

**FOCAL LENGTH OF A COMBINATION OF  
TWO CONVERGENT LENSES USING  
NODAL SLIDE ASSEMBLY  
OMEGA TYPE ES-322**



**OMEGA TYPE ES-322** Experimental Set-Up has been designed specifically for determination of focal length of a combination of two convergent lenses using Nodal Slide Assembly. The set-up consists of Nodal Slide Assembly, Light source, optical screen, plane mirror & convex lens.

The set up is complete in all respect and requires no other apparatus. Practical experience on this set up carries great educative value for Science and Engineering Students.

**OBJECT**

To determine the focal length of a combination of two convergent lenses using Nodal Slide Assembly and to verify the relation

$$\frac{1}{F} = \frac{1}{f_1} + \frac{1}{f_2} - \frac{d}{f_1 f_2}$$

**FEATURES**

The complete experimental Set-up consists of :

01 Nodal Slide Assembly :

Comprising of the following:

1.1 Optical Bench : Two 150cm long steel rods 3/4" dia forming a bench with end supports having levelling screws. One of the two steel rods is graduated in cm & mm. It has four riders, two with transverse motion.

1.2 Nodal Slide Unit : Two vertical axis contains a carriage with suitable arrangement for combination of single & double lens holders. The lens holders are adjustable in height and are provided with lateral motion by rack & pinion. These motions can be noted along a scale. The vertical carriage containing the whole mount can rotate along the vertical axis along a circular graduated scale.

02 Lamp House : An electrical 40W bulb is encased in a case.

03 Optical Screen : With fine cross slit

04 Plane Mirror : Inclined

05 Convex Lens : Two no's.

06 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

**OMEGA ELECTRONICS**