



LU0980Dyyy Medical Diode Laser Up to 12W, 20W or 30W output power at 980nm



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:

- 12W, 20W or 30W power
- 980nm 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

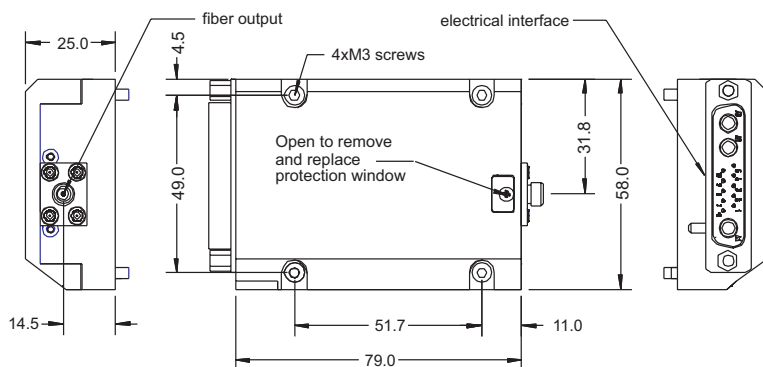
Benefits:

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

Applications:

- Dental
- Dermatology
- Therapeutic
- Veterinary

Module Drawing (Dimensions in mm)



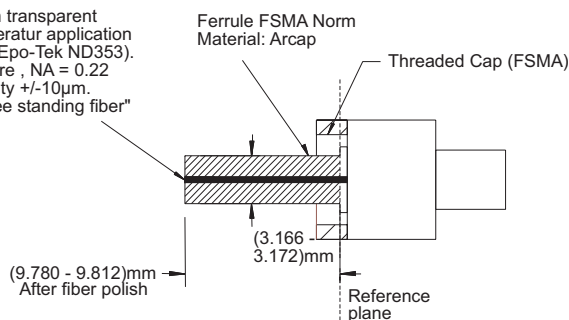
Pin Connections

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

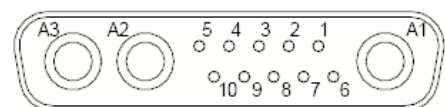
* = optional

F-SMA Connector

Fiber fixed with transparent and high temperature application epoxy (e.g.: Epo-Tek ND353).
Min. 200µm core, NA = 0.22
Max. eccentricity +/-10µm.
"Do not use free standing fiber"



Connector



Your ideas are welcome.


Electrical and Optical Characteristics

Parameter	Type / Conditions	Min	Typ	Max	Unit
Optical Characteristics					
Output Power	LU0980D120-D / P _{op} (c.w.)		12		W
	LU0980D200-D / P _{op} (c.w.)		20		W
	LU0980D300-D / P _{op} (c.w.)		30		W
Peak Wavelength (at P _{op})	λ_{peak}	970	980	990	nm
Spectral Width (FWHM)	λ_{rms}		4		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}		15.5		A
Forward Voltage	LU0980D120-D / V _{op}		1.7		V
	LU0980D200-D / V _{op}		3.3		V
	LU0980D300-D / V _{op}		5.0		V
Threshold Current	I _{th}		1.1		A
Red Pilot Beam					
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			15	20	mA
Sensors					
Power Monitor Operating Voltage			5		V
Power Monitor Signal Voltage			0 - 4		V
Fiber Detection Sensor Operating Voltage			12		V
Fiber Detection Sensor Signal Voltage			12 / 0		V
Temperature Sensor			LM35 (NTC on request)		

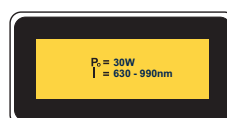
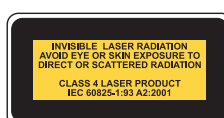
Important Note:

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			10W3 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.