

## 980nm High Power Stabilized LDM, 300mW



### Applications

- Pump Source for Er-Doped Fiber Amplifier
  - C- Band EDFA
- Single Channel Amp to DWDM Amp

### Description

- The FOL0906A series has been designed for use in a wide variety of optical amplifier, such as EDFA used in optical transmission systems, especially in dense wavelength-division-multiplexing (DWDM) systems.
- A strained quantum well laser diode chip is integrated with thermo-electric cooler (TEC), thermistor and PIN photodiode in a hermetically sealed 14 pin butterfly package.
- A lensed-fiber system enables high coupling efficiency and the output power up to 300 mW.
- This laser module complies with telecom requirements described in Telcordia<sup>TM</sup>GR-468 requirement and manufactured in an ISO<sup>TM</sup>9001 certified production line.

### Features

- Rated output power up to 300 mW (operating)
- Widely deployed reliable package design with industry compatible 14 pin butterfly footprint
- Internal Thermo-electric cooler (TEC) and Thermistor for stable operation
- Integrated PIN photodiode
- Wavelength stabilization with external FBG
- PMF pigtail is available.
- Epoxy free design inside the module for long term Reliability

## Absolute Maximum Ratings

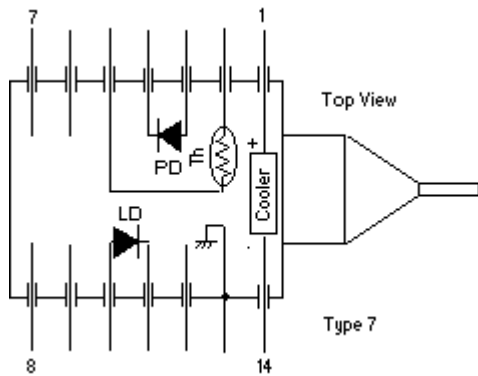
Parameters	Sym.	Min.	Max.	Unit	Parameters	Sym.	Min.	Max.	Unit
Storage Temperature	Tstg	-40	85	°C	PD Forward Current	IfPD	-	5	mA
Operating Case Temperature	Tc	-5	75	°C	PD Reverse Voltage	VrPD	-	20	V
Fiber Output Power	Pf	-	500	mW	TEC Current	Ic	-0.6	2	A
LD Forward Current	If	-	1000	mA	TEC Voltage	Vc	-	4.5	V
LD Reverse Voltage	Vr	-	2.5	V					

## Optical and Electrical Specifications (Sensor Temperature (Ts) = 25°C)

Parameters	Sym.	Min.	Typ.	Max.	Unit	Conditions
Output Power						
FOL0906A23	Pf	230	-	-	mW	IfBOL=<560mA
FOL0906A24		240	-	-		IfBOL=<560mA
FOL0906A25		250	-	-		IfBOL=<580mA
FOL0906A26		260	-	-		IfBOL=<600mA
FOL0906A27		270	-	-		IfBOL=<620mA
FOL0906A28		280	-	-		IfBOL=<620mA
FOL0906A29		290	-	-		IfBOL=<650mA
FOL0906A30		300	-	-		IfBOL=<650mA
Threshold Current		Ith	-	70		85
Center Wavelength	$\lambda_c$	$\lambda_c-1$	$\lambda_c$	$\lambda_c+1$	nm	Peak, Rated Power $\lambda_c=974-976\text{nm}$
Spectral Width	$\Delta\lambda$	-	-	2	nm	FWHM, Rated Power
Wavelength Stability (Temp)	$\Delta\lambda/\Delta T$	-	0.01	0.02	nm/°C	T: FBG Temp.
LD Forward Voltage	Vf	-	-	2.5	V	Rated Power
LD Forward Current at EOL	IfEOL	-	-	1.1xIfBOL	mA	End of Life
Kink Free Power	Pkink	1.1xPf	-	-	mW	-
Optical Power stability	$\Delta Pf$	-	-	2.0	%	30mW~Pf, 60s peak to peak
Monitor Responsivity	Im/Pf	2	-	20	$\mu\text{A}/\text{mW}$	VrPD=5V, Average 0mW ~ Pf
Monitor Dark Current	Id	-	-	100	nA	VrPD=5V
TEC Current	Ic	-	-	1.4	A	max. $\Delta T=50^\circ\text{C}$ , IfEOL
TEC Voltage	Vc	-	-	3.2	V	max. $\Delta T=50^\circ\text{C}$ , IfEOL
Thermistor Resistance	Rth	9.5	10	10.5	k $\Omega$	Ts=25°C
Thermistor B Constant	Rth	-	3900	-	K	Ts=25°C
Tracking Error	T.E.	-0.5	-	0.5	dB	Tc=-5~75°C Referred to Tc=25°C

