



Cercis, Inc.

Model 5X0D Hybrid Dual Light Sources 2 Source Types—Singlemode + Multimode

Putting Light to the Test

Cercis 5X0D Series Hybrid Light Sources are full-feature hand-held instruments combining two source types—VCSEL+LD, VCSEL+LED, LED+LD, VCSEL/LD/LED+VFF—for testing single-mode or multi-mode fibers with a single instrument. Especially convenient where the user must support both long-reach (single-mode) and short-reach (multi-mode) installations. Optional RS232 (5X0DR) port for remote control.

The 5X0D is normally offered with two optical ports.; a single port—convenient for simultaneous testing of two wavelengths—is only available if both sources are used with the same single- or multi-mode fiber type. The optical ports can be either FC-style or can have interchangeable adaptors—FC, ST or SC style. All models supplied with a protective holster and tethered dustcap, plus internal 9V battery and AC port.



Features

- *Wavelengths: 850/1310 VCSEL/LD; 850/1300 VCSEL/LED; 1300/1310 LED/LD; 850/635 (lightsource/faultfinder)*
- *FC or Interchangeable Adaptors: FC, ST, SC & 2.5mm*
- *Modulation Frequencies: 270, 1000, & 2000 Hz*
- *Stabilized Calibrated Output 0.05 dB over 5 hrs.*
- *>30 hours 9 V Battery Life*
- *Optional 9V 120V or 90-264VAC International Adaptor*
- *Ergonomic, Tactile Rubber Keys*
- *Protective Holster with Pedestal ; Tethered Dust Cap*

**Use of same size or larger fibers (*italic*) will yield the same output power since the unit contains a fiber-pigtailed source.

Key	Option	Description
ON/OFF	Auto Shutoff (default)	Auto off if no key pressed for ~15 min..
	No Shutoff	Operator must shutoff; push & hold key
Source	Single Source -10 dBm (default) - 9 to -11 dBm (opt)	Calibrated output power Press & hold to cycle + / - 1 dB
	Dual Source -10 dBm (default) - 9 to -11 dBm (opt)	1 - 1st wavelength source (1310 nm) 2 - 2nd wavelength source (1550 nm) Increment increase +1dB, decrease -1 dB
Mod	Modulation speed (LED action)	Press & Hold: (Dual Source) 1X - 270 Hz, 2X - 1000 Hz, 3X - 2000 Hz (Slow blink) (Faster blink) (Very fast blink)

Model	Units	Dual 13/13		Dual 85/13		Dual 85/13		Dual 85/63	
Wavelength	nm	1300 LED	1310 Laser	850 VCSEL	1310 Laser	850 VCSEL	1300 LED	850 VCSEL	635 VFF
Wavelength Range	nm	+/- 20	+/- 20	+/-20	+/-20	+/- 20	+/- 20	+/- 20	+/- 20
Spectral Width (FWHM)	nm	135	2	2	2	2	135	2	2
Stability: 1 hr. max. deviation	dB	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15
Power Output (Set Point Min.) 9/125 (SMF28) Fiber 50/125 GI MMF 0.21 NA 62.5/125 GI MMF 0.23 NA 100/140 GI MMF 0.29 NA 200/230 GI MMF 0.22 NA*	dBm	N/A	-10	N/A	-10	N/A	N/A	N/A	0
		-17	-10	-5	-10	-5	-17	-10	0
		-10	-10	-5	-10	-5	-17	-10	0
		-10	-10	-5	-10	-5	-17	-10	0
		-10	-10	-5	-10	-5	-17	-10	0
Modulation Frequencies	Hz	270, 1000, 2000							
Functions		MOD (CW DC or modulated output mode), SOURCE (selectable frequency)							
Auto Shutoff / Shutoff Disable		Unit powers down 15 min. after last key has been depressed User-selectable disable function							
Power	V	Requires 1 9 Volt alkaline battery (>30 hrs. life) or optional AC adaptors (neg.)							

Specifications subject to change without notice.

MADE IN USA

*Typical



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Part Number Interchangeable Adaptor Description

LS101	Universal FC Adaptor
LS102	FC Adaptor
LS103	ST Adaptor
LS104	SC Adaptor



Ordering Information

Part No. Description	Character No.	Description
520D-33X2NA	1-3	520D Laser/VCSEL + LED Hybrid Source (SMF/MMF) Single (S), Dual (D), Tri (3), Quad (Q), etc.; optional RS232
	4, 5	
	6-7	
	8	
520DR3A12NF	9, 10	Optical: No. Port (1 single, 2 dual, etc); N (AC negative center) A interchangeable adaptor (1:port) or F fixed FC adaptor
	11	

Information

Calibration
All Cercis Optical Laser Light Sources are calibrated using procedures and equipment traceable to the US National Institute of Standards & Technology (NIST).

