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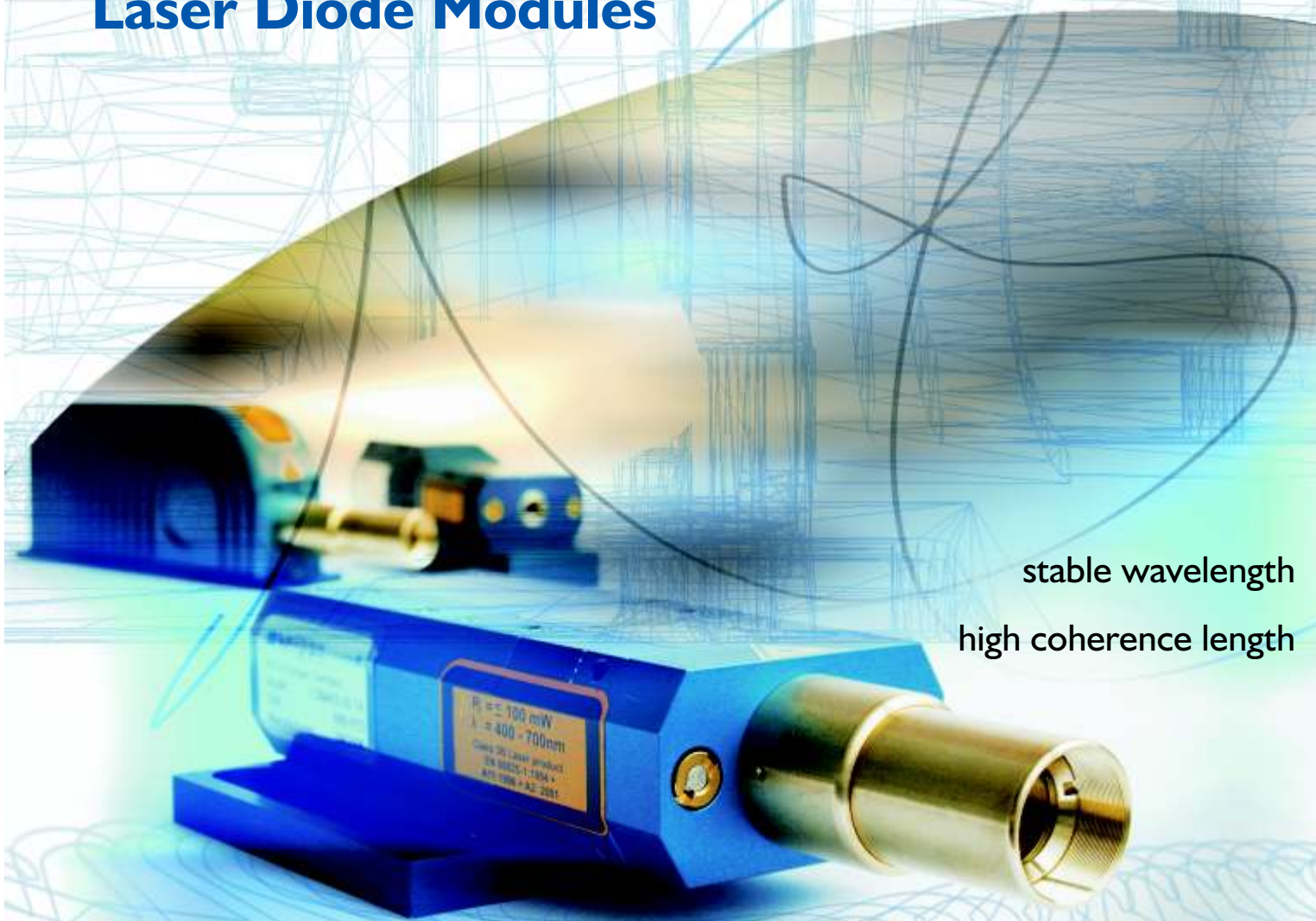
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Wavelength Stabilised Laser Diode Modules

