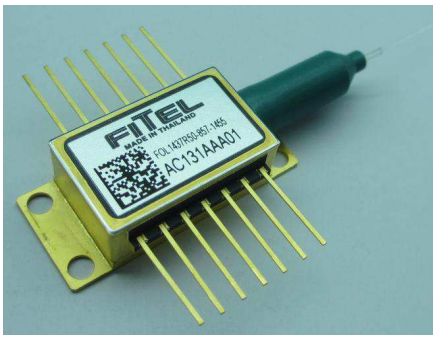
Data Sheet

FOL1437 Series

(with FBG, λ=1400-1465nm) August 2017

14xx-nm Pump Laser Diode Module (with FBG)

(High power / Low power consumption)



Applications

- **Pump Source for Raman Amplifier**
  - **C-band Raman**

Product Type : FOL1437 Series

Descriptions

- The FOL1437 series (with FBG) has been designed for use in a wide variety of optical amplifier, such as Raman Amplifier used in optical transmission systems, especially in dense wavelength-division-multiplexing (DWDM) systems.
- A strained multi-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 2-lens-system couples a round shape light from the laser chip efficiently to the fiber and enables the output power up to 500 mW.
- This laser module complies with telecom requirements described in Telcordia™ GR-468 requirement and manufactured in an ISO™9001 certified production line.

Features

- Rated output power up to 500 mW (CW)
- 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 for back facet monitor
- Polarization maintaining fiber pigtail
- Wavelength stabilization available with external FBG
- EU RoHS compliant (Exemption 7(c)-1, 13(a) applied)

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Absolute Maximum Rating

Parameters	Sym.	Min.	Max.	Unit
Storage Temperature	Tstg	-40	85	°C
Operating Case Temperature	Tc	-20	70	°C
LD Forward Current	If	-	2100	mA
LD Reverse Voltage	Vr	-	2	V
PD Forward Current	IfPD	-	5	mA
PD Reverse Voltage	VrPD	-	20	V
TEC Current	Ic	-1.1	4.5	A
TEC Voltage	Vc	-	4.5	V

Specifications

(LD Temperature (Ts) = 25°C)

Parameters	Sym.	Min.	Typ.	Max.	Unit	Conditions
Output Power[1)]	Pf	Table A			mW	
Forward Current	If				mA	
Center Wavelength(FBG)	λ	λ-1.5	λ	λ+1.5	nm	RMS(-20dB), Rated Power λ=1400~1465nm for FBG
Spectral Width	Δλ	-	-	3	nm	RMS(-20dB), Rated Power
Forward Voltage	Vf	Table A			V	Rated Power
Forward Current at EOL	IfEOL	-	-	1.15xIfBOL	mA	
Monitor Current	Im	100	-	2000	μA	VrPD=5V, Rated Power
Monitor Dark Current	Id	-	-	100	nA	VrPD=5V
Extinction Ratio	Re	16	-	-	dB	
TEC Specification	-	Table A				
Thermistor Resistance	Rth	9.5	10	10.5	kΩ	Ts = 25°C
Thermistor B Constant	Bth	-	3900	-	-	Ts = 25°C

1) Pf: Available Pf may depend upon center wavelength selected.

Table A

*:EOL

Part Number	Pf(mW)	If(mA) max	Vf(V) max	Tc(ºC)	Itec(A)* max	Vtec(V)* max	Wtotal(W)* max
FOL1437R34	340	1300	2.1	70	2.6	3.1	10.5
FOL1437R45	450	1500	2.2	70	2.8	3.3	12
FOL1437R50	500	1700	2.3	70	3.0	3.5	13.5

