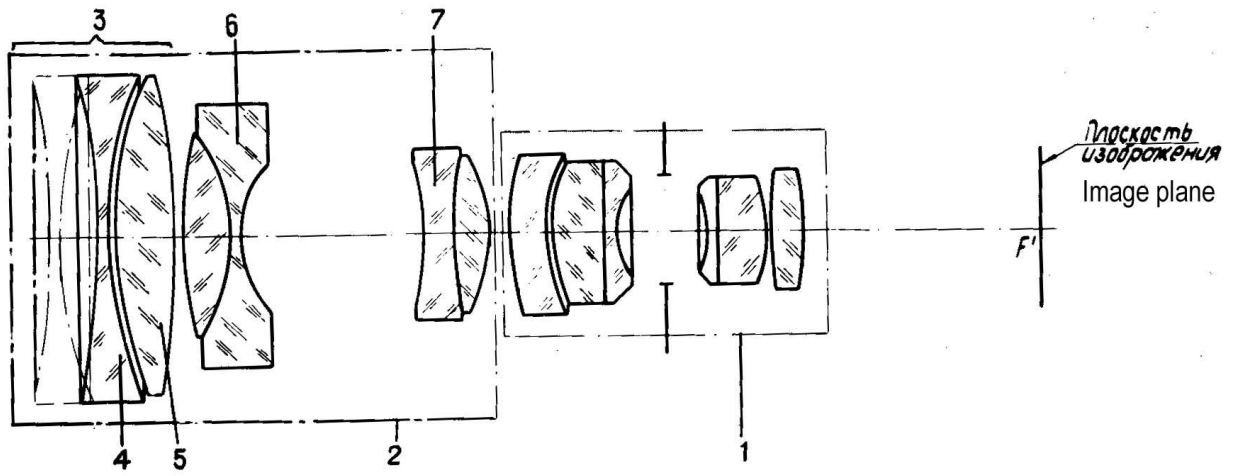


Figure 1

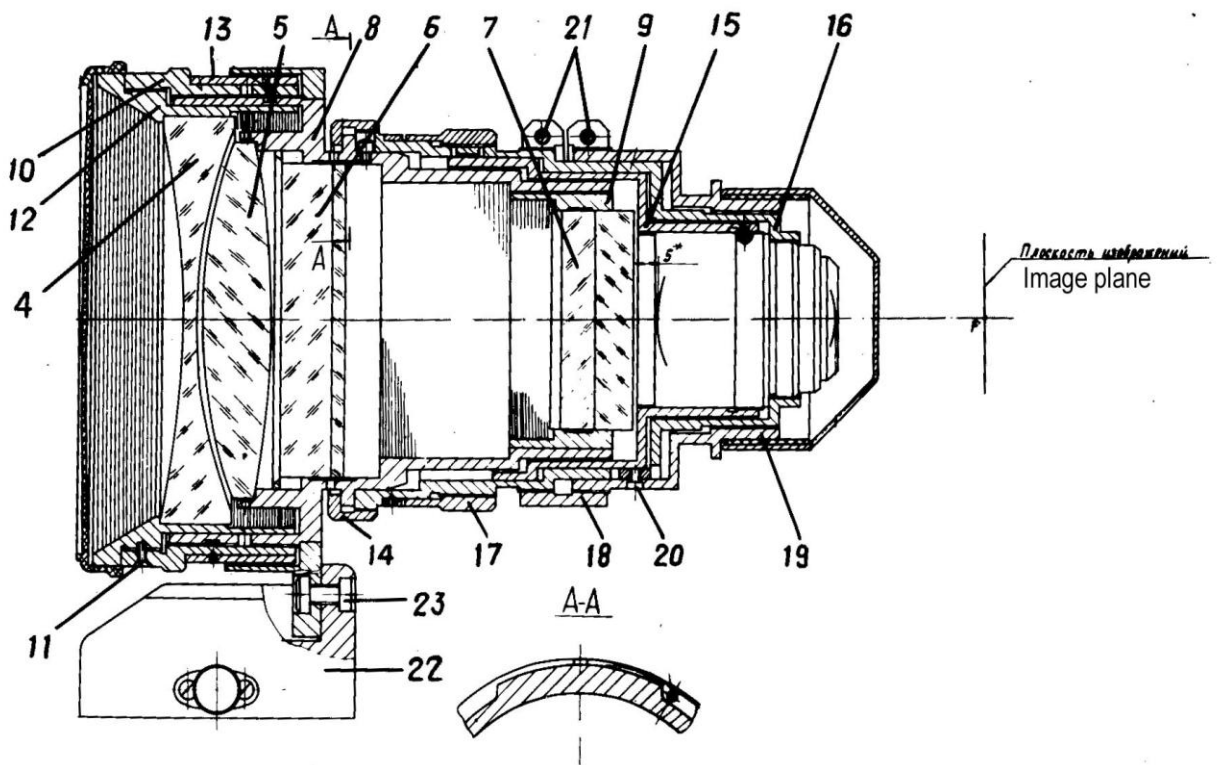


Figure 2