

ABSTRACT

The disclosure provides a near-infrared bandpass filter (5) and an optical sensing system. The near-infrared bandpass filter (5) includes a substrate (51), a set of main films (52) located on a first side of the substrate and a set of secondary films (53) located on a second side of the substrate, wherein the second side is opposite to the first side. The set of main films (52) includes a high refractive index film layer and a first low refractive index film layer arranged in a first preset stacked structure. The set of secondary films (53) includes a second low refractive index film layer and a third low refractive index film layer, or the high refractive index film layer and the second low refractive index film layer, arranged in a second preset stacked structure. In a wavelength range of 780nm to 3000nm, the near-infrared bandpass filter (5) has at least one passband, and when a temperature is changed from -150 °C to 300 °C, a drift amount of a center wavelength of the at least one passband is less than 0.15 nm/°C. The near-infrared bandpass filter provided in the present disclosure can be used to filter light in an operating environment with temperature changes, and the filtered light is stable, so as to improve the imaging quality of the optical sensor system.

Figure 1