



# Cercis, Inc.

## Model 530 & 530 R LED Light Source Single & Dual Wavelength

### Putting Light to the Test

Cercis 530 & 530 R Series LED Light Sources are full-feature handheld instruments for use in multimode optical fiber applications. The 530S or 530D contain single or dual LED sources, respectively. The 530SR or 5230DR includes an RS232 port to enable PC control. Use in the field, component production, quality control area, or lab. Fiber-pigtailed LEDs yield predictable optical power with various optical fibers—and the fiber pigtail mode strips fibers, thereby eliminating the need to mandrel wrap. Cercis LED Light Sources incorporate interchangeable (FC, SC, ST—specify) adapters or FC.

The 530 & 530 R combines a state-of-the-art microprocessor with indicator LEDs. Operation is simple with only 3 keypads: ON/OFF, SOURCE & MOD (modulation). All models include a protective holster & tethered dustcap, plus 9V battery.



### Features

- 850 & 1300 nm LEDs, also 470, 530 & 660 nm POF
- Modulation Frequencies: 270, 1000, & 2000 Hz  
+ External Modulation to 1 MHz (single LED source only)
- Single & Dual LEDs + Dual LED Operation
- >20 hours 9 V Battery Life
- Ergonomic, Tactile Rubber Keys
- Protective Holster with Pedestal

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	<b>Single Source</b> Set Point (default)	Calibrated output power
	- 1 to +1 dBm (opt)	Press & hold to cycle +/- 1 dB
Mod	<b>Dual Source</b> Set Point (dBm)	1 - 1st wavelength source (1310 nm)
	- 1 to +1 dB (opt)	2 - 2nd wavelength source (1550 nm) Increment increase +1dB, decrease -1 dB
	<b>Press &amp; Hold: (Single &amp; Dual Source)</b>	1X - 270 Hz, 2X - 1000 Hz, 3X - 2000 Hz (Slow blink) (Faster blink) (Very fast blink)

**Bold type** standard LED sources.

Model	Units	530D-83 Dual		530S Single					
<b>Wavelength</b>	nm	<b>850</b>	<b>1300</b>	650	<b>850</b>	<b>850</b>	<b>1300</b>	1300	1550
<b>Wavelength Range</b>	nm	<b>+/- 20</b>	<b>+/- 20</b>	+/- 20	<b>+/- 20</b>	<b>+/- 20</b>	<b>+/- 20</b>	+/- 30	+/- 30
<b>Spectral Width (FWHM)</b>	nm	<b>35</b>	<b>135</b>	35	<b>50</b>	<b>35</b>	<b>135</b>	60	50
<b>Stability 1 hr. max. deviation</b>	dB	<b>&lt;0.05</b>	<b>&lt;0.05</b>	<0.15	<b>&lt;0.15</b>	<b>&lt;0.05</b>	<b>&lt;0.05</b>	<0.03	<0.05
<b>Power Output (Set Point min.)</b>									
9/125 SMF		<b>N/A</b>	<b>N/A</b>	N/A	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	-18	-20
50/125 0.21 NA GI MMF		<b>-18</b>	<b>-18</b>	-	<b>-10</b>	<b>-18</b>	<b>-18</b>	-14	-16
62.5/125 0.23 NA GI MMF	dBm	<b>-16</b>	<b>-16</b>	-	<b>-9</b>	<b>-16</b>	<b>-16</b>	-13	-15
100/140 0.29 NA GI MMF*		<b>-14</b>	<b>-14</b>	-	<b>-8</b>	<b>-14</b>	<b>-14</b>	-12	-14
200/240 0.22 NA SI MMF*		<b>-12</b>	<b>-12</b>	-	<b>-7</b>	<b>-12</b>	<b>-12</b>	-12	-14
980/1000 POF		-	-	-3	-	-	-	-	-
<b>Modulation Frequencies</b>	Hz	<b>270, 1000, 2000</b>		<b>270, 1000, 2000 + External Modulation Capable to 1 MHz</b>					
<b>Functions</b>		<b>MOD (CW DC or modulated output mode), SOURCE (selectable frequency)</b>							
<b>Auto Shutoff / Shutoff Disable</b>		<b>Unit powers down 15 min. after last key has been depressed User-selectable disable function</b>							
<b>Power</b>	V	<b>Requires 1 9 V alkaline battery (&gt;20 hrs. battery life) or 120 / 90-264 VAC adaptor.</b>							

Specifications subject to change without notice. MADE IN USA \*Typical



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**Part Number Interchangeable Adaptor Description**

LS101	Universal 2.5 mm Adaptor
LS102	FC Adaptor
LS103	ST Adaptor
LS104	SC Adaptor



**Information**

**Calibration**

All Cercis Optical LED Sources are calibrated using procedures & 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.

