

Technical Specifications

Model	Units	510g	510i	510iH	510s
Detector Type		Germanium (3 mm)	InGaAs (2 mm)	InGaAs (2mm) High Power	Silicon (3.5 mm)
Power Range	dBm	+5 to - 50	+5 to -70	+23 to -45 * *(LOW -45 @ 1310-1625 nm; -35 @ 980 nm) (HI +17 @ 1480 -1625 nm)	+6 to -60
Calibrated Wavelength	nm	850/1310/1550	850/1310/ 1550/1625	980*/1310/1480/ 1550/1625*	635/780/850/980
Absolute Accuracy	dB	+/- 0.25 dB			
LCD Graphic Display	-	View 46 X 18.5 mm; 98 X 32 pixel; blue characters, background reflective gray not requiring a backlight. Display incorporates three distinct annunciators: dB, dBm, or W; BAT (Low Bat), LOW / OVL (power too low/too high) and C (CAL).			
Function	dBm dB W	dBm (absolute power) dB (relative power) nW, μW, mW (autoranging)			
Optical Port		See list on data sheet; interchangeable bayonet mate/remate.			
Power	V	Requires 1 9 Volt alkaline battery (>100 hrs. battery life) or optional center negative 120 V AC or 90-264V AC (47-63 Hz) adaptors .			

Connector Interface Cleaning

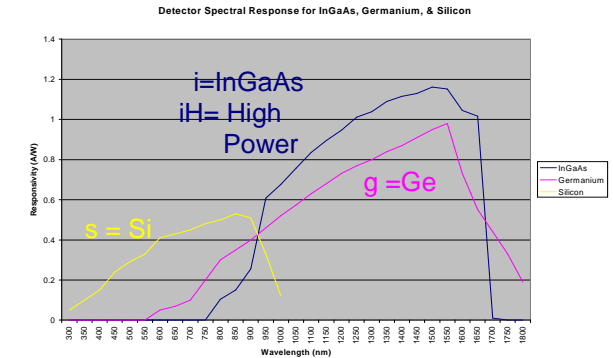
It is important that the connector interface be kept clean and free of contamination. Prior to insertion of any connector into the power meter optical port, proper cleaning of the connector should be done to industry-standard procedures.

Calibration and Maintenance

Each **Cercis** optical power meter is calibrated to NIST traceable standards. The optical power meter should be returned to **Cercis** on an annual basis for recalibration. Call, fax, or EMAIL **Cercis** for recalibration return instructions.

Warning

Operation of this Optical Power Meter must conform to the specifications and instructions provided herein. Please read and understand the entire contents of this manual before operation.



Spectral Range The graph shows the typical spectral response of each detector type used in **Cercis** optical power meters. Select the unit with best response for the input source. Model 510s is Silicon (Si); 510g is Germanium (Ge); Model 510i is Indium Gallium Arsenide (InGaAs); Model 510iH is filtered InGaAs.



Adaptors Cercis offers a number of standard precision machined stainless steel connector adaptors which are readily interchanged with a simple click-on/click-off. Standard SC, FC, ST, LC, SMA & 2.5 mm universal adaptors are available. To re-tension the adaptor after use, pinch it between your thumbs. This will tighten the adaptor slit around the locking pin.

Cercis, Inc.

25 Rt. 31 South, Ste. C 2030
Pennington, NJ 08534
FON: 609-737-5120
FAX: 609-564-0546
EMAIL: info@cercis.com
URL: www.cercis.com

Thank you for purchasing a **Cercis Model 510** Optical Power Meter. This product is designed to provide many years of productive service.

Cercis, Inc.
www.cercis.com

On/Off Depress key & release at NO AUTO, TIMED, or ACTIVITY SHUTOFF

Mode Default ABS mode
1X Relative (dB) with Reference (dBm) @ left
2X Return to ABS mode
3X W (n/μm) autoranging

λ Select wavelength

LOW / OVL Low / Overload Power
"BAT" Low Battery Warning

Serial No:
Part No: NIST Cal:
Traceable Due:

Made in USA

Cercis 1/21/02 510manual

The label shown at left is on the back of each **Cercis Optical Power Meter**. Included are brief operating instructions, annunciator meanings, unique serial number, **Cercis** part number, the calibration date and recalibration due date.

Limited Warranty

Cercis makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that the product be free from defects in materials and workmanship: 1 year limited warranty (unless otherwise specified)

Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alternations made outside our facilities or to a lack of maintenance. Cercis limits all implied warranties to the period specified above from the date the product was purchased. Except as stated herein, any implied warranties of merchantability and fitness are excluded. Cercis shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damage arising from the use of its products. To take advantage of this warranty, the product must be approved for return for examination, postage prepaid, to Cercis. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, Cercis will either repair or replace the product with a product of equal or higher performance. If it is determined that the defect resulted from causes not within the scope of Cercis warranty, then the purchaser must bear the cost of repair and return shipping.

8/03MAN510 Rev. B

Operator's Manual



Model 510 Optical Power Meter

Easy as 1, 2, 3 ... or

Operating Instructions

1) Depress **ON/OFF** key to turn the meter on and off. Allow the OPM ~20 seconds to cycle through startup (**Cercis / www.cercis.com**). By holding this key down during startup, the operator may select **NO AUTO SHUTOFF**, **TIMED SHUTOFF**, or **ACTIVITY SHUTOFF** by releasing when displayed.

NO AUTO SHUTOFF will disable the power saver feature and the power meter will not shutoff until (unless) the battery discharges or an operator pushes ON/OFF.

TIMED SHUTOFF will automatically shutoff the power meter if it is unused for ~15 min. Depress any button within the 15 min. interval to restart timer.

ACTIVITY SHUTOFF will shut down the power meter if there is no power fluctuation >1 dB within ~15 min.

(continued next page)

For optimum results, select the power meter best suited to your emitter wavelength.

...On/Off, λ & Mode

2) Press and release the **λ** key to select one of the factory calibrated wavelengths (i.e. 850, 1310, 1550 nm, etc.).

The unit will cycle with all available preset wavelengths displayed. Select the wavelength that you need. All calibrated wavelength options are NIST traceable.

3) Initially, the power meter will be in absolute mode (ABS) with its readout in dBm. The operator may depress the **MODE** key once to store a reading. Once this feature is enacted, all subsequent measurements made will be in dB and will be relative to the stored (dBm) measurement. The stored reference (dBm) will appear in the lower left corner of the display. While in dB, press **MODE** to reset reference. Press **MODE** again and readings in nW, μW or mW will be displayed. Pressing **MODE** again will return to ABS.

Annunciators (upper right corner of display)

LOW Input power too low (below -70 dBm for 510i).

OVL Input power too high (>5 dBm for 510i).

BAT Low battery. Change the 9V battery as soon as "BAT" is displayed.



Reference this manual for proper operation and maintenance of your **Cercis Model 510 Optical Power Meter**.