

ABSTRACT

An optical sensor having a microsphere structure includes a light-permeable layer (1200), a photoelectronic unit (300) and a substrate (400). The light-permeable layer (1200) includes a microsphere support structure (200) and a plurality of microsphere lenses (100). The microsphere support structure (200) is disposed on the substrate (400). The plurality of microsphere lenses (100) are disposed on the microsphere support structure (200). Each of the plurality of microsphere lenses (100) has a radius and a height that is less than or equal to the radius. The photoelectronic unit (300) is electronically connected to the substrate (400). The photoelectronic unit (300) is configured to receive a light that travels through at least one of the plurality of microsphere lenses (100) or the microsphere support structure (200).

Fig. 1