Cercis Beacon

Putting Light to the Test

Volume 1, Issue 5

October 1, 2001

Cercis, Inc.

For 4Q01, Cercis Reduces Price of 510 Optical Power Meter

For the balance of 2001, Cercis has reduced prices for its 510-Series Optical power meters on any orders placed between October 1—December 31, 2001. A comparison of Cercis 510i (InGaAs) power meter versus similar products offered by other manufacturers is included on Page 3.

Readout in nW, µW, mW + dB/dBm

All Cercis 510 optical power meters include autoranging readout in nW, µW & mW, as well as dB and dBm. Additionally, all power meters now include an AC port and internal 9 V battery.

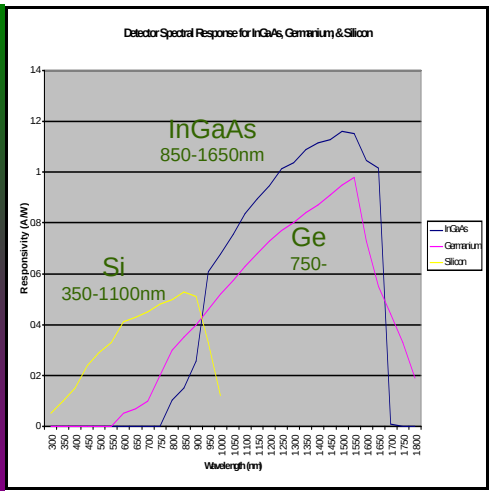
Four detector options are available: 2 mm InGaAs (510i) for +5 to –65 dBm (3 mW to 0.3 nW) power input over 850—1625 nm; 2 mm High Power InGaAs (510ih) for +23 to –45 dBm (200 mW to 25 nW) power input over 1300—1625 nm; 3 mm Germanium (510g) for +5 to –50 dBm (3 mW to 10 nW) over 750—1800 nm; and 3.5 mm Silicon (510s) for +6 to –60 dBm (4 mW—1 nW) over 350—1100 nm range. Each of these is offered with standard NIST-traceable calibration points; however, custom calibration wavelengths may be selected.

Cercis Model 510 Power Meter

The Model 510 is offered with click-on/click-off interchangeable FC, ST, SC, 2.5 mm universal, and **(NEW!)** LC or SMA adaptors.

The instruments are housed within a compact, rugged 3X5X1″ thermoplastic housing, with protective rubber holster. All features—including logarithmic power (dB) and relative power (dBm) + nano- (nW), micro- (µW), or milliWatts (mW) - are accessed via three keys on the front of the unit. Combine a Cercis Model 520 laser or VCSEL light source or Model 530 LED light source with a 510 power meter for basic loss testing with reference set. A dual wavelength, single port light source used with the 510 OPM allows testing of two wavelengths simultaneously—without having to disconnect and reconnect from the light source or the optical power meter.

Responsivity vs. Wavelength



Cercis Relocates to New Facility

Cercis relocated its engineering, operations, and administration organization to:

108 West Franklin Avenue
Pennington, NJ 08534
TEL: 609-737-5120
FAX: 609-737-5122
EMAIL: info@cercis..com
URL: http://www..cercis.com

Cercis moved in mid-August. The move has consolidated operations and offers room for expansion. Also in August, Cercis implemented several procedures to streamline production, including automation of manufacturing, calibration, and laser/LED/VCSEL fiber-coupling processes.

Inside this issue:

Next issue:

Model 610i & 610iH Optical Power Meter with Data Logging

Comparison Hand Held Dual Laser Light Sources

Highlights:

- 4Q01 Price Reduction for Optical Power Meters with n/µ/mW, dB & dBm readout
- CWDM 1470—1610 nm DFB Laser Light Sources
- Cercis Part Number Description
- Fault Finders—635nm Visible for ≤ 5 km & Long Range FiberTracker for ≤ 75 km

Cercis Offers CWDM 1470—1610 nm DFB Laser Light Sources

Cercis Model 520 Single and Dual Laser Light Sources are available at CWDM (Coarse Wavelength Division Multiplexing) C– and L-Band wavelengths of 1470, 1490, 1510, 1530, 1550, 1570, 1590 and 1610 nm (20 nm intervals). These Class 3b sources launch up to 3 dBm (2 mW) into 9/125 SMF.