# Dimensions & Pin Assignment

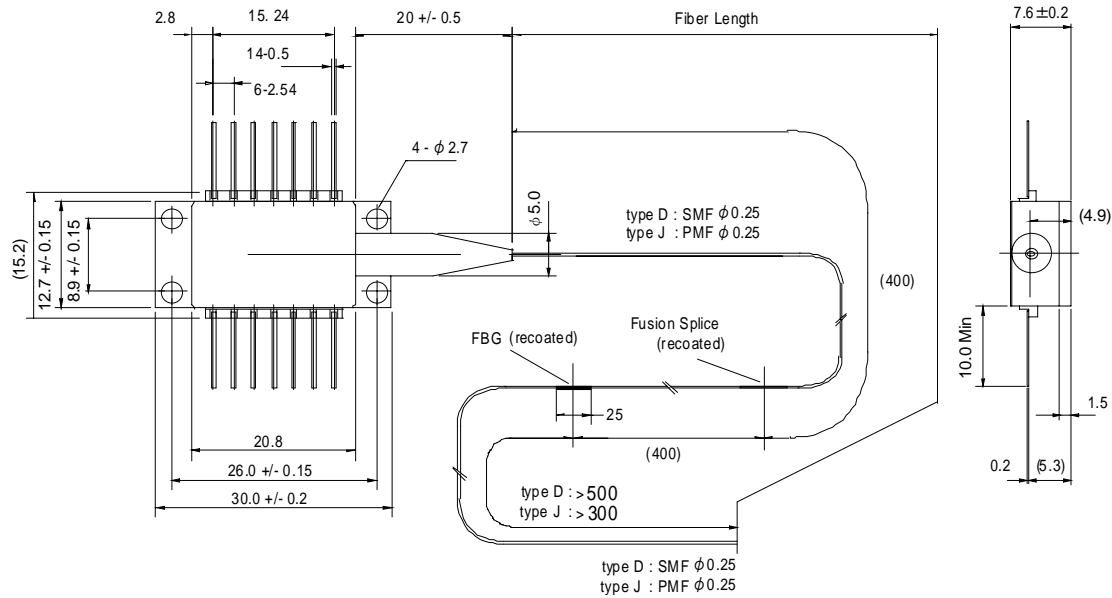
## Pin Assignment



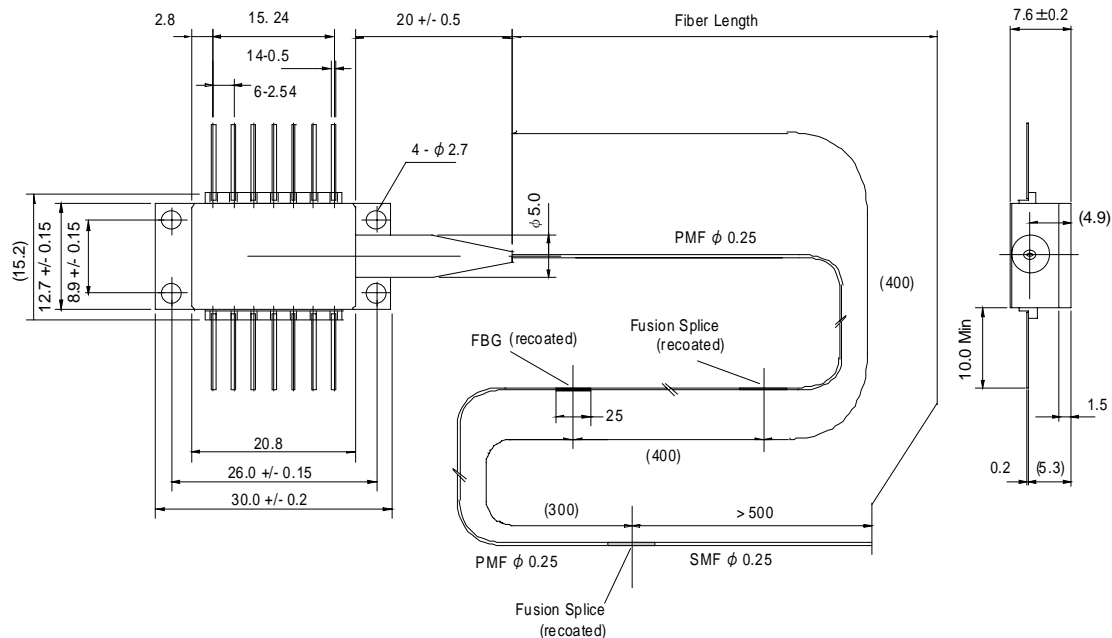
Pin#	Function	Pin#	Function
1	Cooler(+)	8	No Connection
2	Thermistor	9	No Connection
3	PD anode(-)	10	LD anode(+)
4	PD cathode(+)	11	LD cathode(-)
5	Thermistor	12	No Connection
6	No Connection	13	Case GND
7	No Connection	14	Cooler(-)

