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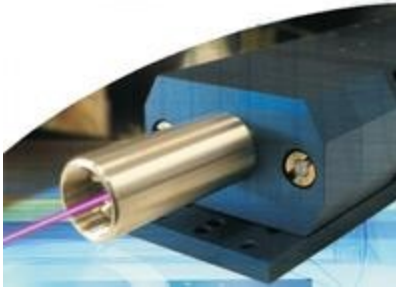
[CWA](#)

[CWA.L](#)

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**CWA.L.WS/US – Wavelength-Stabilised CW
Diode Lasers**



Wavelength stabilised CW laser diode modules with enhanced coherence length

Bluephoton® CWA.L.WS Series – 375 nm – 405 nm
 Redphoton® CWA.L.WS Series – 658 nm – 1061 nm
 Bluephoton® CWA.L.US Series – 405 nm

Specifications CWA.L.WS/US Models

	Bluephoton® CWA.L.WS	Redphoton® CWA.L.WS	Bluephoton® CWA.L.USV2
Wavelengths & Powers (other wavelengths and powers on request)	Single-Mode: 375nm / 16mW 405nm / 100mW Multi-Mode: 405nm / 350mW ($M^2 < 6$)	Single-Mode: 658nm / 100mW 808nm / 150mW 830nm / 150mW 976nm / 120mW 1061nm / 80mW	Single-Mode: 405nm / 40mW
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	<1.2
Astigmatism (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)	<150MHz (FWHM)

Polarisation	>100:1 vertical	>100:1 vertical	>100:1 vertical
Power stability	<0.5% / h	<0.5% / h	<0.5% / h
Noise 0Hz-100MHz	<0.5% peak<>peak	<0.5% peak<>peak)	<0.5% peak<>peak)
Supply voltage	24VDC, 2 Amp.		
Features	Safety-Interlock RS-232 Interface Remote-connector		
Options	LDM.COL - collimator objective LDM.FOC - customized focussing objective LDM.FASY.XXX - fibre coupling unit LDM.24VPSU - worldwide power supply unit		

The wavelength-stabilized lasers of the CWA.L.WS/US series are highly-stable, temperature-stabilized diode lasers with extremely stable central wavelength and decreased spectral bandwidth. By means of the structure of an external cavity, the laser diode is forced to emit on only one single wavelength and to retain this. Since the spectral bandwidth is very large, particularly in case of laser diodes in the blue wave band, this can be very disturbing in some applications. The lasers of the CWA.L.WS/US Series solve this problem and enable employment of diode lasers in applications which require narrow-band emission and stable wavelength (for example, with employment of AO deflectors, AO modulators and other wavelength-sensitive optical elements). As a result of their intelligent laser controller with interface RS-232, these lasers can be integrated seamlessly into applications and controlled. Through the standardized Command Line Interface (CLI), you have at all times full control of all parameters of the laser, such as e.g. laser diode temperature, laser powers and currents, operating modes and lots more. The high-precision temperature stabilization to a maximum diode temperature variation of <0.02°K and the stable power source for the laser diode, enable extreme power stability and very low noise levels.

The systems consist of a laser head and a laser controller in the EMC-screened modular housing with supply voltage input 24 V DC, according to industrial standards.

As in case of all lasers of the Bluephoton® and Redphoton® series, the laser head can be very simply adapted to customer specifications by the use of the modular principle.

Press Releases

[Wavelength-stabilised diode lasers in the red and blue](#)

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