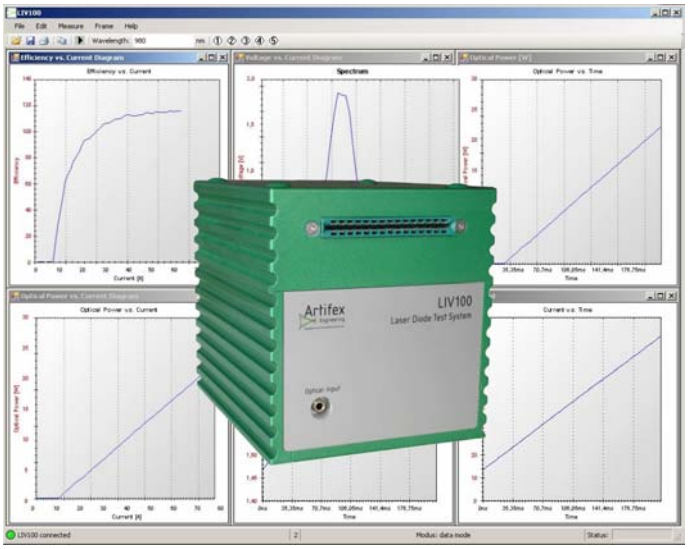
LIV in the fast lane!

Laser Diode Test System LIV100

Artifex Engineering
Optoelectronics & Engineering Services



Highlights:

High throughput

Compact

Low cost

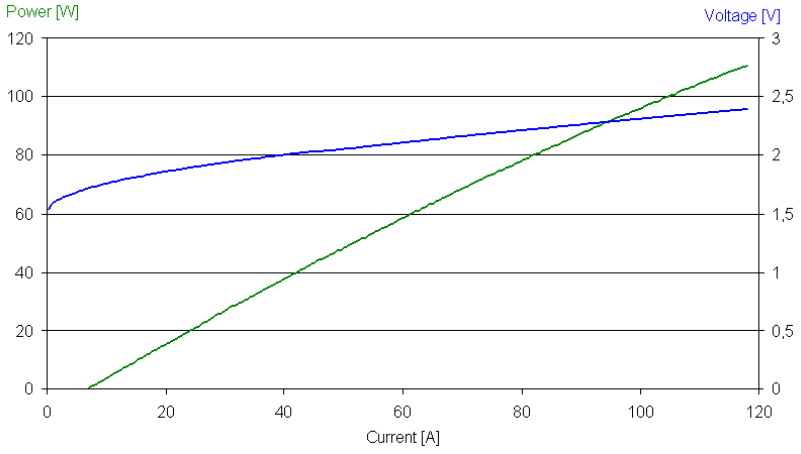
Our offer in Detail:

The LIV100 is a powerful 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 protocoll 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 0.3s for 200 current steps[1] including the data tranfer to the host computer.



Specifications

- Current: up to 400A
- Rise time: <50ns[2]
- Throughput: 0.3s per diode[1]
- USB-controlled via command list
- Up to 6 channels of synchronized data acquisition
- Optical spectrum: resolution ~0.1nm

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.

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Ordering Information

Long pulse version: LIV100-Lc-S

max. current (c) ←

Fast rise time version: LIV100-Fc-S

max. current (c) ←

Appendix S for integrated spectrometer option[3].

Please contact us for customized units.

Specifications

PARAMETER	CONDITIONS	RESOLUTION	MIN	TYP	MAX	UNITS
INPUTS: 2 x Transimpedance amplifier (1 x reserved for power input, 1 x free e.g. for monitor diode) 4 x A/D converter (2x reserved for current and voltage inputs, 2 x free for further signals)						
Sampling rate	selectable: 20/n MS/s mit n = 1 .. 20	n.a.	1		20	MS/s
A/D resolution				11		bit
Photodiode gain	optimum gain automatically selected			1 10 100		V/mA
Transimpedance amplifier rise time[4]	Input capacitance <20pF, gain = 1 kΩ			50		ns
OUTPUT						
Pulse duration	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			50 420	70 500	ns
Current overshoot at maximum current[5]				1	5	%
Pulse separation	selectable: 50•n µs with n = 2 .. 10 000	50	100		500 000	µs
Current range	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[6] 21	V
Duty cycle	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	%
SIGNAL PROCESSING						
Depth of storage				512		kB
Number of channels			2	3	6	
Number of cycles for averaging		1	1		250	
PC INTERFACE						
Type				USB; 100		kB/s
DIMENSIONS						
	DAQ unit		114 x 150 x 125 mm (W x L x H)			mm

[1] At 2µs pulse width, 200 current steps and 0,2% duty cycle.
[2] At 60A using F-version. Maximum current for F-verions is 120A.
[3] Wavelength range and resolution per customer's requirements.
[4] Per ANSI/IEEE Standard 181-1977: 10% - 90%.
[5] With optimized strip line connector.
[6] Dependant on the configuration of the connecting cable.

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