

High Power Ultra-short Pulse UV Laser System

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Abstract

We have developed a terawatts high intensity, sub-hundred femtosecond ultra-short pulses, 248.6 nm ultraviolet laser systems, with dye seed laser in blue-green regime, amplified in the multi-stage dye amplifiers and then frequency doubled and finally amplified with multiple-passes KrF amplifier. We have characterized the system performances, the amplified interaction volume, the amplified spontaneous emission optimization, the Excimer amplifier and the system merits.

Keyword : terawatts high intensity, sub-hundred femtosecond ultra-short pulses, nm ultraviolet laser systems