Single Box L-I-V Test Solution

Keithley announced its Model 2520 Pulsed Laser Diode Test System for electrical characterization of laser diodes in pulse mode up to 5 A peaks. It allows pulse widths as short as 500 nS with rise and fall times less than 60 nS, while protecting the laser diode with output short and voltage compliance functions. In addition to its pulsed current output, this fully-integrated instrument has three measurement channels with a remote digitizing head connected by cables. One channel measures voltage across the laser diode. Two voltage-biased current measurement channels are used for simultaneous measurement of the front and back photodiode detector outputs needed to characterize edge-emitting lasers. Moreover, the single-box design of the Model 2520 makes set up and data collection much faster, and represents a significant savings in cost of ownership compared to traditional solutions.

The Model 2520 was designed for production testing of laser diode chips and bars. These components find use as optical sources in optical networks and in optical read/write heads of data storage systems. However, its pulsed current and V-I compliance capabilities make it useful for testing a wide range of electronic devices that must be protected from destructive voltages or self-heating while under test.

The Model 2520 is supplied in a half-rack size box with IEEE-488 and RS-232 interfaces. It allows complete Light Intensity-Current-Voltage (L-I-V) testing without the need for separate current-to-voltage converters, multichannel digital oscilloscopes, &quotboxcar averagers&quot, or customized software.

The Model 2520 has a 14-bit A/D converter for accurate determination of the laser diode's lasing threshold current, L-I efficiency, and I-V linearity. For users how develop laser diode test applications with LabWindows CVI and LabVIEW, instrument drivers for these packages can be downloaded from the Keithley website.