



LU0808Dyyy Medical Diode Laser Up to 7W, 14W or 20W output power at 808nm



Description:

The Lumics Medical Diode Laser series offers OEM integrators an excellent product to manufacture state-of-the-art end user laser systems. The easy integration and safe use of these medical laser components give the chance to be cost-efficient in development and manufacturing. Equipped with several accessories and features the Lumics diode lasers comply with CE, FDA & ROHS requirements. Lumics warranties highest reliability single emitter technology through careful design, extensive burn-in, long life-time & thermal testing.

Features & Functions:

- 7W, 14W or 20W power
- 808nm wavelength
- 200µm NA 0.22 fiber
- Red pilot
- Monitor photodiodes
- Fiber sensors
- burn-in tested laser diode emitters
- Sealed housing
- SMA connector
- Exchangeable window
- Small foot print

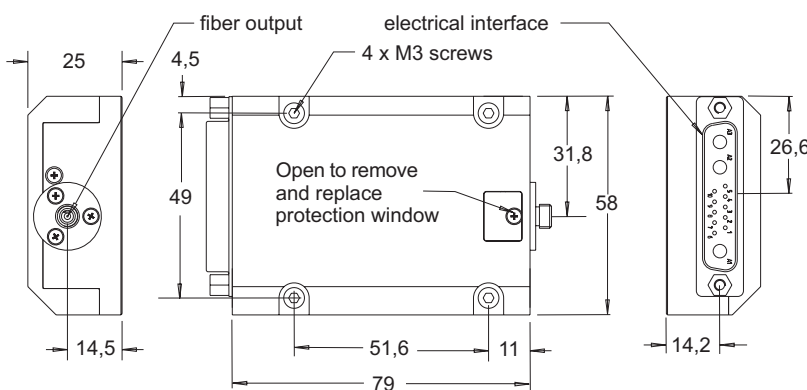
Benefits:

- FDH-required sensors
- Ultra long lifetime
- Passive cooling

Applications:

- Dental
- Dermatology
- Therapeutic
- Veterinary

Module Drawing (Dimensions in mm)



Pin Connections

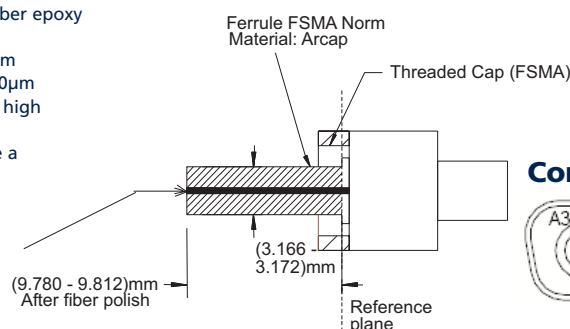
Pin	Configuration
1	Fiber Sensor Signal 1
2	Fiber Sensor Signal 2 *
3	Fiber Sensor / Monitor Diode 12V
4	Fiber Sensor (GND) LM35 (GND) Monitor Diode (GND)
5	LM35 Signal or NTC or PT100/1000
6	Monitor Diode Signal 2 *
7	Monitor Diode Signal 1
8	Pilot Laser (GND)
9	LM35 5V or NTC or PT100/1000
10	Pilot Laser 3V
A1	808nm Laser Diode (+)
A2	Laser Diode GND (-)
A3	N.C.

* = optional

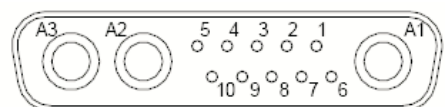
F-SMA Connector

Strict Recommendations

- (1) Use transparent and high temperature fiber epoxy (e.g. Epotek ND353)
- (2) 105µm fiber core max. excentricity +/- 5µm
>105µm fiber core max. excentricity +/-10µm
- (3) Above 60W: use free standing fiber with high power connector
- (4) Below 60W and <=105µm fiber core: use a free standing or large cladding 105µm/600µm not free standing fiber
- (5) Check always for good fiber centricity by turning the fiber ferrule between 0°-180° to maximum output power at < 5W



Connector



Your ideas are welcome.


Electrical and Optical Characteristics

Parameter	Type / Conditions	Min	Typ	Max	Unit
Optical Characteristics					
Output Power	LU0808D070-D / P _{op} (c.w.)		7		W
	LU0808D140-D / P _{op} (c.w.)		14		W
	LU0808D200-D / P _{op} (c.w.)		20		W
Peak Wavelength (at P _{op})	λ_{peak}	798	808	818	nm
Spectral Width (FWHM)	λ_{rms}		3		nm
Conversion Efficiency			40		%
Spectral Shift with Temp.	λ_{T_shift}		0.3		nm / K
Fiber Core Diameter			200		μ m
Fiber Centricity			<10		μ m
Numerical Aperture	NA		0.22		
Fiber Connector Type			SMA905		
Electrical Characteristics					
Forward Current at P _{op}	I _{op}		9		A
Forward Voltage	LU0808D070-D / V _{op}		1.9		V
	LU0808D140-D / V _{op}		3.7		V
	LU0808D200-D / V _{op}		5.5		V
Threshold Current	I _{th}		1.8		A
Red Pilot Beam (Option)					
Pilot Beam Output Power			1		mW
Pilot Beam Wavelength		630	635	640	nm
Pilot Beam Operating Voltage			3	3.3	V
Pilot Beam Operating Current			30	55	mA
Sensors					
Power Monitor Operating Voltage (Option)			12		V
Power Monitor Signal Voltage			0 - 4		V
Fiber Detection Sensor Operating Voltage (Option)			12		V
Fiber Detection Sensor Signal Voltage			12 / 0		V
Temperature Sensor			LM35 or NTC or PT100/1000		

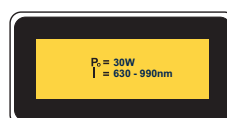
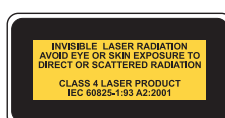
Important Note

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.

General Parameters / Accessories

Parameter	Symbol	Min	Typ	Max	Unit
Storage Temperature	T _s	0		50	°C
Operation Temperature	T _{op}	15		35	°C
Humidity / Non-condensing Atmosphere				90	%
Recommended Thermal Heatsink Resistance				0.1	K / W
Weight			179		g
Compliance			CE, FDA, ROHS		
Standard Accessories					
Interface Connector			13W3 Female		
Mounting Screws / metric			4 x M3 x 10		
Further Options					
2nd Monitor Diode / 2nd Fiber Detection Sensor (Please ask for quotation if needed)					
Optical Fiber Patchcord with SMA Connectors			from our partner FCC GmbH, www.fibercableconnect.de		
Laser diode drivers on request					

User Safety



Your ideas are welcome.