UC8722C/UC8724C/UC8728C Multi Channel Optical Power Meter User Manual

Aug., 2018

UC INSTRUMENTS CORP.

www.ucinstruments.com

Notices

Subject Matter

The material in this document is subject to change without notice.

UC Instruments Corp. makes no warranty of any kind with regard to this printed material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

UC Instruments Corp. shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Warranty

This UC Instruments Corp. product is warranted against defects in material and workmanship for a period of one year from date of shipment. During the warranty period, UC INSTRUMENTS CORP. will, at its option, either repair or replace products that prove to be defective.

For warranty service or repair, this product must be returned to a service facility designated by UC Instruments Corp. Buyer shall prepay shipping charges to UC Instruments Corp. and UC Instruments Corp. shall pay shipping charges to return the product to Buyer. However, Buyer shall pay all shipping charges, duties, and taxes for products returned to UC Instruments Corp.from another country.

UC Instruments Corp. warrants that its software and firmware designated by UC Instruments Corp. for use with an instrument will execute its programming instructions when properly installed on that instrument. UC Instruments Corp. does not warrant that the operation of the instrument, software, or firmware will be uninterrupted or error free.

Limitation of Warranty

The foregoing warranty shall not apply to defects resulting from improper or inadequate maintenance by Buyer, Buyer-supplied software or interfacing, unauthorized modification or misuse, operation outside of the environmental specifications for the product, or improper site preparation or maintenance.

No other warranty is expressed or implied. UC Instruments Corp. specifically disclaims the implied warranties of Merchantability and Fitness for a Particular Purpose.

Exclusive Remedies

The remedies provided herein are Buyer's sole and exclusive remedies.

UC Instruments Corp. shall not be liable for any direct, indirect, special, incidental, or consequential damages whether based on contract, tort, or any other legal theory.

Assistance

Product maintenance agreements and other customer assistance agreements are available for UC Instruments Corp. products. For any assistance contact the UC Instruments Corp. Maintenance Service Center.

Content

Description

Up to 8 power meter channels in a small package UC8722C/UC8724C/UC8728C optical power meters with two, four or eight power-sensor channels provide manufacturing customers with increased through put and operational efficiency to meet today's challenges in manufacturing. Designed for optical multiport applications. Designed for characterizing optical multiport components, these optical power meters offer industry-leading solutions for device connectivity, high-speed measurement data acquisition and fast data transfer for postprocessing. The multiport power meter enables fast measurement solutions for all multiport devices; for example multiplex ers, PON splitters, wavelength selective switches (WSS) and ROADMs, as well as compact setups for simultaneous testing of multiple single-port devices.

Feature

Faster than previous swept-wavelength measurement solutions

– High-speed measurement data acquisition and transfer samples/channel
– Frequency response matched to averaging time and stable dark-current zeroing provide high dynamic range without distorting filter shapes at high sweep speed higher time resolution for transient analysis
– Short minimum averaging time. Unprecedented device connectivity
– Industry-leading solution to separate the connecting task from the measuring task
– Fibers can be comfortably connect to the adapter away from the power meter – Supports MU, FC, SC and LC connectors, as well as bare fiber connector

Appliction

Production PLC, AWG, WSS, ROADM multiport components and modules testing
Fiber Grating Sensor testing
PMD and PDL measurement
Fiber Optical , Telcom R & D lab test
Easy to be integrated into a passive/active fiber components testing system

