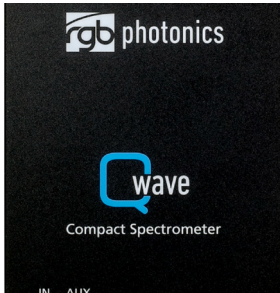


Product Overview

Qwave
COMPACT USB SPECTROMETER
FOR UV/VIS/NIR



KEY FEATURES:

- Spectral resolution from 0.2 nm
- High sensitivity
- Exceptional thermal stability
- Includes sophisticated spectroscopy software

Standard configurations	
• UV:	220 - 400 nm
• VIS:	350 - 880 nm
• NIR:	700 - 1040 nm

	Specifications
Focal length	75 mm
Entrance slit	20 μ m (default)
Spectral resolution (FWHM)	UV: 0.2 nm VIS: 0.5 nm NIR: 0.4 nm
Dynamic range	1500 : 1
Numerical aperture	0.1
Stray light	< 0.1 %
Detector	3648 pixel linear CCD sensor
A/D converter	16 bit 15 MHz
Calibration	Wavelength, sensitivity, non-linearity and multiple dark spectra stored within device
Transfer speed to PC	40 ms per spectrum
Digital Interface	USB 2.0
Power consumption	5 V DC, 200 mA via USB
Application Software	Waves and SDK (included)
PC operating system	Windows 10, 8, 7, Vista, XP
Options	Custom wavelength ranges, entrance slits, connectors, filters, detector collection lens, I/O adapter, RS-232 interface
Dimensions	89.5 x 68.0 x 19.5 mm

Qmini
MINIATURE SPECTROMETER
FOR UV/VIS/NIR



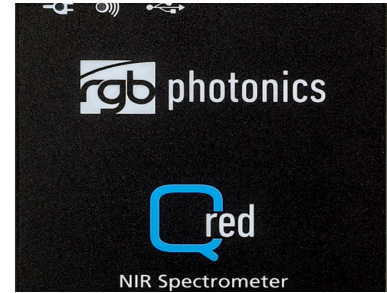
KEY FEATURES:

- Spectral resolution from 0.3 nm
- Miniature size
- Customizable wavelength range, sensitivity and resolution
- Powerful on-board processing and evaluation

Standard configurations	
• UV:	220 - 400 nm
• VIS:	370 - 750 nm
• NIR:	730 - 1080 nm
• Wide UV (optimized at 300 nm):	225 - 1000 nm
• Wide VIS (optimized at 500 nm):	225 - 1000 nm
• VIS/NIR:	480 - 1100 nm

	Specifications
Focal length	50 mm
Entrance slit	20 μ m (changeable)
Spectral resolution (FWHM)	UV: 0.3 nm VIS: 0.7 nm NIR: 0.7 nm WIDE: 1.5 nm VIS/NIR: 1.5 nm
Dynamic range	1300 : 1
Numerical aperture	0.1
Stray light	< 0.1 %
Detector	2500 pixel linear CCD sensor
A/D converter	16 bit
Calibration	Wavelength, sensitivity, non-linearity and multiple dark spectra stored within device
Transfer speed to PC	USB 2.0 High-Speed
Digital Interfaces	USB 2.0 Type-C, SPI, UART
Power consumption	5 V DC, 130 mA via USB
Application Software	Waves and SDK (included)
PC operating system	Windows 10, 8, 7, Vista, XP
Options	Custom wavelength ranges, entrance slits, connectors, filters, detector collection lens
Dimensions	64.0 x 42.0 x 14.5 mm

Qred
MINIATURE NIR SPECTROMETER
UP TO 2500 NM



KEY FEATURES:

- Fanless cooled InGaAs detector
- Ultra-compact design
- Customizable wavelength ranges up to 2.5 μ m
- Powerful on-board processing and evaluation

Standard configurations	
• Qred 256C-1.7	900 - 1700 nm
• Qred 512C-1.7	900 - 1700 nm
• Qred 256C-2.5	900 - 2500 nm
• Qred 512C-2.5	900 - 2500 nm

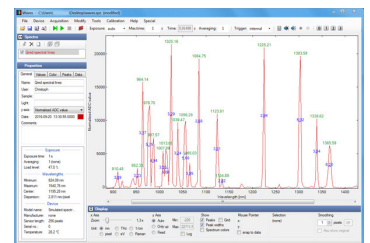
	Specifications
Focal length	50 mm
Entrance slit (changeable)	50 μ m by 256 pixel sensor 30 μ m by 512 pixel sensor
Spectral resolution FWHM	900 - 1700 nm: 8 nm with 256 pixel sensor 4 nm with 512 pixel sensor 900 - 2500 nm: 16 nm with 256 pixel sensor 8 nm with 512 pixel sensor
Dynamic range	15000 : 1
Numerical aperture	0.14
Stray light	< 0.1 %
Detector	Cooled Hamamatsu 256/512 pixel InGaAs line image sensor
A/D converter	16 bit
Calibration	Wavelength, sensitivity, nonlinearity and multiple dark spectra stored within device
Transfer speed to PC	USB 2.0 High-Speed / 480 Mbps
Digital Interfaces	USB 2.0 Type-C, SPI, UART
Power consumption	5 V DC, 200 mA / up to 3 A
Application Software	Waves and SDK (included)
PC operating system	Windows 10, 8, 7, Vista, XP
Options	Custom wavelength ranges, entrance slits, connectors, filters, image sensors, 128 pixel sensor, uncooled sensors
Dimensions	67.0 x 58.0 x 22.5 mm

Waves Software

All our spectrometers include Waves, the smartest generalpurpose spectroscopy software on the planet. Waves not only features unique sophisticated algorithms for data acquisition and evaluation, it provides a clear and straightforward user interface.