## Dimensions

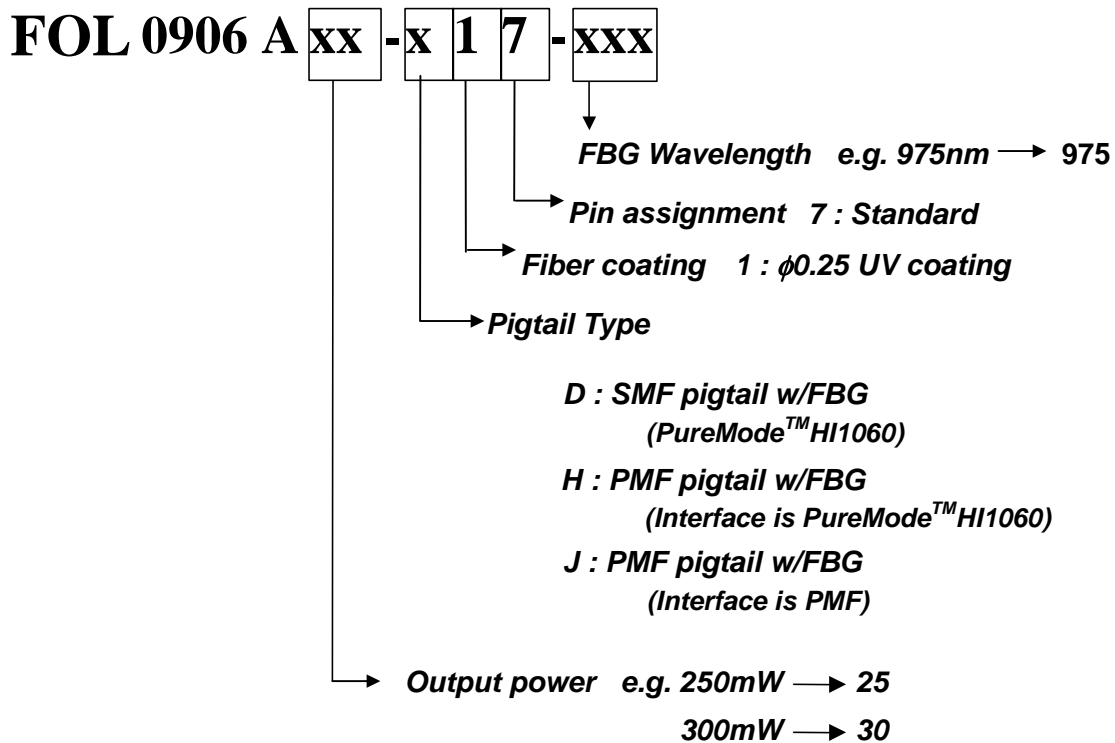
### Type D, J



### Type H



## Ordering Information



## Safety Information

This product complies with 21 CFR 1040.10 and 1040.11, Class 3b laser product. Invisible laser radiation is emitted from the end of the fiber or connector. Avoid direct exposure to the beam.



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