

ABSTRACT

The present disclosure provides a pulsed laser-based ellipsometry device and a related optical operation method. The device is configured to be operable to
5 selectively work in an ellipsometry mode. The ellipsometry device particularly comprises: a lock-in amplification module configured to receive a first detection signal from a sample and perform lock-in amplification on the first detection signal to generate a noise-processed first detection signal on the basis that a first modulation signal is used as a reference signal; and a control and processing module
10 configured to obtain information related to characteristics of the sample based on the noise-processed first detection signal.