



Cercis, Inc.

Model 510 Optical Power Meter

Putting Light to the Test

Cercis 510 Series Optical Power Meters are full-feature hand-held instruments covering the full range of optical fiber applications. For use in the field or in the lab, they are user-friendly and high performance, housed within a compact and rugged ABS plastic case with holster and tethered dust cap.

The 510 combines a state-of-the-art microprocessor with a graphic display for high performance. Operation is simple with only three true keypads: ON/OFF, MODE and λ . Readout: Auto-ranging nW, μ W, mW, as well as dBm & dB. A reference value is stored when mode is switched dBm to dB; when in dB, set a new reference by repressing and holding MODE ~1 sec.

Cercis Optical Power Meters incorporate a quick-connect fiber optic connector interface. All industry standard fiber optic connectors can be accommodated by the complete line of adapters. All models include an interface adapter (default 2.5 mm universal); alternates may be purchased separately.



Features

- 3 Modes: nW, μ W, mW, dBm & dB with Relative Store
- In dB, reset reference value by holding MODE ~1 sec.
- Easy Readable Graphic Display
- Input Range: +5 to - 65 dBm (varies by detector type)
- Digital Calibration (up to 8 calibration points per meter)
- >80 hours 9 V Battery Life
- Ergonomic, Tactile Rubber Keys
- Interchangeable Fiberoptic Connector Adapters
- Protective Holster with Pedestal

Key	Option	Description
ON/OFF	No Shutoff	Operator must turn off.
	Timed Shutoff	Auto off if no key pressed for ~15 min.
	Activity Shutoff	Auto off if < 1 dB power change in 15 min.
Mode	Autoranging	nW, μ W, mW
	Relative Power	dB
	Logrithmic Power	dBm Stores Relative Power Level
λ	Model 510i	InGaAs 850, 1310, 1550, 1625 nm
	Model 510iH	InGaAs (Hi Pwr) 980, 1310, 1480, 1550 nm
	Model 510g	Germanium 850, 1310, 1550 nm
	Model 510s	Silicon 650, 780, 850, 980 nm

Model	Units	510g-30-1NA	510i-40-1NA	510iH50-1NA	510s-40-1NA
Detector Type		Germanium (3 mm)	InGaAs (2 mm)	InGaAs (2 mm)	Silicon (3.5 mm)
Power Range	dBm	+5 to - 50	+5 to -70	+23 to -45	+6 to -60
Calibrated Wavelengths*	nm	850/1310/1550	850/1310/ 1550/1625	980/1310/ 1480/1550/1625	630/780/ 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 2 distinct annunciators: nW, μ W, mW (autoranging) dB and dBm; plus, BAT (Low Bat) and LOW / OVL (power too low/too high).			
Function	W dBm dB	nW, μ W, mW (autoranging) dBm (absolute power) dB (relative power)			
Connector Interface		See list reverse side; interchangeable bayonet click-on/off mate/remate			
Power	V	Requires one 9 Volt alkaline battery (>80 hrs. battery life) or optional 120 V AC 9V adaptor (negative center) or 90—264 V AC, 47-63 Hz interchangeable 9V adaptor.			

