

# 1.55μm SLD MODULE AS5B125EM50M

The AS5B125EM50M is 1.65μm SLD (Super Luminescent Diode) module developed as incoherent light sources for various optical measurements. The device emits incoherent light having wide spectral half width and high output power from PMF (polarization-maintaining fiber).

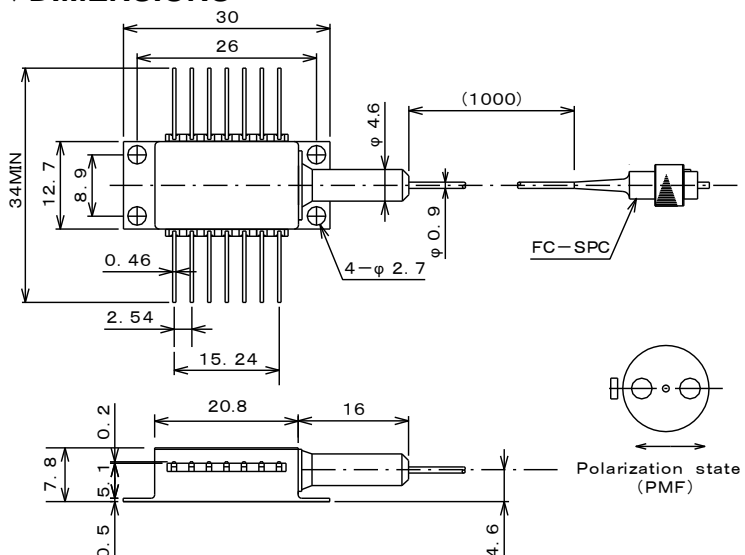
## ◆ FEATURES

- High optical output : 10mW/≤350mA
- Wide spectral half width  $\Delta\lambda=70\text{nm}$  (typ.)
- Built-in optical isolator
- Internal monitor PD and TEC

## ◆ APPLICATIONS

- Optical sensor
- Optical Coherent Tomography (OCT)
- Optical measurement

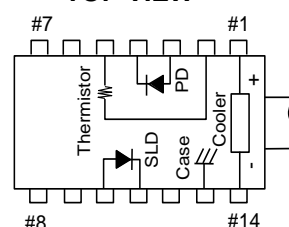
## ◆ DIMENSIONS



## ◆ ABSOLUTE MAXIMUM RATINGS (T<sub>SLD</sub>=25deg.C)

Item	Symbol	Rating	Unit
SLD Forward Current	I <sub>F</sub>	420	mA
SLD Reverse Voltage	V <sub>R</sub>	2	V
PD Forward Current	I <sub>FD</sub>	10	mA
PD Reverse Voltage	V <sub>RD</sub>	10	V
Operating Case Temperature	T <sub>C</sub>	-20 to +75	°C
Storage Temperature	T <sub>stg</sub>	-40 to +85	°C
Cooler Current	I <sub>C</sub>	2	A

## TOP VIEW



## PIN CONFIGURATION

No.	FUNCTION	No.	FUNCTION
1	Cooler anode	8	NC
2	Thermistor	9	NC
3	PD anode	10	SLD anode
4	PD cathode	11	SLD cathode
5	Thermistor	12	NC
6	NC	13	Case
7	NC	14	Cooler cathode

(Unit: mm)

## ◆ OPTICAL AND ELECTRICAL CHARACTERISTICS (T<sub>SLD</sub>=25deg.C, T<sub>C</sub>=25deg.C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	P <sub>F</sub> =10mW			2.5	V
Forward Current (BOL)	I <sub>F</sub>	P <sub>F</sub> =10mW			350	mA
Center Wavelength	λ <sub>C</sub>	P <sub>F</sub> =10mW, -3dB	1630	1650	1670	nm
Spectral Width	Δλ	P <sub>F</sub> =10mW, -3dB	65	70		nm
Spectral Ripple	M	P <sub>F</sub> =10mW, res=0.1nm			0.6	dB
Monitor Current	I <sub>m</sub>	P <sub>F</sub> =10mW, V <sub>RD</sub> =5V	100		2000	μA
PD Dark Current	I <sub>d</sub>	V <sub>RD</sub> =5V			0.1	μA
Tracking Error	ΔP <sub>f</sub>	I <sub>m</sub> =const, T <sub>C</sub> =-20 to 75deg.C			0.5	dB
Cooler Voltage	V <sub>C</sub>	I <sub>F</sub> =*EOL, T <sub>C</sub> =75deg.C			3.5	V
Cooler Current	I <sub>C</sub>	I <sub>F</sub> =*EOL, T <sub>C</sub> =75deg.C			1.2	A
Thermistor Resistance	R <sub>th</sub>	T <sub>SLD</sub> =25deg.C, B=3900±100K	9.5	10	10.5	kΩ
Optical Isolation	R <sub>o</sub>	λ=1650nm, T <sub>SLD</sub> =25deg.C		30		dB

(Note) \*EOL=BOL X 1.2

(Note) Polarization state of SLD is aligned parallel to the slow axis.



**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**

**DANGER**

INVISIBLE LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION

**AVOID EXPOSURE**

Invisible laser radiation is emitted from this aperture

OUTPUT POWER 500mW  
WAVELENGTH 0.80 to 1.80 μm  
CLASS IIIb 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

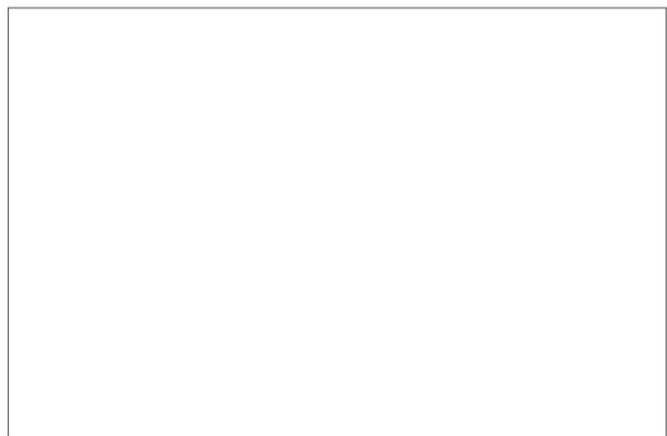
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