Features:

- dynamic exposure control with dark spectrum interpolation - transmission and absorption spectroscopy
- dynamic peak finder - managing series of spectra - import and export files - colorimetry and „strip charts“



Product Overview



COMPACT LASER MODULE WITHOUT COMPROMISES



KEY FEATURES:

- Output powers up to 1W
- High beam quality and stability
- Broad selection of wavelengths, fine-tunable
- Modulation up to 1.5 MHz
- Temperature-stabilized
- Long lifetime
- Software included

PowerBox laser controller



The PowerBox is a miniaturized laser controller for the Lambda Beam series of laser modules, providing power to the laser and controlling the emission and temperature. It is designed for industrial integration where small sizes and weights are important.

- Attaches directly to the Lambda Beam laser head
- Highly compact design
- Straightforward connection via screw-type terminal block
- Digital control via USB (RS-232 on request)
- Powered by 12 – 36 V DC
- Modulation input analog or digital 0 – 5 V DC
- Interlock on/off input

Alternatively, for laboratory applications and prototyping the PowerController can be used, featuring larger connectors and a keyswitch.

Full specifications for all products can be found in the datasheets available for download from our website.

¹ Multi-mode ² Watercooler option recommended ³ on request

Type	Wave-length	Maximum output power
Diode	375 nm	20, 75, 200 ¹ mW
Diode	395 nm	120 mW
Diode	405 nm	75, 125, 175, 200, 300 ² , 500 ^{1,2} , 1000 ^{1,2} mW
Diode	415 nm	120 mW
Diode	422 nm	120 mW
Diode	430 nm	50 mW
Diode	445 nm	75, 100, 250 ¹ , 500 ^{1,2} , 1000 ^{1,2} mW
Diode	450 nm	75, 250 ¹ , 500 ^{1,2} , 1000 ^{1,2} mW
Diode	455 nm	100 mW
Diode	473 nm	100 mW
Diode	488 nm	25, 75, 200 mW
Diode	505 nm	75 mW
Diode	515 nm	25, 75 mW
Diode	520 nm	50, 120, 250 ¹ , 500 ^{1,2} mW
DPSS	532 nm	75, 100, 125, 175, 200 mW
Diode	633 nm	75 mW
Diode	635 nm	75, 125, 300 ¹ mW
Diode	638 nm	75, 125, 175, 250 ¹ , 500 ¹ mW
Diode	642 nm	75, 125, 175 mW
Diode	650 nm	150, 200 ¹ mW
Diode	660 nm	75, 125, 175, 250 ¹ mW
Diode	670 nm	15, 250 ¹ , 500 ^{1,2} mW
Diode	685 nm	40 mW
Diode	690 nm	350 ^{1,2} mW
Diode	705 nm	40 mW
Diode	730 nm	40 mW
Diode	760 nm	20 mW
Diode	785 nm	75, 125, 250, 375 ² mW
Diode	805 nm	500 ^{1,2} mW
Diode	808 nm	75, 125, 175, 1000 ^{1,2} mW
Diode	830 nm	45, 75, 125, 1000 ¹ mW
Diode	852 nm	75, 125 mW
Diode	905 nm	100 mW
Diode	915 nm	75, 125, 175, 250, 1000 ^{1,2} mW
Diode	940 nm	75, 125, 175, 250 mW
Diode	976 nm	75, 125, 175, 250 mW
Diode	980 nm	75, 125, 175, 250, 1000 ^{1,2} mW
Diode	1064 nm	75, 125, 175, 300 ² , 500 ² , 1000 ^{1,2} mW

Lambda Beam Wavelock™

Highly stabilized compact laser system

Wavelength	Max. output power	Coherence length
405 nm	10, 35 mW	> 1.0 m
633 nm	40 mW	> 0.9 m
640 nm	10 mW	> 2.0 m
640 nm	30 mW	> 0.5 m
660 nm	35 mW	> 0.3 m
685 nm	45 mW	> 2.0 m
690 nm	45 mW	> 2.0 m
785 nm	75 mW	> 2.0 m
785 nm	100 mW	> 1.0 m
785 nm	75, 100 mW	> 0.6 cm
808 nm	150 mW	> 2.0 m
830 nm	500 ^{1,2} mW	> 4.5 mm



MINIATURIZED LASER MODULE



KEY FEATURES:

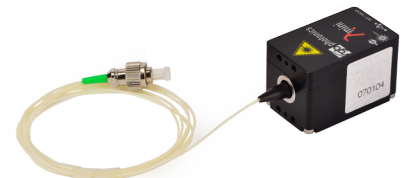
- Incredibly small yet fully featured
- Output powers up to 100 mW
- Powered via USB: no extra power adapter required
- Software included

Lambda Mini EVO

Wavelength	Maximum output power
375 nm	50 mW
405 nm	15, 50 mW
488 nm	75 mW
515 nm	25 mW
640 nm	75 mW
660 nm	75 mW
685 nm	40 mW
785 nm	75 mW
830 nm	45 mW

Lambda Mini FIBER

Wavelength	Maximum output power
405 nm	15, 50, 100 mW
445 nm	30 mW
488 nm	20 mW ^{*3}
520 nm	30 mW ^{*3}
635 nm	30, 60 mW
660 nm	50 mW
785 nm	50 mW
808 nm	50 mW
830 nm	50 mW
1064 nm	50 mW
1310 nm	10 mW
1550 nm	10 mW



Accessories



Fiber Coupler



Shutter



Remote Control



Cosine corrector



Collimator



Optical fiber cable

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