



# Cercis, Inc.

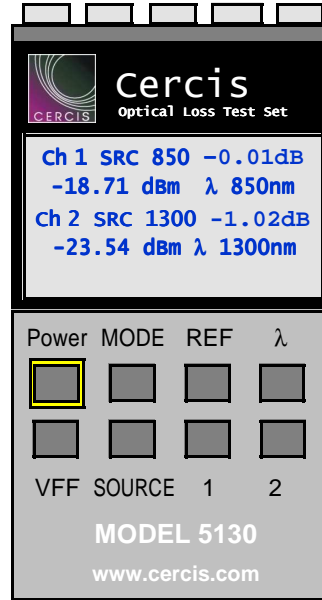
## Model 5310 Optical Loss Test Set 850 / 1300 nm LED + Optical Power Meter PRELIMINARY SPECIFICATION

### Putting Light to the Test

Cercis Model 5310 Optical Loss Test Set includes 850 and/or 1300 nm LED sources and optical power meters - plus a visible fault finder - in one handheld instrument. Standard versions are available for SAN (Storage Area Networks) duplex connector testing and multimode loss testing. Similar LASER + OPM versions (refer Model 5210) are available.

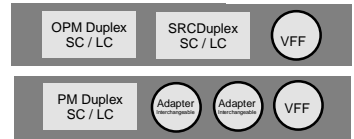
All functions are accessed via 8 keys on the front of the unit. Parameters—Mode (dBm, n/m/mW), Calibrated Wavelength—are selected by the user, first for Channel 1, then for Channel 2. Combinations of industry-standard simplex and duplex (SC, LC) connectors are available to best suit the user.

The Model 5310 Optical Loss Test Set is housed in a 7.2" X 3.7" X 1.3" box with protective rubber holster, including retractable pedestal. Each unit has a battery pack 4 - AA rechargeable NiMH batteries, plus external AC adapter/recharger. ABS case with OLTS and accessory items, can be provided.



### Model 5310 Series

Sketch  
Not to Scale Top View Options



#### Sources:

- 850 / 1300 nm LED (5310 Series)
- 1300 / 1300 nm LED (Series)
- 850 / 1300 nm VCSEL / LED
- 1310 / 1550 nm LASER (5210 Series)
- 1550 / 1625 nm LASER (Series)

### Features (proposed)

- 3 Modes: dBm & dB with Relative Store + n/μ/mW (autoranging)
- Easy Readable Graphic Display (~2.75 X 1.5" W X H)
- Input Range: +5 to - 65 dBm (InGaAs detector)
- LED 850 or 1300 nm -17 dBm into 50/125or 62.5/125 MMF
- InGaAs Detectors; Digital Calibration
- ~15 hours 4 AA NiMH Rechargeable Battery Life
- Ergonomic, Tactile Rubber Keys (membrane keypad optional)
- Simplex & Duplex Connector inputs available
- Protective Holster with Retractable Pedestal

Key	Option	Description
POWER	On—Hold to select: Timed (default), Activity, or No Auto Shutoff	Timed: Auto off if no key for ~15 min. Activity: Auto off if no chg of 1 dB No Shutoff; VFF: activates fault finder
VFF		
MODE	Power Readout	dBm (absolute), dB (relative), n/μ/mW
REF	Set Reference (zero) dB	Stores Relative Power Level (Zero Out); relative power readout displays in lower left
λ	Wavelength	Selects Calibration Wavelength
SOURCE	LED Source	Turns 1st or 2nd source on/off ???
1 or 2	Select Channel 1 or 2	Activates either Channel 1 or 2

Specification	Units	Power Meters	Specification	Units	Source(s)
Detector Type		InGaAs	LED Wavelength	nm	850 and/or 1300
Number of Detectors		2	Number of LEDs		2
Power Range	dBm	+5 to - 65	Output Power (port variation +/-0.5 dB)	dBm	-17 (each LED port) (50 MMF or larger)
Calibrated Wavelengths	nm	850, 1300, 1550*	Wavelength Range	nm	+/- 20
Absolute Accuracy	dB	+/- 0.25 dB	Spectral Width (FWHM)	nm	35
Function	dBm dB	dBm (absolute power) dB (relative power)	Absolute Accuracy	dB	<0.1
LCD Graphic Display	-	View 70.7 X 38.8 mm; 128 X 64 pixel; black characters, background reflective gray no backlight. Readings display simultaneously or separately Readout: dB and dBm; plus, + BAT (Low Bat) and LOW / OVL (power too low/too high).			
Connector Interface		Duplex LC & SC; Simplex FC, ST, SC			
Power—Battery	V	Battery pack 4 AA 1.5 Volt Rechargeable NiMH (~15 hrs. battery life)			
Power—AC / Recharger		90—264 V AC, 47-63 Hz interchangeable adaptor / recharger (2.5mm positive center)			

Preliminary specifications subject to change with notice. All specs @ 25C



Cercis, Inc.

