



Putting Light to the Test

Cercis Model 52 Series Visual Fault Finders are full-feature hand-held instruments enabling visual location of fiber breaks, faulty splices or defective connectors within splice trays and patch panels, or during component manufacturing and assembly. The visible laser light source glows brightly at the point of fiber breakage or severe bend.

It can be used to troubleshoot faults within OTDR dead zones, optimize mechanical or fusion splices, verify connector end-face polish, trace fibers end-to-end, and make loss measurements on POF, PCS or glass fibers. In bright or low light situations, the flashing mode increases visibility of the signal.

The optical port can be either FC-style or can have interchangeable adaptors—FC, ST, SC or 2.5 mm universal styles. Operation is simple via two keys: ON/OFF and MOD.



Model 52

- Fault location to 1 millimeter accuracy
- Locate fiber breaks, tight bends or pinches
- Range: up to 5 km (SM)
- Optimize mechanical and fusion splices
- Trace fibers end-to-end
- Loss measurements for glass core/clad SM & Multimode, PCS, POF
- 1.0 mW at 635—670 nm

Features

- Wavelengths: 635, 650 or 670 nm
- FC or Interchangeable Adaptors: FC, ST, SC & 2.5mm
- Modulation Feature for Detection under Bright Light
- 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—suitable lab or field

**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.. Operator must shutoff; push & hold key
	No Shutoff	
Mod	Modulation speed (LED action)	Press & Hold
		1X - Blinking output 2X—Return to continuous output

Class 2 Laser Output & Fiber Types

Each VFF contains a singlemode fiber pigtailed visible wavelength laser, which retains power output within the prescribed limits of Class 2 laser product—while testing SM or MM fibers.

Model	Units	52-63	52-65	52-67
Wavelength	nm	635*** Laser	650 Laser	670 Laser
Wavelength Range	nm	+/- 20	+/- 20	+/-20
Spectral Width (FWHM)	nm	2	2	2
Stability: 1 hr. max. deviation	dB	<0.05	<0.05	<0.05
Power Output (Set Point Min.) **	dBm	0	0	0
9/125 (SMF28) Fiber		0	0	0
50/125 GI MMF 0.21 NA		0	0	0
62.5/125 GI MMF 0.23 NA		0	0	0
100/140 GI MMF 0.29 NA		0	0	0
200/230 GI MMF 0.22 NA*	0	0	0	
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. center) 120 VAC or 90-264 VAC International		

***635 nm is standard source wavelength; 650, 670 nm optional.

Specifications subject to change without notice.

MADE IN USA

*Typical





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

LED Indicators

Green and red LEDs indicate Power On (Laser Enabled), Modulation Rate, and Low Battery.

Lasers

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

Dust Cap

When the VFF 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 VFF functions.

CW & Modulated Output Modes

The Model 52 Visual Fault Finder (VFF) feature both CW and modulated output modes. In CW mode, the Model 52 Series features stabilized and calibrated output power of 0 dBm. By enabling the MOD key, the light will blink at 1 Hz rate, assisting signal detection by the user in high ambient light level situations.

Holster for Additional Protection and Convenience

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. The Model 52 VFF can be used in the field, lab or workstation; it is designed to withstand accidental drops and a variety of environmental conditions.

AC Adaptors

Center negative adaptors are available for 120 V & 90—264 V AC.

Part No.	Description	Character No.	Description
52-S-6311NA <small>1-4 5 6 7 8 9 10 11</small>		1—3, 4	52 VFF Src; Single (S), Dual (D), Tri (3), Quad (Q), etc.
		6—7, 8, 10	Src(s) λ's; fiber (1=SMF28, 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

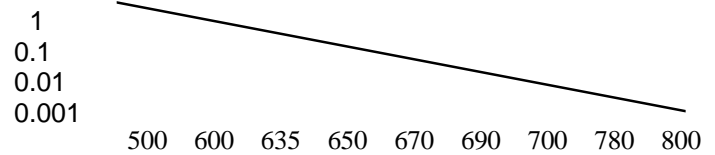
52-S-6311NA	635nm LD, w/ Interchangeable Adapter (specify)
52-S-6511NF	650 nm LD, w/ FC (fixed) optical port
52-S-6711NA	670nm LD, w/ Interchangeable Adapter (specify)

Part Number Accessory Ordering Information

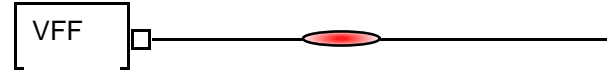
A601	Holster (included with each VFF)
A604N	Adapter 120VAC, 9V, 500mA (1.3mm neg. ctr)
A605N	Adapter 90-264 VAC, 9V, 10W (1.3mm neg ctr)

Subject to change without notice. MADE IN USA 9/03M52VFF Rev. 0

Source Visibility vs. Wavelength (nm)



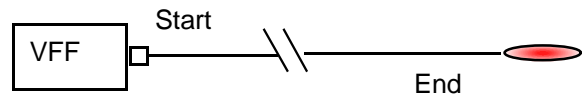
Uses for a Visual Fault Finder



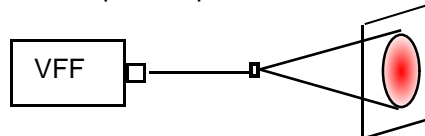
- 1 Detect fiber breaks or microbends
 - within OTDR dead zone (<1 meter up to 5 km)
 - through light-color cable or buffer jacketing
 - in splice trays/patch panels



- 2 Optical splice, connector or component manufacture
 - optimize mechanical or fusion splices
 - detect defective connectors, splices, lens or ferrules



- 3 End-to-end fiber identification
 - identify individual fibers in installation and repair
 - simplex, duplex, or multifiber cables



- 4 End face / optical element inspection
 - detect scratches and imperfections on connectors
 - illuminate lens or optical element imperfections

Operational & Mechanical Data

Parameter	Unit	Value
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 (in.): 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.)
Weight	Instrument (with battery)	g: 300 g (10.6 oz.)
	Instrument w/ holster	(oz.): 350 g (12.4 oz.)