Powered by Microsoft® Windows® CE

DUO

MONITOR

Dual Channel Power and Energy

CE

- **Dual Independent Channels**
- **Microsoft Windows CE™**
- **User-Friendly**
- **Large Display**
- **Full Statistical Functions**
- **PCMCIA Storage**
- **CE Marked**

DUO

Gentec Electro-Optics DUO is a microprocessor-based power and energy monitor that uses the latest technology to provide a multitude of options in a user-friendly environment. It is a complete power meter plus a complete energy meter, both in the same instrument. It can also statistically analyze your measurements. Both pyroelectric and thermopile detectors can be used simultaneously.

Windows CE™

This power/energy monitor runs on Windows CE™. DUO's menu-driven, easy-to-use, intuitive software can be mastered within minutes. You can download the operating software for the DUO over the internet from our website. That means our newest features, latest improvements, or even a custom modification just for you are available at the click of a button.

Large Display

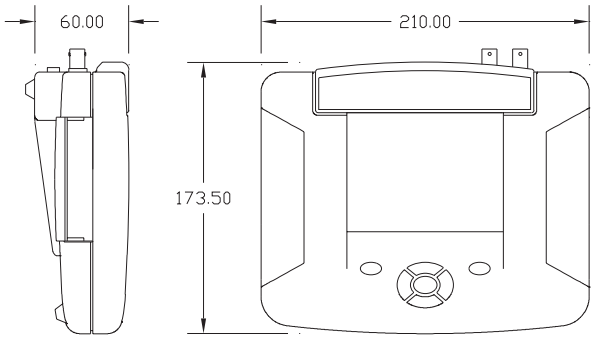
Take a look at the oversized screen. The 100 x 80 mm graphic LCD backlit display allows you to see information from a distance.

Independent Dual Channel

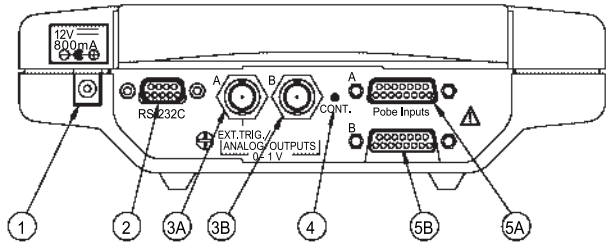
You get two monitors for the price of one. The DUO gives you the advantage of using two detector heads simultaneously to measure power or energy, or both. Each channel is totally independent, so you can instantly switch between power and energy on each channel. Energy detectors will give you energy per pulse, while power detectors yield average power or single pulse energy results.

Data Acquisition

Data acquisition and remote control are possible via the serial RS-232 communication port. You can use an adapter to plug the DUO into your GPIB system and have the same functionality.[1] When you turn your DUO on, it remembers the last baud rate so it is ready to go. PC-DUO, a user-friendly communication software package transforms your PC screen into a virtual DUO, enabling you to control and see your information remotely. Upgrades for PC-DUO are available on our website. You'll find our Labview drivers there as well. Data is easily plotted on widely available spreadsheets and plotting programs.



All dimensions in mm



1 - External power supply input jack

2 - Serial interface connector

3A - 0 to 1 volt analog output / External trigger input

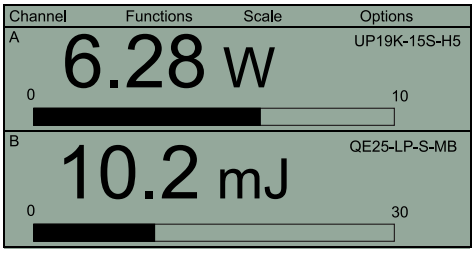
3B - 0 to 1 volt analog output

4 - LCD screen contrast adjusting screw

5A 5B - Probe input jack

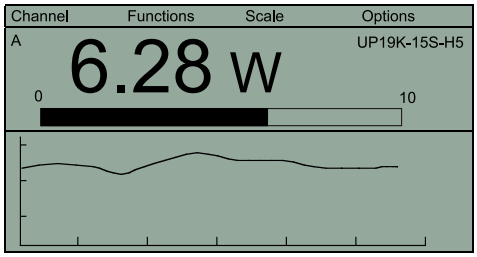
1. Requires commonly available third party GPIB interface.

DUAL CHANNEL DISPLAY MODE



The Dual Channel Mode displays current information from both channels simultaneously. Both channels are fully independent.

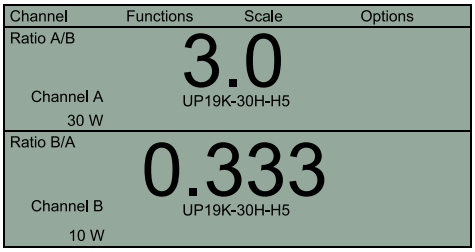
SINGLE CHANNEL DISPLAY MODE



If only one channel is selected, the Display will show current information from the corresponding detector head.

