MULTI-WATT, SINGLE FREQUENCY OUTPUT FROM 1.4 TO 4.2 MICRONS FROM A SINGLE LASER SYSTEM

A. HENDERSON, R. STAFFORD, and P. HOFFMAN, *Aculight Corporation, 22121 20th Ave SE Bothell, WA 98021-4408, USA.*.

The fiber-laser-pumped continuous-wave optical parametric oscillator[a]. (CW OPO) is an ultra-versatile laser system for high resolution near to midinfrared spectroscopy. These devices are currently being offered as a commercial product by Aculight Corporation. We will describe the operating characteristics of the OPO system which provides up to 5 Watts single frequency output between 1.4 and 2 microns and up to 4 Watts between 2.3 and 4.2 microns. Key characteristics for spectroscopists are a mode-hop free tuning range of 60GHz with kHz scan rates and a measured linewidth of 30kHz. In addition we will provide details of long term amplitude and frequency stability, beam quality and further lower power single frequency outputs in the visible range.

[a] A. Henderson and R. Stafford, Opt. Express 14, 767 (2006).