Specification

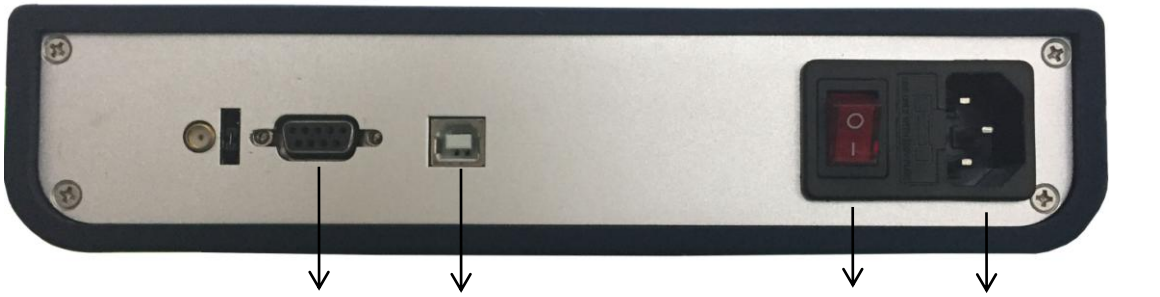
Model #	***UC8722C***	***UC8724C***	***UC8728C***
Channel Number	***2 Channels***	***4 Channels***	***8 Channels***
Wavelength Range	*850 ~ 1700 nm*		
Power Range	*+ 5.0 ~ -75 dBm*		
Sampling Speed	*10 us (100KHz)*		
Application Fiber Type	*Standard SM and MM up to 62.5 um core size*		
Calibration Wavelength	850，980，1300，1310，1490，1550，1625		
Uncertainty (accuracy) at reference condition	*+/- 4% (1200 nm ~ 1610 nm)*		
Relative Uncertainty (accuracy) at reference condition	*< 0.04 dB Typical*		
Linearity (power)	*<= +/- 0.06 dB (1200 nm ~ 1610 nm, + 0~ -60 dBm)*		
Return Loss	*> 40 dB*		
Operation Temperature	*0～ +40℃*		
Storage Temperature	*-30～+80℃*		
Recalibration Period	*2 years*		
Power Adaptor Power	*AC 100 - 240 V ± 10%, 48 - 66 Hz, 100 VA max.*		
Display	*PC Interface.*		
Communication Port	*USB and RS232*		
Work Environmental	*−10°C to +70°C* *0°C to +45°C* *<95% R.H. from 0°C to +45°C*		
Dimensions	*235mm W×45mm H×310mmD*		
Weight	*10.0 lbs*		

Product Interface Description

Front Panel

Ch1-Ch8 Input Connector

Back Panel



AC Line Power Supply Requirements

Line Power Requirements

The UC8722C/UC8724C/UC8728C Optical Power Meter complies with overvoltage category II and can operate from the single-phase AC power source that supplies between 100V and 240V at a frequency in the range 48 to 66 Hz. The maximum power consumption is 230mA under 115V voltage. The maximum power consumption is 120mA under 230V voltage.

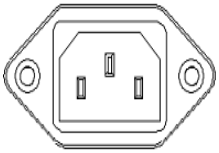
Line Power Cable

In accordance with international safety standards, the instrument has a three-wire power cable. When connected to an appropriate AC power receptacle, this cable earths the instrument cabinet.

AC Power Requirement

The AC power requirements are summarized on the rear panel of the instrument.

AC INPUT:
100-240V~, 48-66Hz, 48~ 66Hz
230mA/115V, 120mA/230V,



AC Power Requirement Mark – UC8722C/UC8724C/UC8728C

Power Cable

UC8722C/UC8724C/UC8728C will come with a international standard 3 wires power cable.

Power Indicate Light

When the machine was powered on, the power light will on.

Communication Port

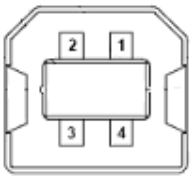
There are two communication interface ports on the rear panel of the UC8722C/UC8724C/UC8728C . They are USB port and RS232 serial interface port.

USB Port

The USB Port is for connection to PC with PC software.

USB Connector

This is a standard four-core type B USB connector.



USB Cable

The USB connection cable must not be extended beyond 5m. For distance over 5m, it is possible to use a third party USB extender. Typically, they extend USB up to 50m.

