

1.65 μm DFB-LD Module AB6B407BJ537F

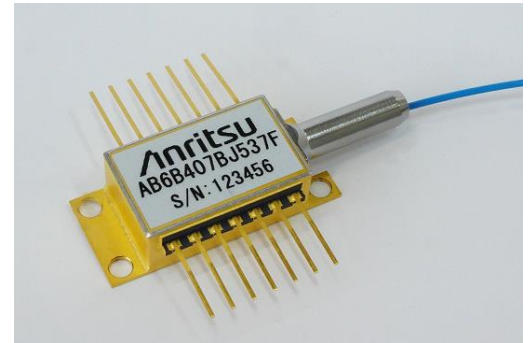
AB6B407BJ537F is 1.65 μm distributed feedback (DFB) laser diodes module developed as a light source for methane sensing.

FEATURES

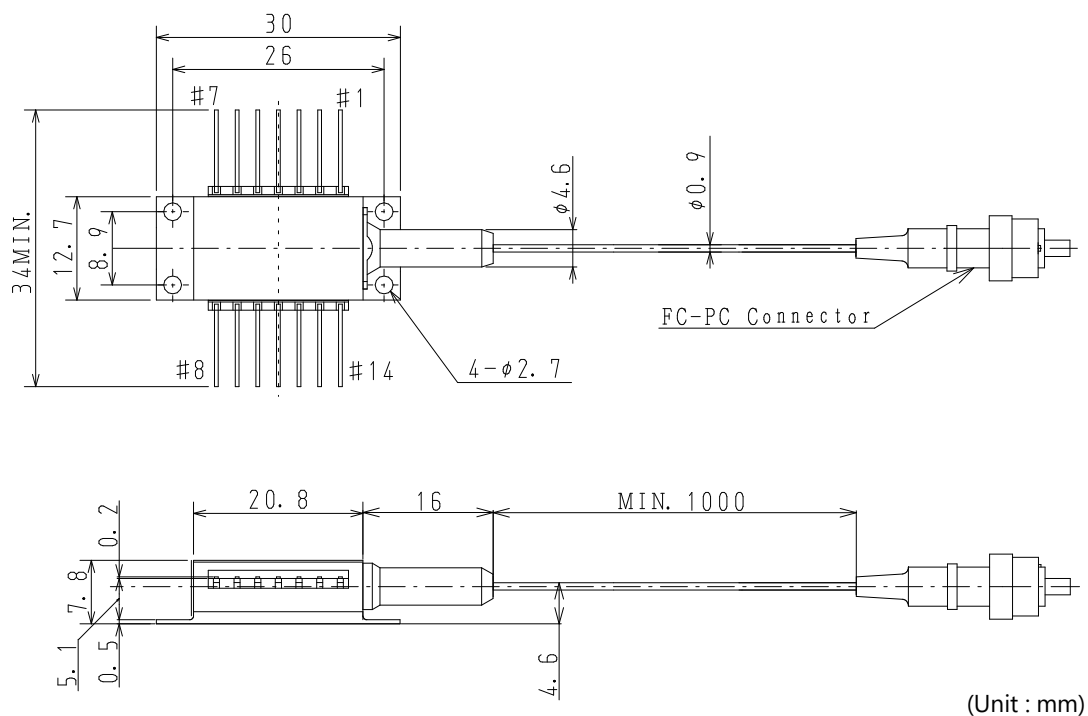
- Optical Output Power : 10 mW typ.
- Built-in optical isolator
- Internal monitor PD and TEC
- SMF pigtail type (FC/PC connector)

