Wolf Laboratories

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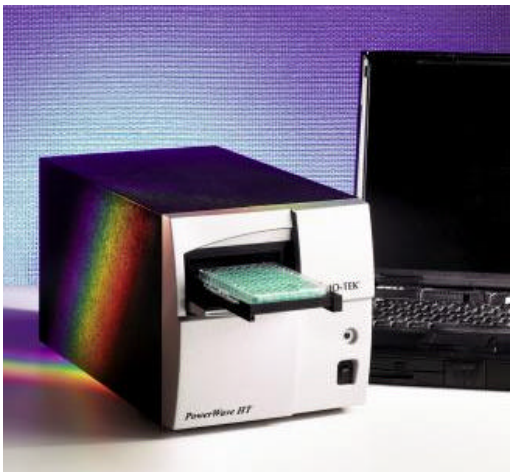
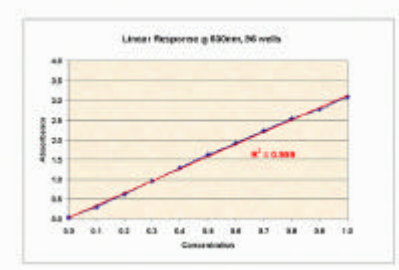
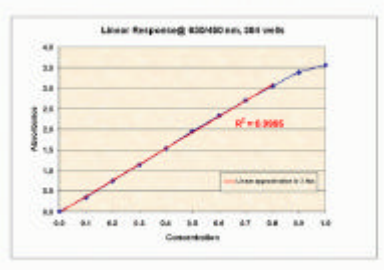
PowerWave™ Microplate Spectrophotometer

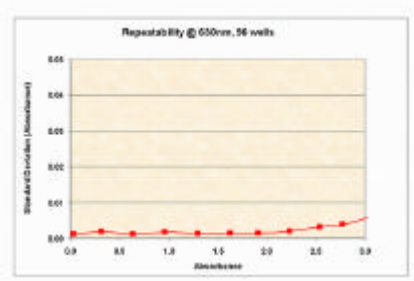


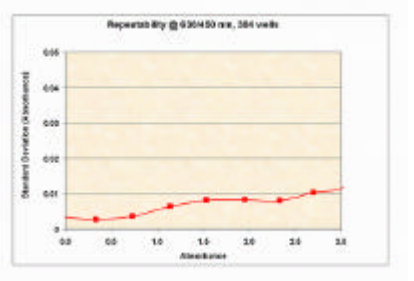
Size, speed and performance are critical to an automated system's overall efficiency. To meet these requirements, Bio-Tek's engineers consulted with experts in the field of automation when designing the PowerWave™. PowerWave is the first microplate spectrophotometer designed specifically to run 24 hours a day, 7 days per week. With rugged hardware, proven optical performance and a small footprint, PowerWave breaks the barrier of traditional spectrophotometry to obtain results quickly, accurately and reliably. One instrument can easily read up to eight, 1 cm BioCell™ cuvettes for standard spectrophotometer applications. Whether used stand-alone or in an automated system, the PowerWave provides flexibility for multiple applications, including endpoint, kinetic, spectral scanning and well scan modes. Bio-Tek's powerful KC4™ or KCjunior™ data collection and analysis software is included with every PowerWave.

Typical Performance of the PowerWave
All data collected in Normal Read mode









Typical Accuracy of PowerWave measured against NIST neutral density glass filters.