RS232 Serial Interface Port

The UC8722C/UC8724C/UC8728C serial interface has fixed parameters.

The PC serial interface should be configured to match the instrument's fixed parameters.

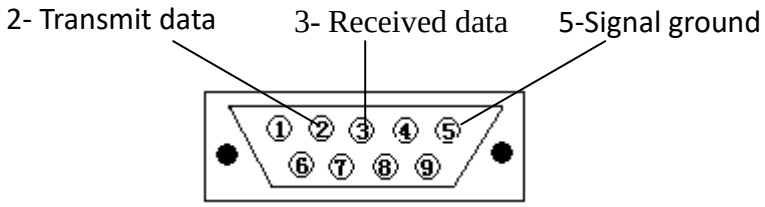
Fixed Parameters

These are:

Baudrate	115200
Data Bits	8
Parity	None
Stop Bits	1

RS232 Connector

The following figure 19 shows the connector and pin assignments.



RS232 Connector

The connector pin assignments on the cable for RS232 Communication.

DB9 CONNECTOR		DB9 CONNECTOR	
PIN	**NOTES**	**PIN**	**NOTES**
2	*Received data*	**2**	*Transmit data*
3	*Transmit data*	**3**	*Received data*
5	*Signal ground*	**5**	*Signal ground*

NOTE For serial communication use the null modem cable provided with your instrument.

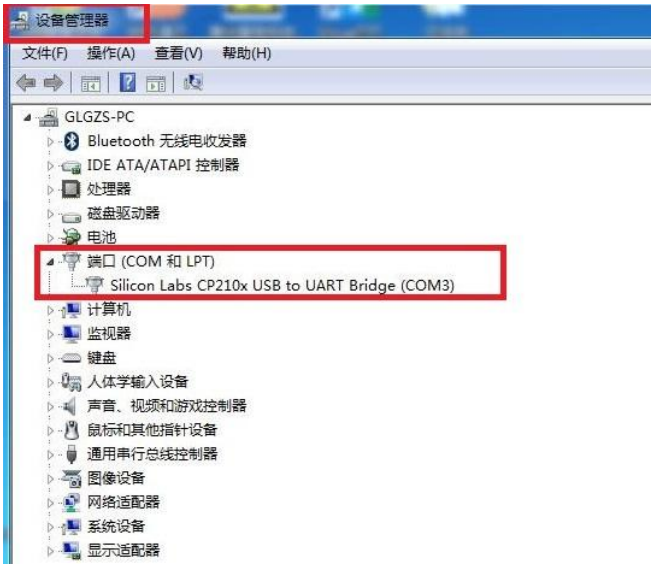
Software GUI

Hardware Connection

Connect power cable with machine, and connect the RS232 communication cable with the machine RS232 port adaptor. RS232 cable the other end connector with a computer RS232 port. Power on the machine.