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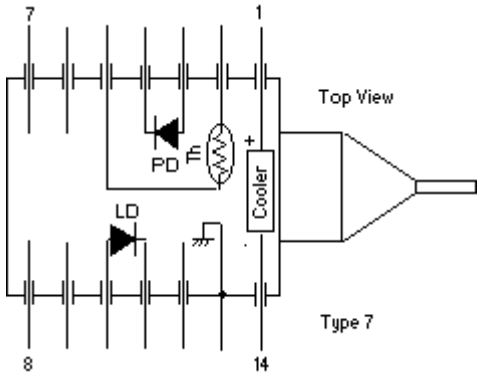
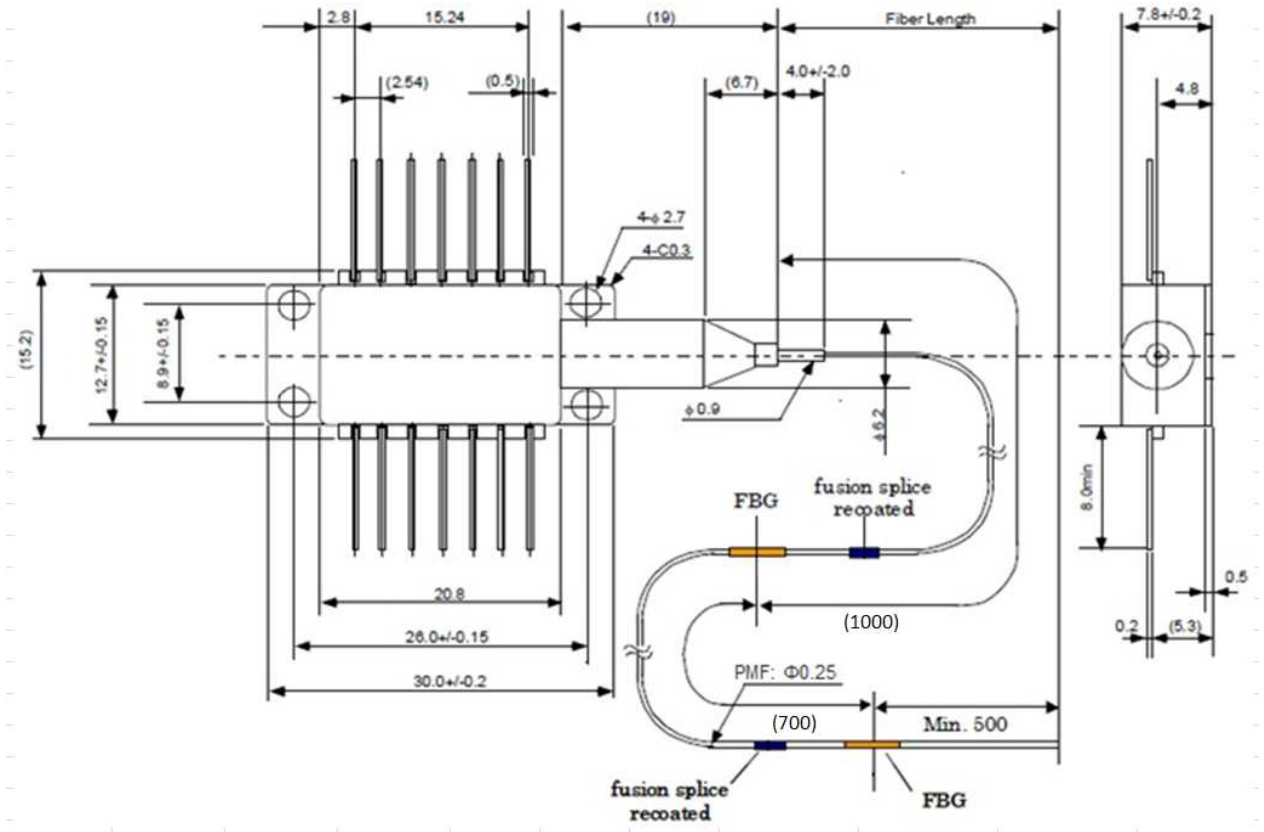
Pin Assignment



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

FOL1437Rxx-857-xxxx (w/2FBGs)



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Ordering information

FOL 1 4 3 7 R□□ - 8 5 7 - □□□□

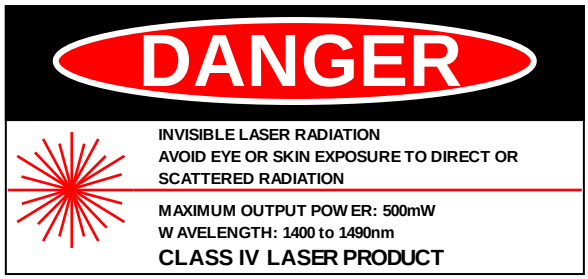
Output power

e.g. 500mW : FOL1437R50

Wavelength *e.g.1425*

Safety information

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



Furukawa Electric reserves the right to improve, enhance and modify the features and specifications of FITEL products without prior notifications.

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