The LDM Series - Versatile High-End Diode Lasers

The Omicron LDM series lasers are the most versatile diode lasers on the market. Their modular principle allows customization in a very quick and easy way. Direct fiber coupling, beam collimation between 0.5 and 15mm (1/e2), direct focusing on customers demand and many more can be realized by using standard modules that just change the length of the LDM laser head. Thirteen different laser models in combination with 20 different modules and more than 50 different wavelengths lead into a variety of more than 1000 different lasers.
The thirteen different laser models cover a huge range of todays most demanding applications like microlithography, DVD and Blu-Ray disc mastering, printing, reprography, microscopy and many more. High stability CW operation as well as high speed digital and analog modulation up to 500 Megahertz are available.

Make your choice…

Available models:

CW Lasers	CWA	Laboratory style CW laser
	CWA.L	Intelligent CW laser
	CWA.L.WS	Wavelength stabilized CW lasers
	CWA.L.US	Ultra stabilized CW lasers
	CWA.L.NB	Narrow Bandwidth DFB lasers
Modulated Lasers	150/500	Diode lasers with 150/500MHz digital modulation
	TA Deepstar®	Diode lasers with >2.500.000:1 modulation depth
	DC180	Diode lasers with 4-Level digital modulation >180MHz
	PS350	Diode lasers with programmable Pulse-Shaping >350MHz
	A350	Diode lasers with >350MHz analog modulation
High Power / Multiline	Dual Diode	Diode laser with two beam-combined laser diodes
	Dual Wavelength	Diode lasers with two different wavelengths
	Triple Wavelength	Diode lasers with three different wavelengths

Wavelength range: 375-1064 nm (others on request)

Optical output power: up to 2.400mW

LDM Series CW Lasers

CWA - High Stability CW laser diode modules with laboratory style controller

CW | >100 Hz | >10 Hz | SM | MM | 85-245V AC

	Blue- /Greenphoton® CWA	Redphoton® CWA
Wavelengths & Powers (other wavelengths and powers on request)	**Single-Mode (SM):** 375nm / 20mW 395nm / 120mW 405nm / 55mW, 120mW 415nm / 120mW 425nm / 120mW 445nm / 50mW, 100mW 457nm / 100mW 460nm / 100mW 473nm / 20mW, 80mW 488nm / 20mW, 60mW, 80mW 515nm / 25mW **Multi-Mode (MM):** 375nm / 200mW (M^2 = 5...6) 405nm / 400mW (M^2 = 5...6) 445nm / 500mW (M^2 = 2...3) 445nm / 1200mW (M^2 = 5...6)	**Single-Mode (SM):** 635nm / 5mW 637nm / 150mW 639nm / 40mW, 100mW 643nm / 150mW 658nm / 130mW 670nm / 15mW 685nm / 35mW 785nm / 120mW 808nm / 200mW 830nm / 200mW 852nm / 150mW 980nm / 150mW 1016nm / 100mW 1060nm / 100mW **Multi-Mode (MM):** 638nm / 250mW 670nm / 500mW 808nm / 1000mW (others on request)
Beam diameter (other diameters on request)	1.25mm ($1/e^2$) +/- 0.25mm 3 mm ($1/e^2$) +/- 0.3mm	1.25mm ($1/e^2$) +/- 0.25mm 3 mm ($1/e^2$) +/- 0.3mm
Beam quality M^2	< 1.2 (SM) < 6 (MM)	< 1.2 (SM) < 10 (MM)
Astigmatism (corrected)	<0.2*ZR	<0.2*ZR
Beam ellipticity	< 1.1:1 (SM)	< 1.1:1 (SM)
Polarisation	> 100:1 vertical	> 100:1 vertical
Power stability	<0.5% / h	<0.5% / h
Noise 0Hz-100MHz	<0.5% peak<>peak (CW)	<0.5% peak<>peak (CW)
Modulation speed	Analog: 100Hz Digital: 10kHz	Analog: 100Hz Digital: 10kHz
Supply voltage	85-245VAC, 50/60Hz	
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	

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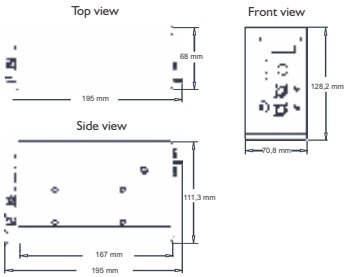
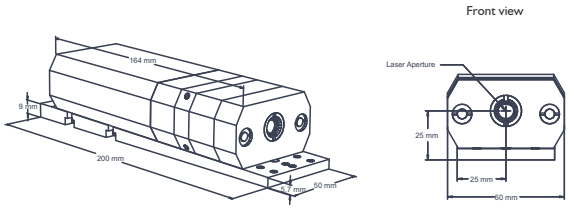
Wavelength in nm | Power in mW

CWA Controller



CWA/CWA.L Laserhead



Note: Laserhead dimensions may vary

CWA.L - OEM high stability CW laser diode modules with intelligent controller for machine integration

