

Semiconductor lasers in indication and measurement applications

陳振文, 吳仕銳, 陳逸咸, 段景斌, 邱利安, 康雅萍

Communication Engineering

Engineering

jwchen@chu.edu.tw

Abstract

A novel high quality semiconductor cross indicator is presented. Practical modular setup and the measurement results verify the theoretical deduction and optical design simulation. We have achieved the fine and sharp cross lines to the excellent result of 1.4 mm and even the best result of 1.2 mm in line-width, both in red semiconductor light source and in green semiconductor light source. What is more, we have designed and completed a semiconductor source medium to long range high accuracy range finder that measures up to hundred meters with accuracy of less than 2 mm.

Keyword : Semiconductor lasers, laser indicator, laser range finder