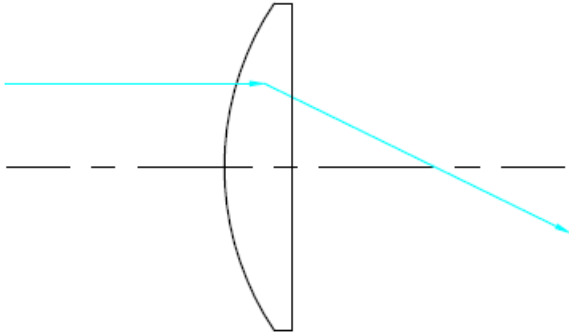


- Focal Lengths Available from 5.0 to -1000.0 mm
- Focal Lengths Tolerance:  $\pm 1\%$
- Dimension: 1.0~200.0mm
- Scratch & Dig: 80/50~40/20
- Center Error: 5arc min ~ 3 arc min



Plano-Convex Cylindrical Lenses are ideal for applications requiring magnification in one dimension. While spherical lenses act symmetrically in two dimensions on an incident ray, cylindrical lenses act in the same manner but only in one dimension. A typical application is to use a pair of cylindrical lenses to provide anamorphic shaping of a beam. A pair of positive cylindrical lenses can be used to collimate and circularize the output of a laser diode. Another application possibility would be to use a single lens to focus a diverging beam onto a detector array. To minimize the introduction of spherical aberrations, collimated light should be incident on the curved surface when focusing it to a line, and light from a line source should be incident on the plano surface when collimating.

The focal length of each lens can be calculated using the following equation:

$$f = R / (n - 1),$$

where  $n$  is the index of refraction and  $R_1, R_2$  is the radius of curvature for each surface of the lens.

They can be also coated with MgF<sub>2</sub> to protect the surface or AR coated to increase the transmission.