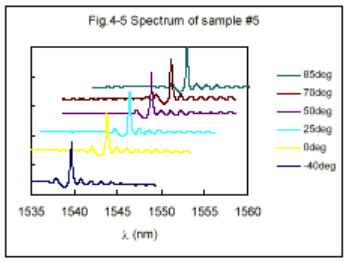
The lasers are MQW (Multi-Quantum Well) DFB (Distributed Feedback) InGaAsP/InP with internal back facet monitor in uncooled, non-isolated coaxial-pigtailed packages similar to that shown in the photo at the bottom of page 3; an internal 1550 nm isolator version is also available. Tolerance around each center wavelength is +/- 2 nm or +/- 3 nm at 25C; variation of center wavelength over temperature is typical ~0.1 nm/C. Although these uncooled lasers do not offer the tight tolerances required for C—Band (1530—1565 nm) or L-Band (1570-1610 nm) transmission, they are useful in component manufacture or testing.

Model No. (Single)	Wavelength nm (center)	Model No. (Dual 2 Port)
520S-5S11NA	1470	520D-ST12NA (1470 + 1490)
520S-5T-11NA	1490	
520S-5U11NA	1510	520D-UV12NA (1510 + 1530)
520S-5V11NA	1530	
520S-5W11NA	1550	520D-WX12NA (1550 + 1570)
520S-5X11NA	1570	
520S-5Y11NA	1590	520D-YZ12NA (1590 + 1610)
520S-5Z11NA	1610	

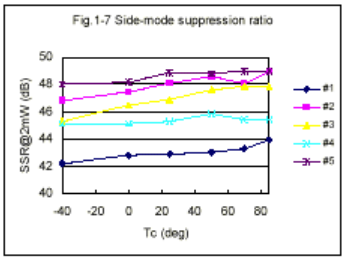
Notes: Dual laser combinations for example only; any two wavelengths can be combined in one instrument. Single port dual wavelength light source uses 1550 nm coupler decreasing power output to 0 dBm (1 mW) due to typical 3 dB coupler loss.

Cercis Model 520S (Single) and 520D (Dual) Laser Light Sources are full-feature handheld instruments which combine a state-of-the-art microprocessor with indicator LEDs for easy use, within a small 3X5X1" case with protective holster and tethered dust-cap. Power is provided by 9V alkaline battery or through the AC port. Operation is simple via three true keypads: ON/OFF, SOURCE and MOD (modulation). Power may be increased or decreased ± 1 dB from the set point by holding the source button. Modulation frequencies of 270, 1000 and 2000 Hz may be accessed via the MOD key. Single laser sources allow external modulation to 1 MHz of a digitized signal. The optical port(s) of all Cercis light sources use FC (PC or APC) fixed or interchangeable FC, ST, or SC (PC or APC) adapters.

Cercis Model 520 Single & Dual CWDM-Wavelength DFB Laser Light Sources



CWDM Laser Properties



Dual laser sources are offered with either a single or two optical ports—which can be either FC-style or interchangeable adapters – specify PC or APC—accommodating FC, SC or ST connector types.

Cercis Part Number Description

MMM T X WW F S P A

Model No. (MMM)	Model							
Type (T)	**510** OPM	Type						
Modfier / Dash (X)	**520** LD	**S** Single**LS**	Modifier					
Wavelength / Calibration (WW)	**530** LED	**D** Dual **LS**	- **LS** Std. Pwr.	Wave-length / Cali-bration				
Fiber Type / Spec (F)	**52** VFF	**i,g,s PM**	**X** TBA **LS**	**13** = 1310 **LS**	Fiber / Spec			
Ports 1 or 2 (S)	**60** FF		- Std. **PM**	**15** = 1550 **LS**	**1** = 9/125	Ports		
AC Port (P)			**X** TBA **PM**	**35** = 1310/1550	**2** = 50/125	**0** = Detector (attached) **PM**	AC Port	
Optical Port (A)				**#** **PM** Calibration Settings	**3** = 62.5/125	**1** = Single **LS**	**N** = Neg Ct	Optical
					- TBA **PM**	**2** = Dual **LS**	**0** = No AC	A = Adapter
								F = Fixed **LS**