Directly under the reading, a bargraph display presents the measurement in an analog format.

RATIOMETRIC DISPLAY MODE



The Ratiometric Display gives the ratio of the two channels. This option allows the user to compare one channel with the other.

STATISTICS DISPLAY MODE

Channel	Functions	Scale	Options
Statistics for Channel A			UP19K-15S-H5
Current Value:	17.9 mW	T(sec) 55 / 55	
Maximum Power:	18.0 mW	RMS Stability:	0.44 %
Minimum Power:	17.5 mW	Stand. Deviation:	0.08
Average Power:	17.8 mW		
PTP Stability:	2.69%		
Statistics for Channel B			QE25-LP-S-MB
Current Value:	19.2 mJ	Pulse # 1000 / 1000	
Maximum Energy:	20.0 mJ	Repetition Rate:	10 Hz
Minimum Energy:	19.0 mJ	PTP Stability:	4.62%
Average Energy:	19.6 mJ	RMS Stability:	0.86 %
Average Power:	196 mW	Stand. Deviation:	1.89

When selected, the statistical analysis screen replaces the Main Display and offers a complete statistical analysis of the two channels.

Automatic Head Recognition

The DUO automatically recognizes all thermopile-based power detectors and pyroelectric energy detectors, ensuring accurate auto-calibration. More importantly, it can take advantage of our *Personal wavelength correction*™. It reads the memory in the Smart Interface connector to provide a wavelength correction that is based on spectral data measured from that specific detector. Your measurements across the band have never been this precise or easy.

Fast Response

It features an anticipation circuit for fast response.

Correction Factor

If you use a sampling device such as the Gentec-EO Holographic Beam Sampler (HBS) or need to account for other optics in your system you can easily program a correction factor for a true value reading.

Ratiometric Display

This function allows you to compare one channel with the other.

Full Statistical Functions

The DUO can display a complete statistical analysis of power or energy measurements, including maximum, minimum, average, PTP stability, etc. You can set the DUO to calculate the statistics for a single sample and stop, or to repeat continuously. Take data for a few seconds or a few weeks.

Impressive Storage Capability

Data can be stored on optional 8 Mb PCMCIA cards (100,000 points/card). The card is inserted in the right side of the DUO. This type II memory card is compatible with most laptop computers or any desktop with a PCMCIA slot.

Ergonomic Design

Compact and sturdy, the DUO can go anywhere! You will appreciate its ergonomic shape and handy kickstand.

UP19K-30H-H5

QE25-SP-S-MB

QE25-LP-H-MB

DUO SPECIFICATIONS

	DUO
POWER METER SPECIFICATIONS	
Power Ranges	30 mW, 100 mW, 300 mW, 1 W, 3 W, 10 W, 30 W, 100 W, 300 W, 1 kW, 3 kW, 10 kW
Resolution (digital)	15 µW on 30 mW scale
Monitor Accuracy	±0.5%
Response Time	Accelerated: 1 second
ENERGY METER SPECIFICATIONS	
Energy Ranges	300 µJ, 1 mJ, 3 mJ, 10 mJ, 30 mJ, 100 mJ, 300 mJ, 1 J, 3 J, 10 J, 30 J, 100 J
Resolution (digital)	150 nJ on 300 µJ scale
Accuracy	±1%
Default Trigger Level	2%
Software Trigger Level	from 2 to 99%
DETECTOR COMPATIBILITY	
Thermopile (power detector)	Average Power, Single Shot Energy
Pyroelectric (energy detector)	Pulse Energy including single shot
Photo Detector	----
GENERAL SPECIFICATIONS	
Bargraphs	240 divisions
Analog Output	0 to 1 V, full scale, ±1%
Digital Display	100 x 80 mm LCD screen, 320 x 240 pixels
Display Rate	3 Hz
Data Storage	PCMCIA card
Dimensions (mm)	210 (W) x 173.5 (H) x 60 (D)
Weight	1.2 kg
Input Voltage	12 VDC/800 mA
Batteries	Battery pack of 10 rechargeable (1.2 Volts) NiCad AA
External Power Supply	Input: 100/120 VAC, 60 Hz, UL / CSA approved Output: 12 VDC 800 mA or Input: 220/240 VAC, 50 Hz, CE / VDE / TÜV approved Output: 12 VDC 1A

Order number	Description
100-18221-01	DUO (with Power Supply – 100/120 VAC UL / CSA)
100-18221-01	DUO (with Power Supply – 220/240 VAC CE / VDE / TÜV)
170-24268	PCMCIA, flash memory card

Specifications subject to change without notice.

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