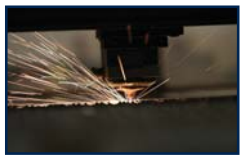
Lumics






LUxxxxCyyy-C
Multiple Wavelength Diode Laser
Mix of 808nm to 1470nm wavelength

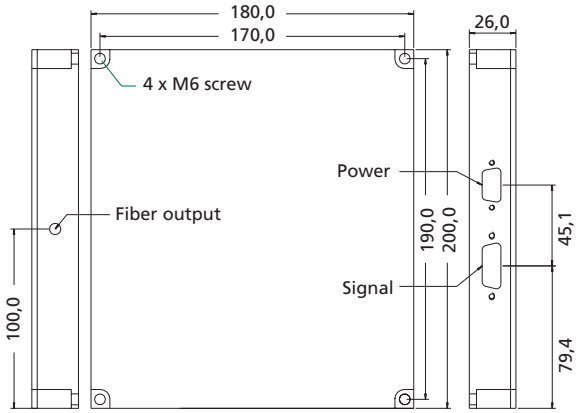
Description:
The Lumics LUxxxxCyyy-C Diode Laser series provides different wavelength laser light out of one singe 400µm, NA 0.22 output fiber. Multiple wavelength like 808, 915, 940, 980, 1064 and/or 1470nm can be combined within one system. Each wavelength segment can be individually controlled and monitored. The Diode Laser consists of hermetically sealed single emitter modules in a rugged industrial package. Long lifetime is ensured due to extensive screening and facet passivation technology. The performance makes it a variable medical treatment laser source

Features & Functions:
- Multiple wavelength (808, 915, 940, 980, 1064 and/or 1470nm)
- Hermetically sealed and tested single emitters
- Individual output power control for each wavelength
- Temperature control
- Fiber sensor
- Red pilot

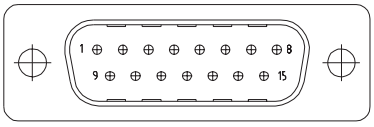
Benefits:
- Very high Lifetime
- Compact design
- Cost-effective
- All-in-Fiber

Applications:
- Multiple medical laser treatments with one system
- Materials processing

Module Drawing (dimensions in mm)



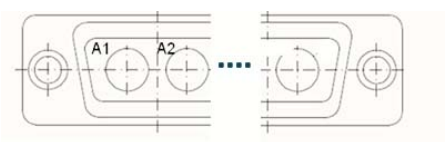
D-Sub 15-pole Signal Connector



Pin	Function	Pin	Function
5	Pilot Laser +*	10	Photo Diode 2 +*
6	Pilot Laser -*	11	Photo Diode Gnd
7 / 8	Temp. Sensor 1 for Diode Laser*	12 / 13	Temp. Sensor 1 for Fiber Connector*
9	Photo Diode 1 +	14 / 15	Temp. Sensor 2 for Diode Laser*

* = Option

5 to 7-pole Pin



Pin	Function
A1	LD (+) wavelength 1
A2	LD (-) wavelength 1
A3	LD (+) wavelength 2
A4	LD (-) wavelength 2
A5	. . . .

Your ideas are welcome.

Electrical and Optical Characteristics (Laser specifications at 25°C):

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Example 1: 2 wavelength (40W 808nm + 40W 980nm)						
c.w. Output Power	808nm	Pop1		40		W
	980nm	Pop2		40		W
Peak Wavelength	808nm	λ1	798	808	818	nm
	980nm	λ2	970	980	990	nm
Operating Current	808nm	Iop1		4.8	5.2	A
	980nm	Iop2		11	12	A
Operating Voltage	808nm	Vf1		21.5		V
	980nm	Vf2		9		V
Example 2: 3 wavelength (15W 808nm + 15W 980 + 15W 1470nm)						
c.w. Output Power	808nm	Pop1		15		W
	980nm	Pop2		15		W
	1470nm	Pop3		15		W
Peak Wavelength	808nm	λ1	798	808	818	nm
	980nm	λ2	970	980	990	nm
	1470nm	λ3	1460	1470	1480	nm
Operating Current	808nm	Iop1		4.8	5.2	A
	980nm	Iop2		11	12	A
	1470nm	Iop3		7.5	8	A
Operating Voltage	808nm	Vf1		7.2		V
	980nm	Vf2		3.6		V
	1470nm	Vf3		18		V
Other general characteristics						
Spectral Width (FWHM)	each wavelength	Δ λ		4	8	nm
Threshold Current	depends on wavelength	Ith		600-900		mA
Wavelength Tuning vs. Temperature		Δ / T		0.35		nm/K
Wavelength Tuning vs. Operating Current		D / I		1		nm/A
Monitor Diode (individual monitors each wavelength as option)				0.5 - 20		µA/W
Temperature Sensor		NTC		10		kOhm
Red Pilot Beam						
c.w. Output Power (1)		at 5V		1	3	mW
Peak Wavelength		as specified	625	635	660	nm
Spectral Width (FWHM)				1	2	nm
Operating Voltage				5		V
Fiber Output						
SMA 905 Connector on Case						
Fiber Core Diameter				400		µm
Numerical Aperture		NA		0.22		

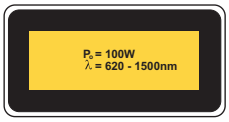
Remark:
(1) Do not exceed 3 mW Optical Output Power for the Red Pilot Beam.

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temp. (without water)	Tmax	-20	60	°C
Operating Case Temp.	Top, case	10	40	°C
LD Reverse Voltage	VR, max		2	V
Maximum Power Red Pilot Beam	Pmax, red LD		3	mW

Important Note:
Read and carefully follow operating manual instructions. Especially - whenever power supply is switched on or off, always disconnect from laser module. See manual for details. Uncontrolled on / off switching may cause spikes and result in fatal device damage.

User Safety



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