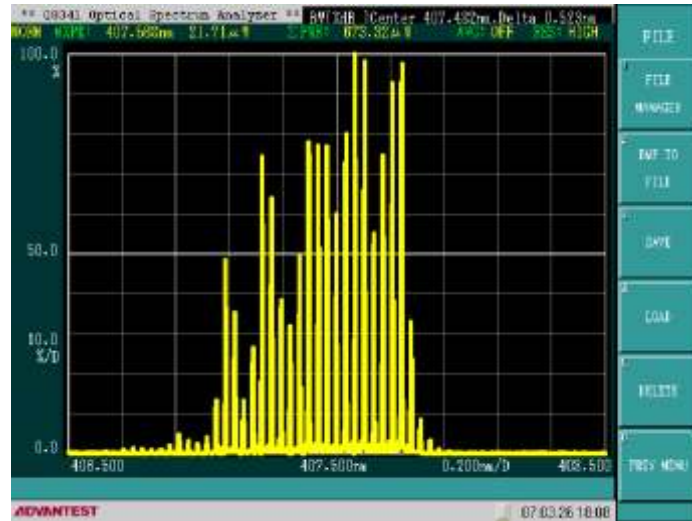


stable wavelength
high coherence length

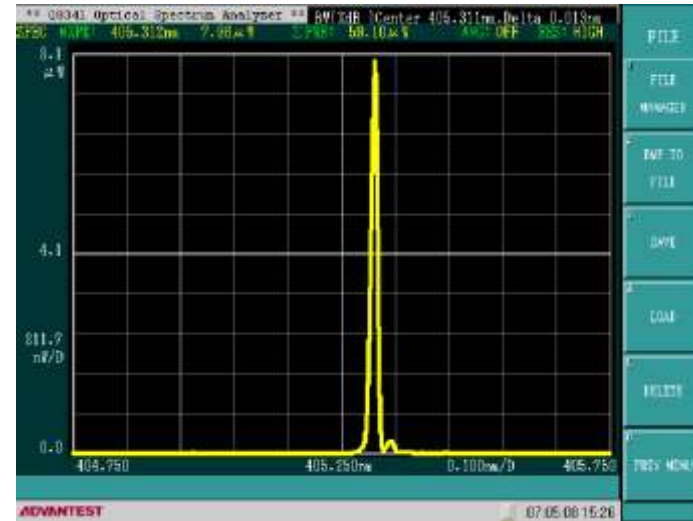
Wavelength Stabilised Laser Diode Modules

The **Bluephoton® WS** and **Redphoton® WS**, "Wavelength Stabilised" laser diode modules are using 375nm to 980nm laser diodes in an external cavity configuration to produce narrow linewidth and stable wavelength emission. Suitable for all UV/VIS/IR applications where wavelength sensitive elements like AO-modulators, electro-optic deflectors etc. are used in the beampath, the Photon-Series WS models are the right choice. The **Bluephoton® WS** UV/violet/blue laser diode modules are the most sophisticated light sources for replacement of gas lasers like Helium Cadmium, Argon Ion and Krypton lasers in high end applications for e.g. microlithography, digital holography, holographic data storage, wafer inspection, laser scanning microscopy aso.

The **Bluephoton® US** and **Redphoton® US** "Ultra Stabilised" laser diode modules offer even smaller bandwidth of <50 MHz. (<150MHz@405nm)



Optical bandwidth of normal 405nm laser diode modules



Optical bandwidth of the **Bluephoton® WS** 405nm wavelength stabilised laser

Specifications CWA.L.WS and CWA.L.US Models			
	Bluephoton® CWA.L.WS	Redphoton® CWA.L.WS	Blue-/Redphoton® CWA.L.US
wavelengths & Powers (other wavelengths and powers on request)	Single-Mode: 375 nm / 16mW 405 nm / 100mW 445 nm / 40mW 473 nm / 16mW 488 nm / 16mW Multi-Mode: 405 nm / 350mW (M ² <6)	Single-Mode: 638nm / 30mW 658nm / 100mW 808nm / 150mW 830nm / 150mW 976nm / 120mW 1061 nm / 80mW	Single-Mode: 405nm / 10mW 405nm / 50mW 638nm / 10mW 643nm / 100mW 658nm / 35mW 658nm / 100mW 685nm / 45mW 785nm / 85mW
beam diameter (other diameters on req.)	1.25mm (1/e ²) +/- 0.25mm (SM) 2.5mm (1/e ²) +/- 0.5mm (MM)	1.25mm (1/e ²) +/- 0.25mm	1.25mm (1/e ²) +/- 0.25mm
beam quality M ²	< 1.2 (SM) < 6 (MM)	< 1.2	< 1.3
stigmatism (corrected)	< 0.2*ZR	< 0.2*ZR	< 0.2*ZR
beam ellipticity	< 1.1:1 (SM)	< 1.1:1	< 1.1:1
optical bandwidth	< 0.02nm (FWHM)	< 0.2nm (FWHM)	< 50MHz (FWHM) (405nm < 150MHz)
Polarisation	> 100:1 vertical	> 100:1 vertical	> 100:1 vertical
Power stability	< 0.5% / h	< 0.5% / h	< 1% / h
Noise 0Hz-100MHz	< 0.5% peak<>peak	< 0.5% peak<>peak)	< 1% peak<>peak)
modulation speed	Analog: 100Hz Digital: 10kHz	Analog: 100Hz Digital: 10kHz	Analog: 100Hz Digital: 10kHz
supply voltage	24VDC, 2 Amp.		
features	Safety-Interlock LCD-working-hours display Remote-connector		
options	LDM.COL - collimator objective LDM.FOC - customized focussing objective LDM.FASY.XXX - fibre coupling unit LDM.24VPSU - worldwide power supply unit		