

1.55μm SLD Module AS5B310KM50M

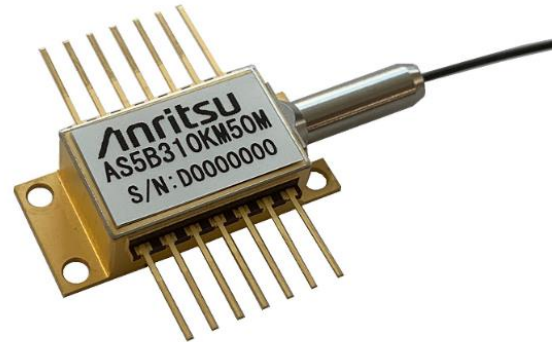
AS5B310KM50M is 1.55μm SLD (Super Luminescent Diode) module developed as incoherent light sources for various optical measurement. The device emits incoherent light having wide spectral half width and high output power from PFM (polarization-maintaining fiber).

◆ FEATURES

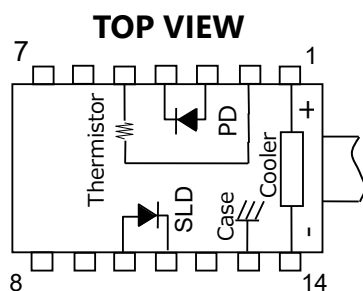
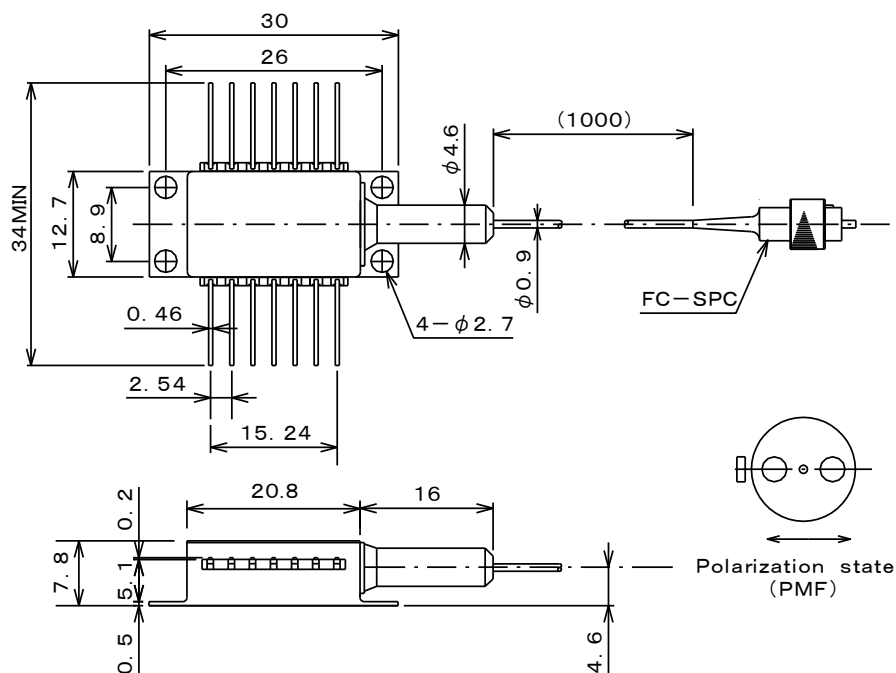
- Wide spectral half width: $\Delta\lambda = 60 \text{ nm}$ (typ.)
- Built-in optical isolator
- Built-in monitor PD and TEC

◆ APPLICATIONS

- Optical fiber sensor
- Optical Coherence Tomography (OCT)
- Optical measurement



◆ DIMENSIONS (Unit: mm)



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

◆ **ABSOLUTE MAXIMUM RATINGS** ($T_{SLD}=25^{\circ}C$)

Item	Symbol	Rating	Unit
SLD Forward Current	I_F	250	mA
SLD 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 +75	$^{\circ}C$
Storage Temperature	T_{stg}	-40 to +85	$^{\circ}C$
Cooler Current	I_c	2	A

NOTE: Exceeding the absolute maximum ratings may cause a failure.

◆ **OPTICAL AND ELECTRICAL CHARACTERISTICS** ($T_{SLD}=25^{\circ}C$, $T_C=25^{\circ}C$)

Item	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=200$ mA	-	-	2.0	V
Optical Output Power	P_f	$I_F=200$ mA	1	3	-	mW
Center Wavelength	λ_c	$I_F=200$ mA, -3 dB	1530	1550	1570	nm
Spectrum Bandwidth	$\Delta\lambda$	$I_F=200$ mA, -3 dB	40	60	-	nm
Spectral Ripple	M	$I_F=200$ mA, res=0.1 nm	-	-	0.6	dB
Monitor Current	I_m	$I_F=200$ mA, $V_{RD}=5$ V	200	-	1500	μA
PD Dark Current	I_d	$V_{RD}=5$ V	-	-	0.1	μA
Tracking Error	$ \Delta P_f $	$I_F=200$ mA, $T_C=-20$ to $75^{\circ}C$	-	-	0.5	dB
Cooler Voltage	V_c	$I_F=200$ mA, $T_C=75^{\circ}C$	-	-	3.5	V
Cooler Current	I_c	$I_F=200$ mA, $T_C=75^{\circ}C$	-	-	1.2	A
Thermistor Resistance	R_{th}	$T_{SLD}=25^{\circ}C$, $B=3900\pm 100K$	9.5	10	10.5	$k\Omega$
Optical Isolation	R_o	$\lambda=1550$ nm, $T_{SLD}=25^{\circ}C$	-	30	-	dB



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
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