**Sources**

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

**Digital Signal Processing**

Proprietary micro control circuitry features digital calibration, and microprocessor control of all OLS functions.

**CW & Modulated Output Modes**

The Model 530 Optical LED Sources (OLS) feature both CW & modulated output modes. In CW mode, the Model 530 Series features stabilized & calibrated output power of -10 to -20 dBm (depending on the source); this is adjustable within  $\pm 1$  dB range with easy key function. The modulated tone frequency for use with fiber identifiers may be set to 270,1000 or 2000 Hz by the user, with adjustment of the MOD key.

**Dust Cap**

When the OLS 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.

**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.

**RS232 Data Port**

The optional RS232 data port allows the user to control the functions of the 530 LED source from a PC. Windows<sup>R</sup> DLL drivers can be downloaded from Cercis website.

Part No.	Description	Character No.	Description
<b>530D-8322NA</b> 1-4 5 6 7 8 9 10 11		1-3, 4, 5	530D Src; Single (S), Dual (D), Tri (3), Quad (Q); RS232
		6-7, 8, 10	Src(s) $\lambda$ 's; fiber (2=50, 3=62.5); N (1.3mm neg ctr AC)
		9, 11	Optical: No.Pt (1 single, 2 dual, etc); A: Interchglbl adptr (1/port)

**Part Number Ordering Information**

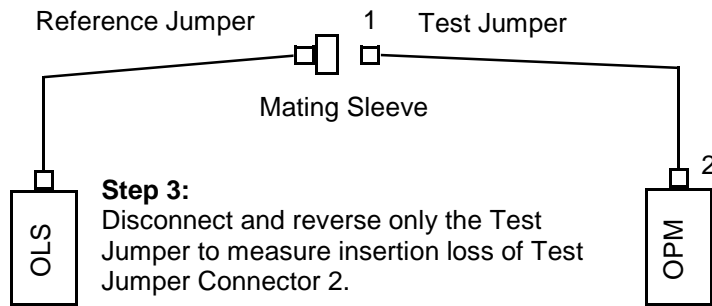
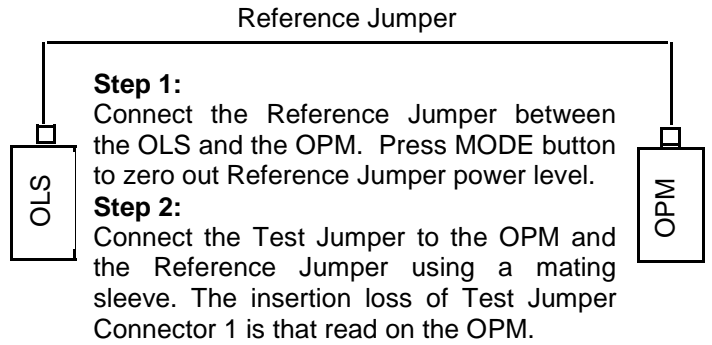
530S-1321NA	1310 nm Surface-Emitting LED
530S-8521NA	850 nm Surface-Emitting LED
530S-8H21NF	850 nm SLED High Power
530S-65M1NF	650 nm Surface-Emitting LED
530D-8522NA	850/1300 nm Dual ELED Source
530DR8321NA	850/1300 nm SLED Src w/ RS232
530D-8332NF	850/1300 nm SLED Src, 62.5/125 MMF
530SR8H21NA	850 nm SLED High Power w/ RS232

<sup>R</sup>Windows is a registered trademark of Microsoft Corporation.

**Model 530 / 530 R with Model 510 or 610 OPM**

The Cercis Model 530 Optical LED Source (OLS) was designed to work with the Model 510 Optical Power Meter (OPM). The following test procedure is used when determining the insertion loss of a fiber optic jumper assembly.

**Insertion Loss Test Model 530 OLS & Model 510 OPM**



**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 <sup>R</sup> Software Drivers (download)

**Operational & Mechanical Data**

<b>Temperature Range</b> Operating	C	-15 C to +50 C
	(F)	(20 to 50 F)
Storage	C	-35C to +70 C
	(F)	(20 to 50 F)
<b>Dimensions</b> Instrument (with battery)	mm (in.)	Width X Length X Height 70 X 125 X 25 mm (2.75 X 5 X 1 in.)
		Shipping 75 X 130 X 40 mm (3 X 5 X 1.5 in.)
<b>Weight</b> Instrument (with battery)	g (oz.)	300 g (10.6 oz.)
		Instrument w/ holster 350 g (12.4 oz.)