

ABSTRACT

An optical system and a display apparatus. The optical system comprises a lens assembly, a polarization reflection layer, a transflective film and a phase retardation film. The lens assembly comprises at least two lenses, and the at least two lenses comprise a first surface, a second surface, a third surface and a fourth surface which are successively arranged in the optical axis direction of the lens assembly. The polarization reflection layer is arranged on the side of the first surface away from the fourth surface, the transflective film is arranged on the side of the fourth surface away from the third surface, and the phase retardation film is arranged on the side of the transflective film facing the first surface. The second surface and the third surface are both Fresnel surfaces, and surface profiles of the second surface and the third surface are complementary to each other. The at least two lenses comprise lenses differing from each other in terms of at least one of the dispersion coefficient or the refractive index. The second surface and the third surface are configured to be Fresnel surfaces, and the at least two lenses are configured to differ from each other in terms of at least one of the dispersion coefficient or the refractive index, thus helping to achieve chromatic aberration correction by means of cooperation of the Fresnel surfaces and the at least two lenses.