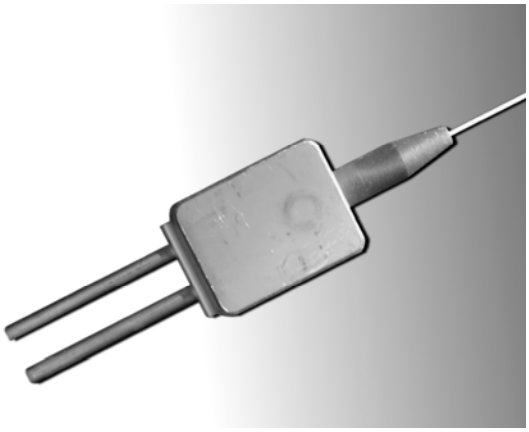
7W 2 Pin Multimode Pump Laser

Features

- 915, 940 or 960nm center wavelength
- 0.15 or 0.22NA 105µm core multimode fiber pigtail
- Uncooled
- Laser welded and epoxy free
- Hermetically sealed
- RoHS compliant
- Qualified high reliability build structure



Applications

- Fiber lasers
- Yb laser pumping
- Marking
- Material processing
- Printing

General Description

The EM4 low cost RoHS compliant multimode pump is designed for pumping fiber lasers. It provides 7W of light fiber coupled into a 105µm core multimode fiber with numerical aperture of 0.15 or 0.22. The pump laser chip is built into a 2 pin package. The design and build of the module fulfills the requirements of Telcordia GR-468 and uses EM4 proven manufacturing processes.

Ordering Information

Part Number	λ_C [nm]	Fiber NA
EM298	915	0.15
EM299	915	0.22
EM300	940	0.15
EM301	940	0.22
EM302	960	0.15
EM303	960	0.22

Absolute Maximum Ratings

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only and operation of the device at these or conditions beyond these are not implied. Exposure to absolute maximum ratings for extended periods of time may affect device reliability.

Parameter	Sym	Condition	Min	Max	Unit
Storage Temperature	T_{STG}		-40	85	°C
Operating Case Temperature	T_{OP}		-20	70	°C
Laser Forward Current	I_F			11	A
Laser Reverse Voltage	V_R			2	V
Lead Soldering Time				10	s
Lead Soldering temperature				250	°C
ESD		HBM		500	V

Optical And Electrical Characteristics

T_C=25°C unless otherwise specified, good thermal interface

Parameter	Sym	Condition	Min	Typ.	Max	Unit
Center Wavelength	λ_C	EM298, EM299, I=I_{OP}-1	905	915	925	nm
		EM300, EM301, I=I_{OP}-1	930	940	950	
		EM302, EM303, I=I_{OP}-1	950	960	970	
Operating Current	I_{OP}	P=P_{OP}			9	A
Operating Voltage	V_{OP}	I=I_{OP}			2.2	V
Output Power	P_{OP}		7			W
Threshold Current	I_{TH}			0.4	0.6	A

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Optical And Electrical Characteristics (continued)

T_C=25°C unless otherwise specified.

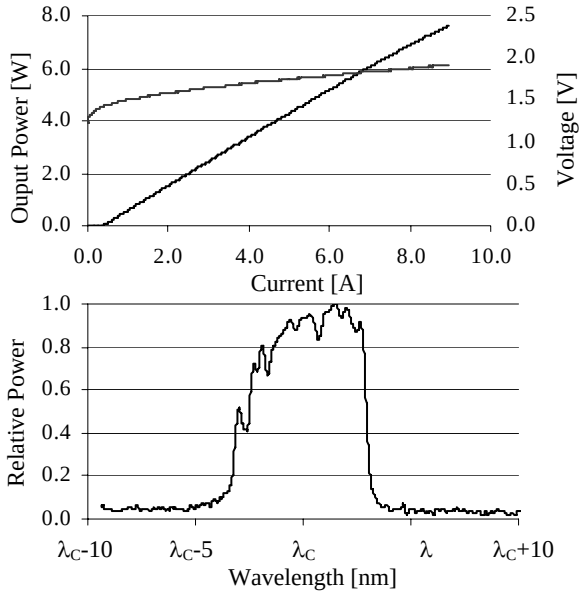
Parameter	Sym.	Condition	Min	Typ.	Max	Unit
Wavelength Drift vs. T_C	$\delta\lambda/\delta T_C$			0.3		nm/°C
Spectral Width	$\Delta\lambda$	-17dB down from peak		6		nm
Operating Case Temperature	T_C		0		45	°C

Fiber Specification

Parameter	Typ.	Unit
Fiber Type	Step Index	-
Numerical Aperture	0.15 or 0.22	-
Core Diameter	105	µm
Outer Diameter	125	µm
Buffer Diameter	250	µm
Jacket Material	PVDF	-
Jacket Diameter	900	µm
Jacket length from end of boot	85±10	mm
Pigtail Length Min	1	m

Typical Operating Characteristics

T_C=25°C

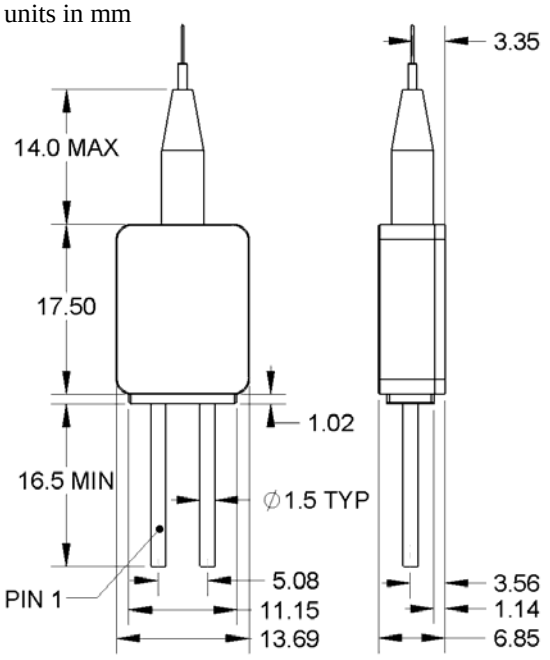


Pinning

Pin	Description
1	Laser Anode (+)
2	Laser Cathode (-)

Mechanical Drawing

All units in mm



The component complies with all applicable portions of 21 CFR 1040.10, 21 CFR 1010.2 and 21 CFR 1010.3. Since this is a component, it does not comply with all of the requirements contained in 21 CFR 1040.10 and 21 CFR 1040.11 for complete laser products.

For pricing and delivery information, please contact EM4 inc. direct at +1 781 275 75 01, sales@em4inc.com or any of the representatives listed at www.em4inc.com.