LED Indicators
Green and red LEDs indicate Power On, Laser Enabled, Modulation Speed, and Low Battery.

Lasers/VCSELs/LEDs
All sources employ an extremely stable fiber coupling scheme, which yields reliable, long-life devices.

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

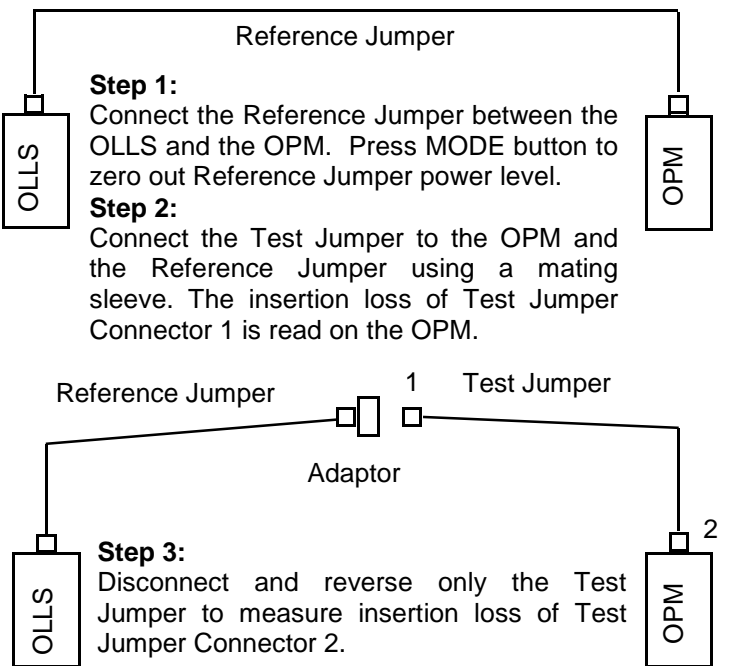
Digital Signal Processing
Proprietary micro control circuitry features digital calibration, and microprocessor control of all OLLS functions.

CW & Modulated Output Modes
The Model 5X0 Hybrid Optical Light Sources (OLLS) feature both CW and modulated output modes. In CW mode, the Model 5X0 Series features stabilized and calibrated output power per page 1; this is adjustable within a +/- 1 dB range (-9 to -11 dBm) with easy key function. In modulated mode, the tone frequency for use with fiber identifiers may be set to 270 Hz, 1 KHz or 2 KHz by the user, by depressing the MOD key.

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

RS232 Data Port
The optional RS232 data port allows the user to control the functions of the 5X0 hybrid light source from a PC. Windows^R DLL Drivers can be downloaded from Cercis website.

Insertion Loss Test Model 520 OLLS & Model 510 OPM



Operational & Mechanical Data

Temperature Range Operating	C	-15 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 (2.75 X 5 X 1 in.)
	(in.)	75 X 130 X 40 mm (3 X 5 X 1.5 in.)
Shipping		
Weight Instrument (with battery)	g	300 g (10.6 oz.)
	(oz.)	350 g (12.4 oz.)

Part Number Description

520D-13X2NA	1300/1310 nm SLED + Fabry-Perot LD
520D-V3X2NA	850nm VCSEL (50/125) + 1310nm Fabry-Perot LD (9/125)
520D-3A12NA	1310/635nm Dual LD Source w/ Faultfinder
520DRV321NA	850 nm VCSEL/1300 nm SLED (50/125 MMF or larger fiber) single port; RS232 port
520D-VAX2NA	850 nm VCSEL/635 nm VFF Laser Diode (50/125 MMF or larger fiber) double port
A601	Holster (included with each light source)
A604	Adaptor 120V AC, 9V, 500mA (neg. center)
A605	Adaptor 90 - 264 V AC, 9V, 10W (neg.)

Part Number Accessories Ordering Information

A604N	Adapter 120V, 9V, 500mA, 1.3mm cntr neg
A605N	Adapter 90-264V AC, 47-63Hz, 1.3mm neg.
A605A,E,K,S	A605 International plugs US, Europe, UK & Australia
A604N-E	Adapter 230V Euro, 9V, 500mA, 1.3mm cntr neg
A232	RS232 DB9 Cable
ADLL	Windows ^R Software Drivers (download)