

ABSTRACT

A focusing and leveling device for calculating the defocusing amount and/or tilt amount of a substrate (60), comprising a lighting unit, a projection marking plate (10) with a projection slit marker, a projection imaging group (20), a refractive prism (30), a light splitter (40), a detection unit and a signal processing unit. A beam generated from the lighting unit forms a measurement light spot after passing through the projection marking plate (10). The projection imaging group (20) images the measurement light spot onto the surface of the substrate (60). The refractive prism (30) is used for enabling the beam, which is reflected by the surface of the substrate (60) for the first time, to be incident again onto the surface of the substrate (60) after being refracted, such that the beam which is reflected by the surface of the substrate (60) for the second time passes through the projection imaging group (20). The light splitter (40) is used for guiding the beam which is reflected by the surface of the substrate (60) for the second time to the detection unit. The signal processing unit calculates the defocusing amount and/or tilt amount of the surface of the substrate (60), according to the measurement light spot detected by the detection unit. The focusing and leveling device has a simple structure, is easy to install and regulate, and can improve the detection accuracy.