Software Installation

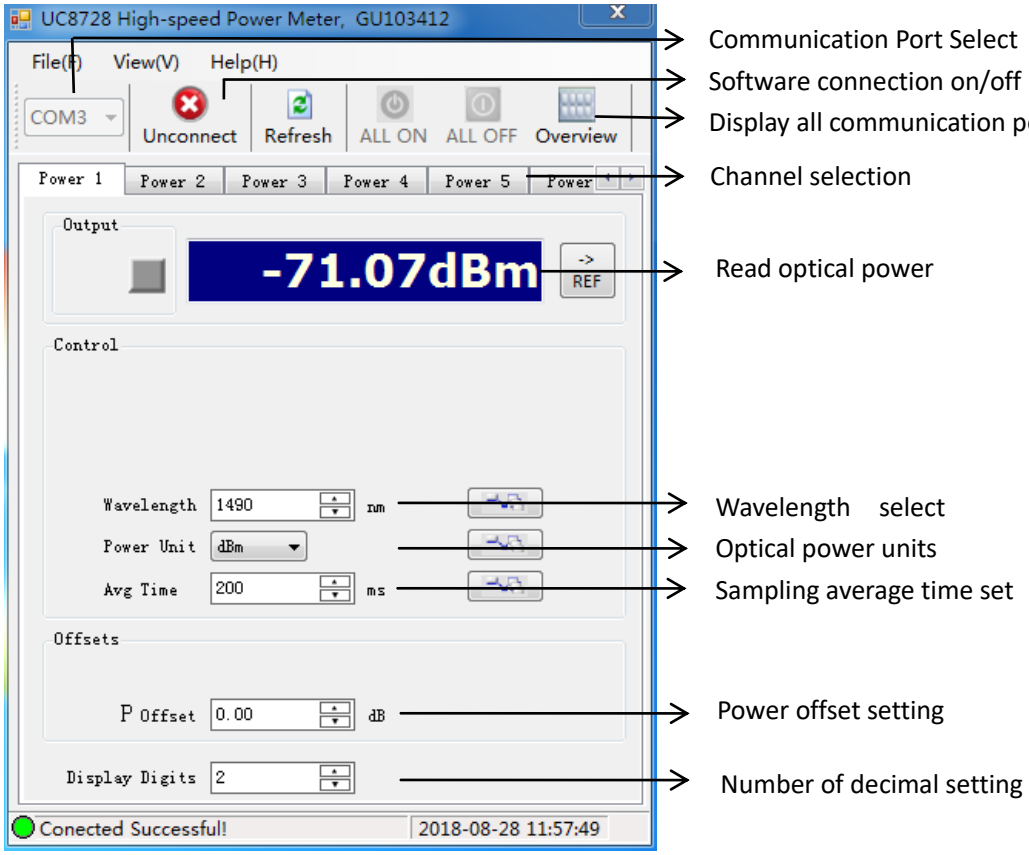
Power on the control computer. Go to and click window “Control Panel”. Select “Device Manager”， Pull down “（COM 和 LPT）” and you will see new add in communication port show up. Like below picture：



driverPlug in the UC8722C/UC8724C/UC8728C software USB driver. Copy the UC87xx software GUI driver fold to your computer, and double click UC872xx software

GUI, you will see UC872xx GUI as below:

Software GUI Interface introduction



Software Control

When customer turn on the GUI, we can check and setting machine parameters in GUI .

- Communication Port on/off

Select or key in communication port you select, click [Unconnect] or [Connect], active or disconnect the communication port.

- Refresh the display

Click [Refresh] , current display data will be refreshed into the newest sampling data.

- Select Optical Power Meter Channel

1、Click the select communication port to matching optical power meter channel, convert to the matching communication port.

2、Click [Overview], you can active all optical power meter channel communication port..

- Setting current wavelength

On the wavelength setting window directly key in wavelength you want, click [Enter], then the select wavelength you want was set.

Click wavelength setting small icon  next to the wavelength setting window, and then all other channel wavelength were reset as the current setting wavelength.

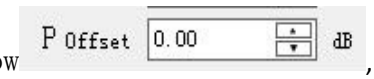
- Setting Optical Power Unit.

Click optical power units setting pull down icon, select the optical power unit you want, the power unit was set.

- Average Sampling Time

Average sampling time is the average time the machine sampling test power average time. The machine default samp[ling average time is 200m. User can selectthe sampling average time from 0.01 ~ 999.99ms. When you selection done, click [Enter], then the data was saved.

- Setting Power Offset

On the power off set window 

, key in the off set value you want, click [Enter], the power offset window will show up the offset data.

UC INSTRUMENTS CORP. CONTACT INFORMATION

UC INSTRUMENTS CORPORATION
Add: 37498 Glenmoor Dr., Fremont, CA 94536 USA
Tel: +1-510-366-7353
Fax: +1-510-353-1809
Email: sales@ucinstruments.com
Website: www.ucistruments.com