CW | >100 Hz | >10 Hz | SM | MM | RS 232 | 24V DC

	Blue- /Greenphoton® CWA.L	Redphoton® CWA.L
Wavelengths & Powers (other wavelengths and powers on request)	**Single-Mode (SM):** 375nm / 20mW 395nm / 120mW 405nm / 55mW, 120mW 415nm / 120mW 425nm / 120mW 445nm / 50mW, 100mW 457nm / 100mW 460nm / 100mW 473nm / 20mW, 80mW 488nm / 20mW, 60mW, 80mW 515nm / 25mW **Multi-Mode (MM):** 375nm / 200mW (M^2 = 5...6) 405nm / 400mW (M^2 = 5...6) 445nm / 500mW (M^2 = 2...3) 445nm / 1200mW (M^2 = 5...6)	**Single-Mode (SM):** 635nm / 5mW 637nm / 150mW 639nm / 40mW, 100mW 643nm / 150mW 658nm / 130mW 670nm / 15mW 685nm / 35mW 785nm / 120mW 808nm / 200mW 830nm / 200mW 852nm / 150mW 980nm / 150mW 1016nm / 100mW 1060nm / 100mW **Multi-Mode (MM):** 638nm / 250mW 670nm / 500mW 808nm / 1000mW (others on request)
Beam diameter (other diameters on request)	1.25mm ($1/e^2$) +/- 0.25mm 3 mm ($1/e^2$) +/- 0.3mm	1.25mm ($1/e^2$) +/- 0.25mm 3 mm ($1/e^2$) +/- 0.3mm
Beam quality M^2	< 1.2 (SM) < 6 (MM)	< 1.2 (SM) < 10 (MM)
Astigmatism (corrected)	<0.2*ZR	<0.2*ZR
Beam ellipticity	< 1.1:1 (SM)	< 1.1:1 (SM)
Polarisation	> 100:1 vertical	> 100:1 vertical
Power stability	<0.5% / h	<0.5% / h
Noise 0Hz-100MHz	<0.5% peak<>peak (CW)	<0.5% peak<>peak (CW)
Modulation speed	Analog: 100Hz Digital: 10kHz	Analog: 100Hz Digital: 10kHz
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.AAC - **A**utomatic **A**ging **C**ompensation LDM.24VPSU - 85-245VAC, 50/60Hz power supply unit	

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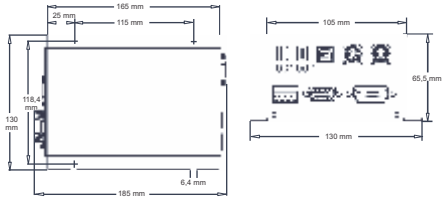
Wavelength in nm | Power in mW

CWA.L Controller



Note: Laserhead dimensions may vary

CWA.L.WS / US - Wavelength stabilised CW laser diode modules with enhanced coherence length

CW | SLM | RS 232 | 24V DC

	Bluephoton® CWA.L.WS	Redphoton® CWA.L.WS	Blue/Redphoton® CWA.L.US
Wavelengths & Powers (other wavelengths and powers on request)	**Single-Mode:** 375nm / 16mW 405nm / 100mW **Multi-Mode:** 405nm / 350mW (M^2<6)	**Single-Mode:** 638nm / 30mW 658nm / 100mW 808nm / 150mW 830nm / 150mW 976nm / 120mW 1061nm / 80mW	**Single-Mode:** 405nm / 12mW, 40mW 638nm / 9mW 658nm / 35mW 685nm / 45mW 785nm / 80mW 808nm / 170mW
Beam diameter (other diameters on req.)	1.25mm ($1/e^2$) +/- 0.25mm (SM) 2.5mm (1/e2) +/- 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	<1.5
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)	<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 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		

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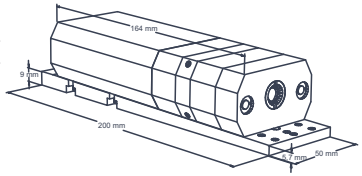
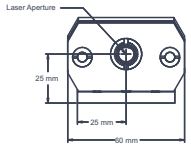
Wavelength in nm | Power in mW

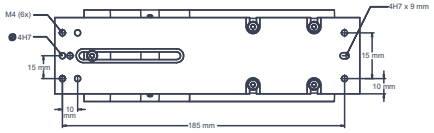
CWA.L.WS / CWA.L.NB / CWA.L.US Laserhead

Front view





Bottom view



Note: Laserhead dimensions may vary

CWA.L.NB - Narrow Bandwidth CW laser diode modules using DFB diode technology

CW | >100 Hz | >10 Hz | SLM | RS 232 | 24V DC

	Redphoton® CWA.L.NB
Wavelengths & Powers (other wavelengths and powers on request)	**Single-Mode:** 760nm / 40mW 763nm / 30mW 773nm / 75mW 780nm / 80mW 785nm / 80mW 852nm / 150mW 937nm / 100mW 976nm / 150mW 1060nm / 150mW
Beam diameter (other diameters on request)	1.25mm ($1/e^2$) +/- 0.25mm
Beam quality M^2	<1.2
Astigmatism (corrected)	<0.2*ZR
Beam ellipticity	<1.1:1
Optical bandwidth	<10 MHz (2 MHz typical)
Polarisation	>100:1 vertical
Power stability	<0.5% / h
Noise 0Hz-100MHz	<0.5% peak<>peak
Modulation speed	Analog: 100Hz Digital: 10kHz
Supply voltage	24VDC, 2 Amp.
Features	Safety- interlock RS-232 Interface Remote-connector
Options	LDM.COL - collimator objective LDM.FOC - customized focussing objective LDM.AAC - Automatic Aging Compensation LDM.FASY.XXX - fibre coupling unit LDM.24VPSU - world wide power supply

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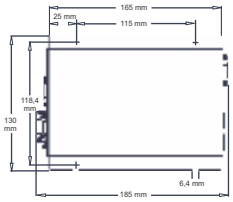
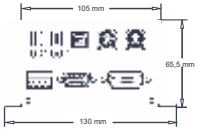
Wavelength in nm | Power in mW

CWA.L.WS / CWA.L.NB / CWA.L.US Controller

Top view



Front view



Note: Laserhead dimensions may vary