

Laser Processing Device

Abstract

Laser oscillator (6) includes a Q-switch unit controlled by a Q-switch control pulse and an optical resonator (7). Oscillation is checked when the Q-switch unit is turned ON under the control of the Q-switch control pulse but proceeds normally when the Q-switch unit is OFF. Optical switch unit (9) is arranged in the optical path between a laser oscillator and an object to be processed and either transmits or blocks laser light under the control of an optical switch pulse. Control unit (2) generates a Q-switch frequency pulse of repetition frequency designated by computer (1) and a Q-switch control pulse synchronized with the Q-switch frequency pulse. The Q-switch control pulse has a width corresponding to a period designated as pumping interval by computer (1) and generates an optical switch pulse synchronized with the Q-switch control pulse that has a pulse width corresponding to a predetermined interval of laser light transmission.

FIG 7.