Comparison of Optical Power Meters

Manufacturer	Cercis	Noyes/Alcoa	Nettest	Rifocs/Textron	FIS
Model	510i-40-1NA	OPM4-3C	GN-6000	555B	FI8513HR
Detector Type/Size	InGaAs 2 mm	InGaAs 1 mm	InGaAs 1 mm	InGaAs 1 mm	Germanium 2 mm
Range (dBm)	+5 to –65	+6 to -70	+5 to –70	+3 to –60	+5 to –65
Calibrated Wavelengths (nm)	850, 1310, 1550, 1625 nm*	850, 1300, 1310, 1550 nm	850, 1300, 1310, 1550 nm	850, 1300, 1310, 1550 nm	850, 1310, 1550 nm
Modes (autoranging)	dBr, dBm, n/µ/mW	dBr, dBm, µW	dBr, dBm	dBr, dBm	dBr, dBm
Optical Port	Interchangeable Click-on/off; 1 incl.	Interchangeable Screw-on; separate	Interchangeable Screw-on; 1 incl.	Interchangeable Snap-on/off; sep.	Interchangeable Screw-on; 1 incl.
Display	Graphic LCD	4 digit LCD	4 digit LCD	4 digit LCD	4 digit LCD
Resolution (dB)	±0.01**	±0.01	±0.01	±0.01	±0.01
Battery Type/Hrs	9 V*** / 80 hrs.	9V / 60 hrs.	2 AA*** / ~60 hrs.	2 AA*** / 100 hr	9V / 70 hrs.
Accuracy (dB)	±0.25	±0.25	±0.25	±0.25	±0.3
Size (inches)	5.5 X 3.1 X 1.6****	5.5 X 3.2 X 1.5	6.3 X 3.3 X 1.3	5.6 X 2.8 X 1.4	~6.5 X 4 X 1.6
Price	$550	$649	$499	$795	$495

*Custom calibrated wavelengths also available, up to 8 / instrument.
**Resolution over entire dynamic range.
***AC adapter available
****Holster & adapter included.
Information accurate to the best of our knowledge; specs obtained from publicly-available documents. Corrections will be made upon receipt of published data sheet from manufacturer.
dBr = relative logarithmic dB

Visual Fault Finder—635 nm—Model 52

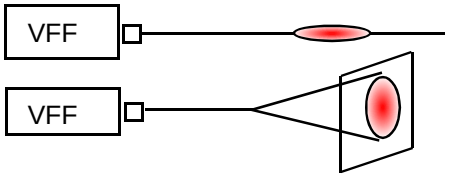
Cercis Model 52 Visual Fault Finder enables visual location of fiber breaks, faulty splices or defective connectors within splice trays of patch panels, or during component manufacturing and assembly. The visible laser light source glows brightly at the point of fiber breakage or severe bend. It can be used to troubleshoot faults within OTDR dead zones, optimize mechanical or fusion splices, verify connector end-face polish, trace fibers end-to-end, and make loss measurements on POF, PCS or glass fibers. In bright light situations, the flashing mode increases visibility of the signal.

Operation is simple via two keys: ON/OFF and MOD. A red LED is illuminated when the source is on; a green LED blinks if modulate mode is enabled. The ON/OFF button can be depressed (~1 sec) until the red LED blinks to disable auto shutoff.

The optical port can be either FC-style or can have interchangeable adaptors-FC, ST, SC or 2.5 mm universal. If the adaptor is not specified, the unit is provided with the FC adaptor.

All instruments are available immediately, and are powered either with an internal 9 V battery or optional A604 or A605 AC adaptors.

Uses for a Visual Fault Finder



- Detect fiber breaks or microbends
- End-to-End fiberID
- End face / optical element inspection

Fiber-Coupling of Lasers, VCSELS, LEDs

Cercis fiber-couples its own lasers, VCSELS, and LEDS, beginning with commercially-available devices in TO cans. Most standard devices use either TO18 / TO46 or 5.6 mm CD headers. Fiber coupling is done external to the hermetically sealed device using various singlet lenses.

Fiber-coupling gives Cercis the flexibility to provide its light sources with higher or lower optical output powers. For instance, 1310 or 1550 nm FP lasers can be provided with output powers of 100 µW (-10 dBm), 400 uW (-4 dBm), or 1 mW (0 dBm) - up to 1.5 mW (2 dBm) to 2 mW (3 dBm). It also enables Cercis to use nonstandard or customer-provided fibers to meet various application requirements.

