

ABSTRACT

The semiconductor failure analysis device 1 includes: a tester 2 configured to apply a stimulation signal to a semiconductor device 100; a light source 3 configured to generate irradiation light L1 with which the semiconductor device 100 is irradiated; a solid immersion lens 4 disposed on an optical path of the irradiation light L1; a light detection unit 5 configured to receive reflected light L2 and to output a detection signal according to the reflected light L2; an optical system 6 disposed between the light source 3 and the solid immersion lens 4 to emit the irradiation light L1 to the semiconductor device 100 via the solid immersion lens 4 and disposed between the solid immersion lens 4 and the light detection unit 5 to emit the reflected light L2 received via the solid immersion lens 4 to the light detection unit 5; and a computer 7 configured to obtain information on a failure portion of the semiconductor device 100 using the detection signal. The light source 3 emits the irradiation light L1 having a center wavelength of 880 nm or more and 980 nm or less. The solid immersion lens 4 is formed of GaAs.

Fig.1