25 Rt. 31 S, Ste. C 2030, Pennington, NJ 08534 URL: <http://www.cercis.com>  
 TEL: 609-737-5120 FAX: 609-564-0546 EMAIL: [info@cercis.com](mailto:info@cercis.com)



### Display

Display Readout similar to that included on the sample (at right), which includes: Connector/cable ID. Readings to display simultaneously as shown, or separately.

### Duplex or Simplex Cable Interface

Fixed SC or LC duplex connector input may be selected. Simplex interfaces use Cercis standard interchangeable adapters—FC, SC, & ST for sources, and FC, SC, ST, LC, MU, SMA and 2.5 mm universal for power meter(s).

### Calibration

Light sources and optical power meters are calibrated using procedures and equipment traceable to the US National Institute of Standards & Technology (NIST); NPL traceable calibrations are also available.

### Holster with Pedestal

Included with every instrument is a removable protective housing. This molded silicone shell protects against shock in the field, and has a pivoting bale to hold the instrument upright when required. Also, there are holes for a wrist or neck strap.

### Absolute & Relative Measurements

Absolute measurements are useful for verifying transmitted power or measuring the power of fiber optic sources. Depress dBm key to display all subsequent readings relative to the reference power level.

### CFR

Mating a single mode fiber (SMF) to the multimode LED will result in 21-22 dB loss due to the mismatch in core diameters, i.e. 50 to 62.5 into 9 μm core.

### Kit Case (optional)

Black, high impact engineering grade ABS plastic alloy guards against jarring, vibration and crushing, and will not dent, corrode or conduct electricity. Silicone O-ring seals out water, salt air, dust, and some gasses; pressure equalization valve allows easy case opening after changes in altitude or temperature. Internal dimensions 13.4"(L) X 8.9" (W) X 5.6" (D); external dimensions 14.9" (L) X 10.6" X 6.5" (D); weight 4 lbs (empty). Pick and place foam inserts protect and organize instruments and accessories and allow addition or rearrangement of components.

### Display Examples

Layout in graphic sample shows display with both channels with low battery power.

<b>BAT</b> Ch 1 SRC 1300 -30.98 dBm ABS 1300nm	<b>BAT</b> Ch 1 SRC 1300 -18.22 dBm -17.65dBm 1300nm
Ch 2 SRC 1300 --.-- dBm ABS 1300nm LOW	Ch 2 SRC 1300 -17.34 dBm ABS 1300nm

Above: No reference set & low power Ch 2.

Above: Display with reference set.

Part Number	Ordering Information
5310D132i2P5A	2 LEDs 1300 nm (50/125), 2 OPM, VFF 635 nm, 5 adapters (specify)
5310D833i2P3S	LEDs 850/1300 nm (62.5), 2 OPM, VFF 635 nm (adapter), Duplex SC
5310D832i2P3L	LEDs 850/1300 nm (62.5), 2 OPM, VFF 635 nm (adapter), Duplex LC
5310D133i1P3S	2 LEDs 1300 nm (62.5), 2 OPM, VFF 635 nm (adapter), Duplex SC
Other Information	Operational & Mechanical Data
Dimensions	7.2" X 3.7" X 1.2" L X W X H (excluding holster & optical ports)
OTR / STR	-10 to +60C (Operating) / -20 to +60C (Storage)
Weight	1.25 lb (including NiMH battery pack & optical adapters)

\*Up to 8 calibrated wavelengths per power meter—specify. Specifications subject to change without notice.



## Cercis

Putting Light to The Test

ch1 1 -0.01dB  
-18.71 dBm 850nm

ch1 2 -1.02dB  
-23.5 dBm 1300nm

Power	dBm	Ref	Source
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VFF	λ	1	2

MODEL 5310  
Duplex Optical Test Set

[www.cercis.com](http://www.cercis.com)

### Sample front graphics & keyboard of Duplex Optical Test Set

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Power	Depress key & release at NO AUTO, TIMED, or ACTIVITY SHUTOFF LED & detectors activated at power on
MODE	Power Readout dBm (both LED ports)
Ref	Set reference (readout in lower left) All main readings in dB when ref set
Source	Select Source
λ	Selected calibrated wavelength
1 or 2	Select channel 1 or 2
VFF	VFF On/Off; hold ~2 sec for no shutoff

LOW / OVL Low / Overload Power

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Made in USA **Serial No: 323061**  
**Part No: 5310-**  
NIST Cal: 10/30/03  
Traceable Due: 10/30/05

**Above: Example calibration label on back of Optical Test Set including basic operating instructions**