Accuracy @ 405 nm				
NIST Filter Data	0.302	1.723	2.313	2.934
PowerWave HT (Mean OD)	0.299	1.721	2.313	2.944
Difference	*-0.003*	*-0.002*	*0.000*	*0.010*
Accuracy @ 630 nm				
NIST Filter Data	0.307	1.463	1.956	2.600
PowerWave HT (Mean OD)	0.303	1.461	1.957	2.599
Difference	*-0.004*	*-0.002*	*0.001*	*-0.001*

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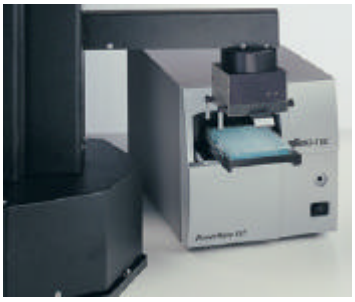
Features

- Monochromator optical design with powerful xenon flash lamp
- Select wavelengths from 200 to 999 nm in 1 nm increments without the use of filters
- 96- and 384-well microplate or 1 cm Bio-Cell™ reading for application flexibility
- 4-Zone™ temperature control to 50°C provides superior temperature stability
- Ultra fast read times for 96- and 384-well formats
- Small footprint and freely accessible carrier for easy integration into automated systems
- With pathlength correction, easily convert cuvette-based assays onto a microplate format
- Versatile KC4™ software with exclusive PowerReports™ feature for unique report customization.



Models

Model	PowerWave™				
	PowerWave HT		PowerWave		PowerWave XS
Part #	RPRWI	RPRWI340	RPRWI340/96	RPRWI96	MQX200R
96-well only			●	●	
96-/384-well	●	●			
6- to 384-well					●
200-999 nm	●			●	●
340-999 nm		●	●		
Incubation	●	●	●	●	●
Shaking	●	●	●	●	●
Software	KC4™	KCjunior™	KCjunior™	KC4™	KCjunior™

RPRWI

PowerWave™ HT: 200-999 nm, 96- and 384-well plate reading with programmable shaking and temperature control from ambient +4ºC to 50ºC. Includes KC4™ software.

RPRWI/96

PowerWave™: 200-999 nm, 96-well plate reading with programmable shaking and temperature control from ambient +4ºC to 50ºC. Includes KC4™ software.

RPRWI340

PowerWave™ HT 340: 340-999 nm, 96- and 384-well plate reading with programmable shaking and temperature control from ambient +4ºC to 50ºC. Includes KCjunior™ software.

RPRWI340/96

PowerWave™ 340: 340-999 nm, 96-well plate reading with programmable shaking and temperature control from ambient +4ºC to 50ºC. Includes KCjunior™ software.

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Specifications

Detection method	Absorbance
Read method	Endpoint, kinetic, spectral and linear scanning
Microplate types	96- and 384-well microplates. Also reads up to 8 Bio-Cells (patented quartz miniature vessels) for 1 cm absorbance measurement.
Reading speed	• Normal: 96 = 20 sec, 384 = 66 sec • Rapid: 96 = 11 sec, 384 = 23 sec • Sweep: 96 = 5 sec, 384 = 11 sec
Wavelength range	200 to 999 nm (PowerWave HT and PowerWave) 340 to 999 nm (PowerWave HT 340 and PowerWave 340)
Wavelength selection	Monochromator, selectable 1 nm or greater increments
Monochromator wavelength accuracy	±2 nm
Monochromator wavelength repeatability	±0.2 nm
Bandpass	5 nm
Dynamic range	0 to 4.0 OD
OD accuracy	1% ± 0.01 OD typical
OD linearity	±1% typical
OD repeatability	0.5% ± 0.005 OD typical
Light source	Xenon flash lamp
Stray light	0.03% at 230 nm typical
Temperature control	Ambient +4°C to 50°C 4-Zone™ natural convection
Shaking	User-programmable timing and frequency
PC Software	Includes KC4 software
Power	100 VA max Instrument powered by universal input (100-250 VAC 50-60 Hz) switching 24 VDC power supply.
Dimensions	16" D x 8.5" W x 8.5" H (40.6 x 21.6 x 21.6 cm)
Weight	24 lbs (10.9 kg)
Regulatory	For in-vitro diagnostic use (Except in the European Union). All Bio-Tek microplate instrumentation is CE and ETL marked. For details on approvals and standards compliance, please contact Bio-Tek.
Automation	Compatible with Bio-Stack and Fastrack microplate stacking devices

Specifications subject to change.