Specifications subject to change without notice. MADE IN USA



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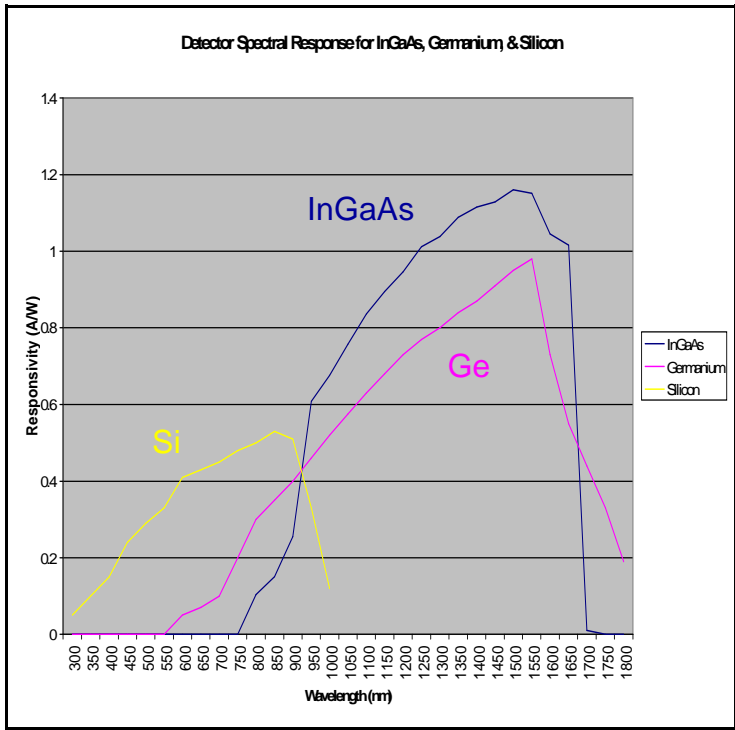
Part Number	Adapter Type Description
101	Universal 2.5 mm Adapter <small>(default supplied w/ meter)</small>
102	FC Adapter
103	ST Adapter
104	SC Adapter
105	LC Adapter
106	SMA 905/906 Adaptor
107	MU Adapter



Part Number	Description
510i-40-1NA	510i 2mm InGaAs Power Meter
510iH50-1NA	510iH 2 mm High Power InGaAs OPM
510g-30-1NA	510g 3mm Germanium Power Meter
510s-40-1NA	510s 3.5mm Silicon Power Meter

Responsivity vs. Wavelength

Model 510g (Ge), Model 510i (InGaAs), Model 510s (Si)



Information

Calibration
 All Cercis 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.

Graphic Display
 LCD graphic display has full character readout. Annunciators for nW, μ W, mW, dB / dBm, BAT (low battery), OVL / LOW (power too high or low), plus wavelength (nm), and numerical value of relative power. All features rival functions otherwise found only in laboratory instruments.

Connector Interface
 The precise quick-connect adapter interface allows the user to quickly change to any industry standard fiberoptic connector. These click-on/click-off adapters are also used with other Cercis instruments.

Dust Cap
 When the OPM is not in use, the permanently tethered dust cap simply is pushed in place. The cap protects the interface against dirt and scratches. The dust cap fits over all adapter versions.

Digital Signal Processing
 Proprietary micro control circuitry features digital calibration, and microprocessor control of all OPM functions.

Absolute & Relative Measurements
 Absolute measurements are useful for verifying transmitted power or measuring the power of fiber optic sources. To measure relative losses, the 510 Series Optical Power Meter provides a dB function. The user simply depresses MODE and all subsequent readings are displayed relative to the reference power level. While in dB mode, user may reset the reference by holding MODE key ~1 sec.

Holster for Additional Protection and Convenience
 Included with every instrument is a removable protective housing. This molded silicon 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.

Operational & Mechanical Data

Temperature Range Operating	C	-10 C to +50 C
	(F)	(20 to 50 F)
Storage	C	-35C to +70 C
	(F)	(20 to 50 F)
Dimensions Instrument (with battery)	mm	Width X Length X Height 70 X 125 X 25 mm
	(in.)	(2.75 X 5 X 1 in.)
Instrument w/ Holster		75 X 130 X 40 mm (3.00 X 5 X 1.5 in.)
Weight Instrument (with battery)	g	241 g (7.6 oz.)
	(oz.)	545 g (12.4 oz.)

Part No.	Description	Character No.	Description
510g-30-1NA	1-5, 7, 8 6, 8, 10 9, 11	1-5, 7, 8	510 OPM + S-,I-,iH or G-; characters 7 & 8 = 0, - (used for mods TBD)
		6, 8, 10	No. Calibrated λ / instrument (1-8); N (1.3 mm negative cntr AC port)
		9, 11	Optical: No.Pt (1 simplex, 2 duplex, etc); A interchgbt adptr (if instrument supplied <small>seems</small>)

*Calibrated λ up to 8/instrument; no. of calibration λ 's in P/N 6th character.
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