APPLICATIONS

- Methane gas sensing



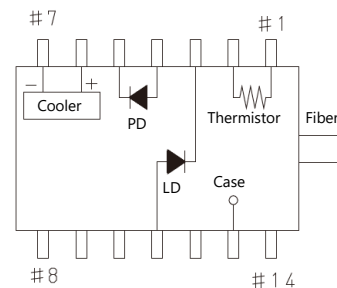
DIMENSIONS



PIN CONFIGURATION

No.	FUNCTION	No.	FUNCTION
1	Thermistor	8	NC
2	Thermistor	9	NC
3	LD Cathode	10	NC
4	PD Anode	11	LD Anode
5	PD Cathode	12	NC
6	Cooler Anode	13	Case
7	Cooler Cathode	14	NC

TOP VIEW



ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Ratings	Unit
LD Forward Current	I_F	150	mA
LD Reverse Voltage	V_R	2	V
PD Forward Current	I_{FD}	10	mA
PD Reverse Voltage	V_{RD}	10	V
Operating Case Temperature	T_C	-20 to +70	°C
Storage Temperature	T_{stg}	-40 to +85	°C
Cooler Current	I_C	2	A

*Excess over the absolute maximum ratings may cause device failure.

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{LD} = 25^\circ\text{C}$, $T_C = 25^\circ\text{C}$)

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 100 \text{ mA}$	–	–	2.5	V
Threshold Current	I_{th}	–	–	10	25	mA
Optical Output Power	P_f	$I_F = 100 \text{ mA}$	7	10	–	mW
Peak Wavelength	λ_p	$I_F = 100 \text{ mA}$	1652.7	1653.7	1654.7	nm
Side Mode Suppression Ratio	SMSR	$I_F = 100 \text{ mA}$	33	40	–	dB
Spectral Linewidth	Δf	$I_F = 100 \text{ mA}$	–	3	15	MHz
PD Dark Current	I_d	$V_{RD} = 5 \text{ V}$	–	–	0.1	μA
Tracking Error	ΔP_f	$I_m = \text{const.}, T_C = -20 \text{ to } 70^\circ\text{C}$	-0.5	–	0.5	dB
Cooler Voltage	V_C	$I_F = 100 \text{ mA}, T_C = 70^\circ\text{C}$	–	–	2.5	V
Cooler Current	I_C	$I_F = 100 \text{ mA}, T_C = 70^\circ\text{C}$	–	–	1	A
Thermistor Resistance	R_{th}	$T_{LD} = 25^\circ\text{C}, B = 3900 \pm 100 \text{ K}$	9.5	10	10.5	k Ω
Isolation	R_O	$\lambda = 1650 \text{ nm}$	–	30	–	dB
Current dependency of peak wavelength	$d\lambda/dI$	$I_F = 100 \text{ mA}$	–	0.009	–	nm/mA
Temperature dependency of peak wavelength	$d\lambda/dT$	$I_F = 100 \text{ mA}$	–	0.09	–	nm/°C



CAUTION : Handle the fiber of the enclosed device(s) with extreme care ; glass fiber is subject to breakage if mishandled and permanent damage to the device may result. Do not pull the device by the fiber or protective sleeve.
Do not coil the fiber into a loop of than 30 mm in radius.

SEMICONDUCTOR LASER AVOID EXPOSURE Invisible laser radiation is emitted from this aperture	DANGER INVISIBLE LASER RADIATION AVOID DIRECT EXPOSURE TO BEAM OUTPUT POWER 50mW WAVELENGTH 1.10 to 1.80 μm CLASS IIb LASER PRODUCT Caution – use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. This Product Complies with 21 CFR 1040.10 and 1040.11 Manufactured Anritsu Corp. 5-1-1 Onna, Atsugi-shi, Kanagawa, Japan
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ANRITSU CORPORATION

SENSING & DEVICES COMPANY SALES DEPT.

<https://www.anritsu.com/sensing-devices>

Tel +81 46 296 6783 Fax +81 46 225 8390
5-1-1 Onna, Atsugi-shi, Kanagawa
243-8555 Japan



Contact URL

<https://www.anritsu.com/en-gb/sensing-devices/contact-us>

Please read "Notes on Handling Optical Devices" before use.

<https://www.anritsu.com/sensing-devices/guide/optdevices-handling>



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