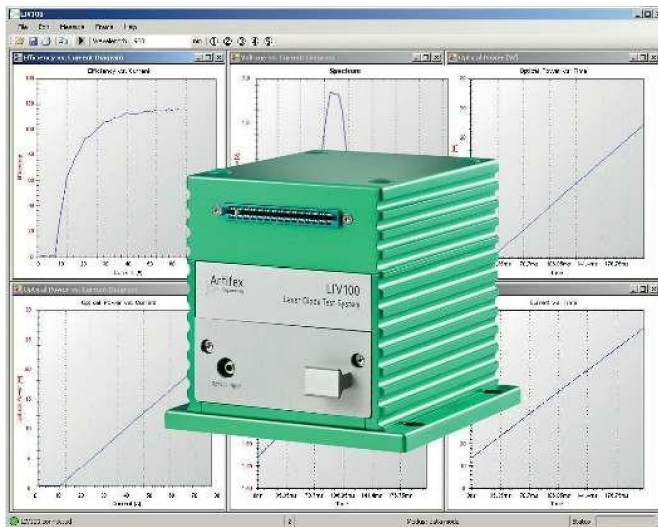


## Laser Diode Test System LIV100



### Highlights:

- High throughput
- Compact
- Low cost

### Our offer in Detail:

The LIV100 is a powerful pulsed current test system for use in the lab as well as for OEM applications, ideal for

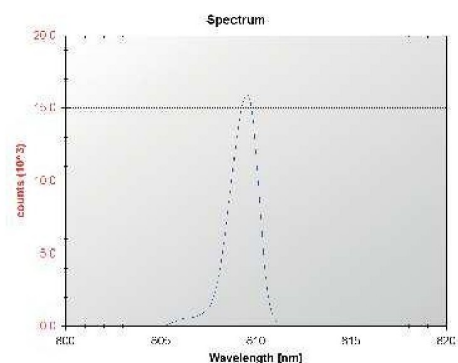
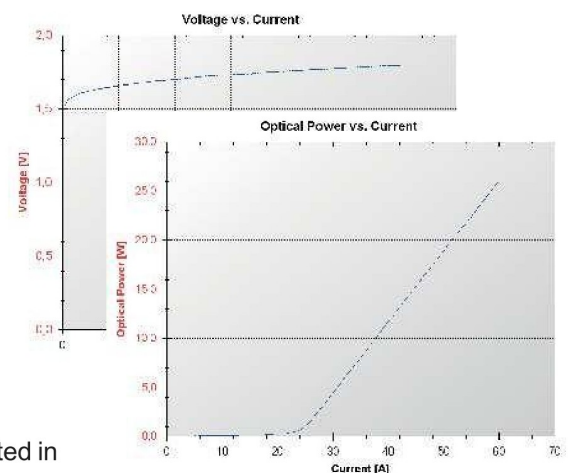
- Diode characterization at the chip or bar level
- Quality control of incoming goods
- OEM

We offer this instrument with a variety of end stages covering current ranges from 1A up to 400A.

A complete parameter set for a given measurement protocol may be uploaded to the LIV100. The LIV100 then takes over the measurement procedure beginning with a test of proper laser contact. Once this preliminary test is passed, the unit drives the laser with the given prescription and performs the data acquisition and storage. Many laser diodes of the same type may now be tested in this manner with very high throughput. The measurement cycle takes less than 1s for 200 current steps including the data transfer to the host computer.

### Specifications:

- Current: from 1A up to 400A
- Rise time:  $<50\text{ns}^2$
- Throughput:  $<1\text{s}$  per diode<sup>1</sup>
- USB-controlled via command list
- Up to 6 channels of synchronized data acquisition
- Optical spectrum: resolution  $\sim 0.1\text{nm}$



### Your problem is our challenge - flexibility is our standard:

We will gladly adapt, for example, the wavelength or the current to suit your application. Let us know your requirements.

## Ordering Information

Long pulse version: LIV100-Lc-S

Fast rise time version: LIV100-Fc-S

max.current (c)



max.current (c)



Appendix S for integrated spectrometer option<sup>3</sup>.

Please contact us for customized units.

## Specifications

PARAMETER	CONDITIONS	RESOLUTION	MIN	TYP	MAX	UNITS
<b>INPUTS: 2 x Transimpedance amplifier (1 x optical power input, 1 x free e.g. for monitor diode)</b>						
<b>4 x A/D converter (current, voltage and optical power inputs, 1 x free e.g. for monitor diode)</b>						
Sampling rate	selectable: 20/n MS/s with n = 1 .. 20	n.a.	1		20	MS/s
A/D resolution				13		bit
Photodiode gain	optimum gain automatically selected			1 10		V/mA
Transimpedance amplifier rise time <sup>4</sup>	Input capacitance <20pF, gain = 1 kΩ			50		ns
<b>OUTPUT</b>						
Pulse duration <sup>5</sup>	20MS/s sampling rate 1MS/s sampling rate	0.050 1	0.150 1		100 2000	μs
Rise time	Fast rise time version Long pulse version			50 <sup>2</sup> 420	70 500	ns
Current overshoot at maximum current <sup>6</sup>				0	5	%
Pulse separation		50	100		500 000	μs
Current range (examples only: any current range from 1A to 400A may be specified at time of purchase)	LIV100-L002 (or F002) LIV100-L040 (or F040) LIV100-L080 (or F080) LIV100-L120 (or F120) LIV100-L200	0.0005 0.01 0.02 0.03 0.05	0.0005 0.01 0.02 0.03 0.05		2 40 80 120 200	A
D/A resolution				12		bit
Compliance voltage	Fast rise time version Long pulse version				8 <sup>7</sup> 21	V
Duty cycle (examples only: any current range from 1A to 400A may be specified at time of purchase)	Fast rise time version: LIV100-F002 LIV100-F040 LIV100-F080 LIV100-F120 Long pulse version: LIV100-L002 LIV100-L040 LIV100-L080 LIV100-L120 LIV100-L200				25 1.5 0.7 0.5 35 6 3 2 1.2	%
<b>SIGNAL PROCESSING</b>						
Depth of storage				512		kB
Number of cycles for averaging		1	1		250	
<b>PC INTERFACE</b>						
Type				USB; 100kB/s		
<b>DIMENSIONS</b>						
	DAQ unit			114 x 150 x 125 mm (W x L x H)		mm

<sup>1</sup> At 2μs pulse width, 200 current steps and 0,2% duty cycle.

<sup>2</sup> At 60A using F-version. Maximum current for F-version is 120A.

<sup>3</sup> Wavelength range and resolution per customer's requirements.

<sup>4</sup> Per ANSI/IEEE Standard 181-1977: 10% - 90%.

<sup>5</sup> Optimum sampling rate is automatically selected.

<sup>6</sup> With optimized strip line connector, no load matching required

<sup>7</sup> Dependant on the configuration of the connecting cable.