All Cercis light sources use fiber-coupled devices which, unlike active receptacle elements, mode strip the fiber—eliminating the need for an external mandrel-wrap.

On a special-order, limited-quantity basis, Cercis will provide fiber coupled devices—either standard or custom wavelengths. Cercis standard (stocked) lasers include: 635, 650, (850 VCSEL), 1310, 1550, and 1625 nm.

Cercis Fiber-Coupled Laser/VCSEL/LED

Cercis, Inc.

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Pennington, NJ 08534
TEL: 609-737-5120
FAX: 609-564-0546
EMAIL: info@cercis.com

Putting Light to the Test

We're on the Web! www.cercis.com

Add to Mailing List/Corrections

.Name: _____
Company: _____
Address: _____
_____
City: _____ State: _____ Zip: _____
Phone: _____ FAX: _____
EMAIL: _____
Primary Function: Engineering _____ Research _____
Technician _____Scientist _____ Purchasing _____
Sales/Mktg _____ Management _____ Other _____
Do you plan to purchase any of the following during the next
1 mo _____ 3 mos _____ 6 mos _____ 1 yr _____
Light Source _____ OPM _____ VFF _____
◠ Have a Cercis representative contact me. ◠ Add to mail list.

Tell us about a product which would be useful to you and why.
_____
_____
_____
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_____

Before returning, please make sure you have:

- Provided full & legible company name & address or attached a business card) & completed the form

Yes, We Accept Credit Cards—VISA, MC, Amex

Cercis accepts credit card orders. We are able to process all major credit card types, including VISA, Mastercard,, American Express, and others. Just provide the card number, name of the person and company to whom the card is issued—as it appears on the card—expiration date, and billing address (if different than the shipping address). Orders are shipped as soon as the transaction is approved. It's fast, it's easy, and it's secure. Orders may also be placed by fax or EMAIL by confirmed purchase order, with acceptance subject to credit references and approval.

Cercis Logo Featured by LANDS' END

Cercis logo appears on page 25 of LANDS' END Fall-Winter 2001 Corporate Sales Catalog. For a catalog, call LANDS' END at 800-338-2000.

Cercis US Representatives

Cercis has appointed representatives within following territories:

NC, SC, GA — Lightwave Component Sales
901 Paverstone Drive, Suite 6
Raleigh, NC 27615
T: 919-847-2532
F: 919-847-2533
EMAIL: lwcs@att.net
Contact: Russell Turner

VA, WV, MD, & Wash, DC, — Pro-Lynx Inc.
56 West Main Street, Suite B5
Westminster, MD 21157
T: 410-848-3400
F: 410-848-7030
EMAIL: billevans@pro-lynx.com
Contact: Andrew Smith / Bill Evans

New England CT, MA, ME, NH, VT — Optimark Fiber Optics
14 Heath Wood Lane
Chestnut Hill, MA 02467
T: 617-232-6224
F: 617-731-2272
EMAIL: sales@optimark-fiber.com
Contact: Marjorie Katz / Aaron Snyder

To discuss your requirements, contact Cercis' representatives or sales department directly. Representatives also offer complimentary fiber optic products from leading industry suppliers, including connectors, passive components, and accessories.

International 90-264V AC Interchangeable Adaptor Available

Cercis provides an interchangeable AC adaptor which is able to accept AC currents 90—264 V. The adaptor is supplied with interchangeable plugs, compatible with US, Europe, UK and Australian configurations.

Cercis A605 Interchangeable Adaptor — 90-264V AC, 47-63 Hz, 9V DC

The A605 is a standard AC power supply with a negative center plug compatible with Cercis test instruments.

Interchangeable plugs compatible with US (A605A), UK (A605K), Europe (A605E) and Australia (A605S) electrical configurations snap on or off. Once the proper plug is attached, just plug it into the outlet and you're ready to use your Cercis power meter, light source of visual fault finder with any 90-264V AC worldwide.

Features	Safety Approvals
Double Insulated	UL 1950, Class 2
Power-On LED	CSA 22.2 M950
Class B EMI	TUV EN60950 (In Process)