Optical Surfaces lens production has been a core part of its business from the beginning. The range offered includes singlets, doublets, meniscus and cylindrical lenses all up to 600mm in diameter. We hold an extensive range of test plates and tools to cover most sizes and radii. Plano-Cylindrical Lens for applications in vision, laser optics, and more. Lens Type: Positive, Negative. Material: BK7. Another typical application of a is in the light sheet microscope where a cylindrical lens is placed in front of the illumination objective to create the light sheet used for imaging. External links: 1- More on Wikipedia. About Us. Appendix A: Geometric optics approximation and the eikonal equation. The basic concept in the geometric optics approximation in that in the optical range the propagation of waves can be represented (to a very high degree of accuracy) as the transfer of wave energy, which are described by geometric relations. Here we present a transition from the wave equation to an equivalent relation for rays. Consider the case of a uniaxial crystal, with optic axis in the z-direction. If, as before, a and b are the principal phase velocities and ¢ the wave phase, the eikonal equation for the E wave is. (15). Geometrical optics mechanics and, 6-8 Optimal policy, 187 Optimization theory, for light propagation, 185 Outer caustic, 72. p Parabolic index fiber. These optical metamaterial spaces could enable innovative paradigms of transformation optics pertinent to optical cloaking, sub-wavelength sensing, super-resolution imaging, magnifying hyperlenses, and light-concentrating devices. We also outline our recent development and deployment of an easy-to-use, multifaceted, on-line research environment for the nanophotonics research community. In particular, we show representative examples of two online software tools addressing a growing need for efficient numerical simulations in the area of transformation optics. Here, we focus on another important application - a flat hyperlens that can magnify small, nanometer-scale features of an object that cannot be resolved with conventional optics [10]. Adaptive Optics is a prime example of how progress in observational astronomy can be driven by technological developments. At many observatories it is now considered to be part of a standard instrumentation suite, enabling ground-based telescopes to reach the diffraction limit and thus providing spatial resolution superior to that achievable from space with current or planned satellites. In this review we consider adaptive optics from the astrophysical perspective. 3.1.3 Planets and their Satellites The planets, with angular diameters of a few arcsec to an arcmin, are obvious targets for adaptive optics. Ground-based observations of Jupiter and Saturn (Glenar et al. 1997) using LGS at the USAF Starre Optical Range, and of the three ring arcs around Neptune (Sicardy et al.