

# Five simultaneously Q-switch mode-locked passive laser modulators

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## Abstract

Five types of passive Q-switched as well as simultaneously Q-switch mode-locked modulators: plastic dye sheets (Kodak 9850 cellulose acetate dye sheets), lithium fluoride crystals containing F<sup>2+</sup> color centers (LiF:F<sup>2+</sup>), chromium-doped yttrium-aluminum-garnet crystals (Cr<sup>4+</sup>:YAG), ionic color filter glass (Schott RG1000 color filter glass), and the single crystal semiconductor wafers (GaAs, Fe-doped InP, Zn-doped InP, S-doped InP, etc.) used for modulation of the Nd:hosted (Nd:YAG, Nd:YVO<sub>4</sub>, and Nd:LSB) lasers were investigated in detail in our research. We also investigated applications of the Q-switch mode-locked pulse train for the development of a higher resolution solid-state laser range finder. # 2006 The Optical Society of Japan

Keyword : passive Q-switch modulators, simultaneously Q-switch mode-locked pulses, Nd:hosted lasers