

CA92050 KT 2 kHz Fast Swept C Band Tunable Laser Source

(Version 2.00)

Technical Specifications Ver 2.00
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 UC INSTRUMENTS CORP.

www.ucinstruments.com

CA92050-KT 2 kHz Fast Swept Tunable Laser Source

The CA92050 2 kHz fast swept tunable laser modules offer superior performance for the test of Fiber Vibration Sensing, DWDM components, AWG , WSS, OPM components, Fiber sensing(especially for vibration fiber sensing application) , optical amplifiers, and other general purpose of fiber optical test and measurement with high wavelength resolution applications.

Each of CA92050 tunable laser modules is connected to a PC with RS232 cable. It becomes a High Accuracy, High Power, Small Dimension, Fast Startup, Affordable Tunable Laser Source system. It provides C band tunable laser sources options. UC Instruments also provide modules control software. The module also can be integrated into customers' products system with RS232 interface control.

The CA92050-KT swept lasers are widely deployed in FBG sensing systems and passive component test systems.

1. Key Features

- Wavelength Range C-band
- High Output Power
- Low Power Consumption
- Wide Operating Temperature Range
- Fast Swept Speed
- Simple Interface
- High Stability



2. Applications

- Fiber Grating Sensor Interrogator System
- Optical Passive Components test system
- Scanning Spectrometer
- Laser Ranging

3. Technical Specifications

Model No.	CA92050-KT
Wavelength Range	40 nm for C-band (From 1528 – 1568 nm)
Optical Power	20 mW
Resolution	1 GHz
Absolute Wavelength Accuracy	+/-10 pm Typ<5 pm
Relative Wavelength Accuracy	+/-5 pm Typ+/-2 pm
Wavelength Repeatability	+/-2 pm Typ+/-1 pm
Wavelength Stability(-5 to 55 °C)	<+/-2 pm
Sweep Speed	2 KHz(Max)
Default Sweep Step	1 GHz
Power Stability	+/- 0.05 dB
Spectral Flatness	<0.5 dB
SMSR	>40 dB
RIN	< -135 dB/Hz
Power Supply	+5 V / 3 A
Linewidth	<5 MHz Typ 1 MHz
Trigger Interface	LVTTL
Communication Interface	RS232 or TTL
Dimension	235mm W, 45mm H, 310 mm D
Fiber Adaptor	FC/UPC
Working Temperature Range	-10 to 55 °C

4. CA92050-KT GUI

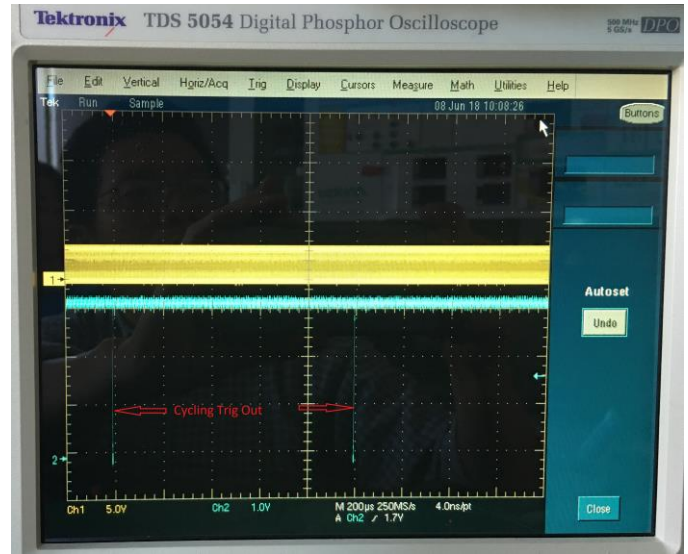
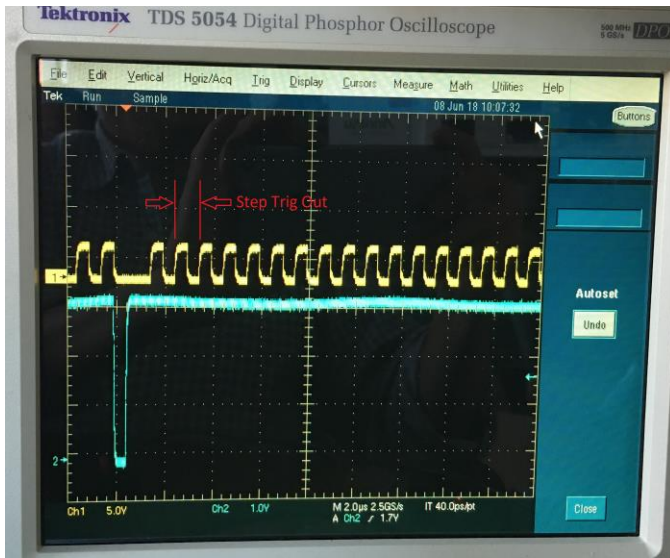
The screenshot displays the CA92050-KT Fast Swept Laser GUI. The window title is "CA92050-KT Fast Swept Laser". The interface includes the following sections:

- UART Port:** COM6 (selected), Baud Rate: 115200. Buttons: Open UART, Close UART.
- Read Info:** SN: 20160731, Ver: V0.5. Button: Read.
- Set Light Source Power Enable:** Turn ON, Turn Off.
- Set Sweep Speed:** 1 - 1us/step (selected), Set.
- Set Sweep Parameter:** Use Frequent GHz (selected).
- Start/Stop Parameters:**
 - Start: 196250 GHz, 1527.605 nm
 - Stop: 191150 GHz, 1568.362 nm
 - Step: 1 Step GHz
 - Buttons: Set
- Start Sweep:** Single Sweep, Continuous Sweep, Stop Sweep.
- Set a Fixed Frequency:** 193700 GHz, 1547.715 nm. Buttons: Set, Set method 2.
- Delete Info list:** Button.
- Log Window:** Displays a list of received and sent data packets with timestamps.

Log Window Content:

```
2019-01-01 14:05:12
2019-01-01 14:05:12 Recv: 14 c3 01 f4
2019-01-01 14:05:12 Send: e0 c3 00 01
2019-01-01 14:05:12
2019-01-01 14:05:12 Recv: 64 c2 a0 db
2019-01-01 14:05:11 Send: e0 c2 00 00
2019-01-01 14:05:11
2019-01-01 14:05:11 Recv: 84 c1 01 33
2019-01-01 14:05:11 Send: d0 c1 00 00
2019-01-01 14:05:08
2019-01-01 14:05:08 D 1 07 00 00
```

Trig Out Signal:



Ring Tone Vibration Signal (Application Sample):



Contact Information

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