

Features

- 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 6W 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.

Absolute Maximum Ratings

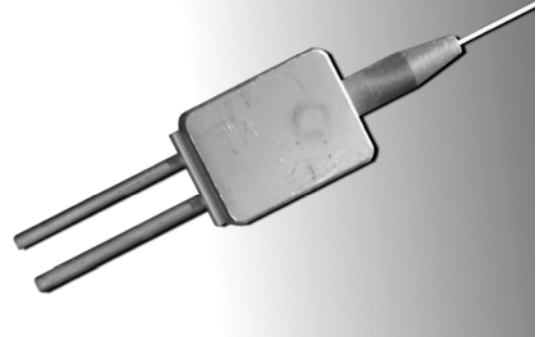
Stresses beyond those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only and operation of the device at these or conditions beyond these are not implied. Exposure to absolute maximum ratings for extended periods of time may affect device reliability.

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	I=I _{OP} -1	965	975	985	nm
Operating Current	I _{OP}	P=P _{OP}			8	A
Operating Voltage	V _{OP}	I=I _{OP}			2.2	V
Output Power	P _{OP}		6			W
Threshold Current	I _{TH}			0.4	0.6	A



Ordering Information

Part Number	λ _C [nm]	Fiber NA
EM304	975	0.15
EM305	975	0.22

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

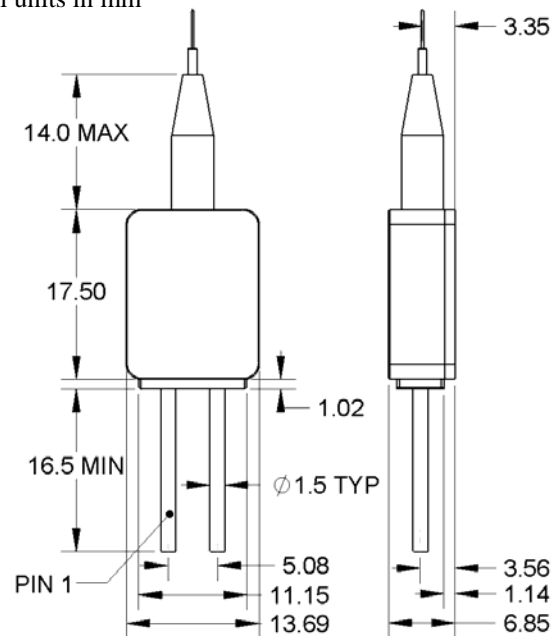
Parameter	Typ.	Unit
Fiber Type	Step Index	-
Numerical Aperture	0.15 or 0.22	-
Core Diameter	105	μm
Outer Diameter	125	μm
Buffer Diameter	250	μm
Jacket Material	PVDF	-
Jacket Diameter	900	μm
Jacket length from end of boot	85±10	mm
Pigtail Length Min	1	m

Pinning

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

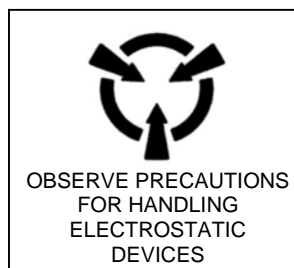
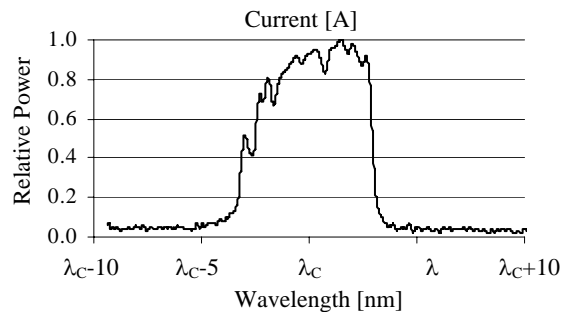
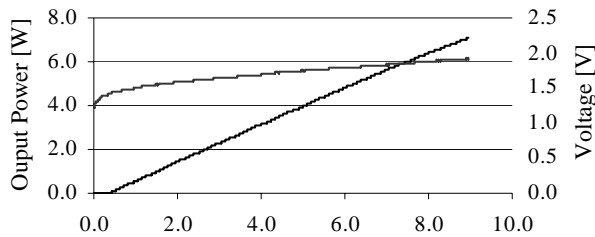
Mechanical Drawing

All units in mm



Typical Operating Characteristics

T_C=25°C



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.

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