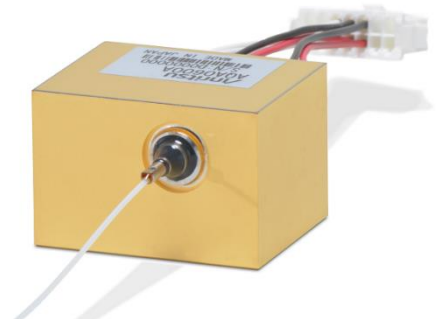


Wavelength Swept Light Source AQA0600A

The AQA0600A Wavelength Swept Light Source outputs single-longitudinal-mode laser light that is continuously wavelength phase-swept without mode hopping. This modular light source is built into a 40 x 27 x 31.6 mm metal package.

Features

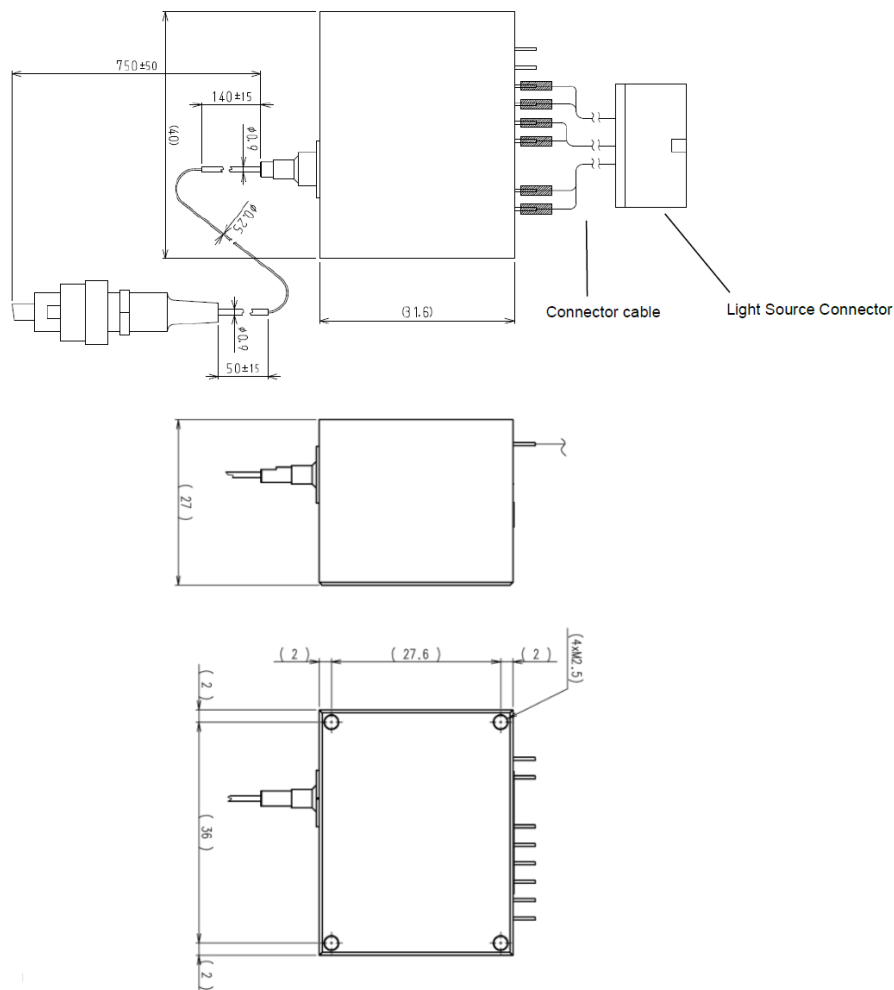
- 1060 nm band swept laser
- Single-longitudinal-mode oscillation without mode hopping
- Compact, lightweight assembly
- Sweep frequency: 1250 Hz, sinusoidal
- Wavelength sweep range: 30 nm
- Average optical output: ≥ 10 mW



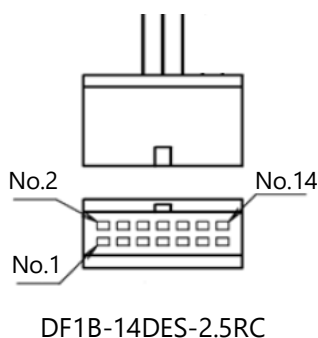
Applications

- OCT for internal structure measurement *OCT: Optical Coherence Tomography
- Integration into fiber sensing equipment
- Integration into bio-imaging equipment

Dimensions Unit: mm



Light Source Connector



PIN CONFIGURATION

No.	FUNCTION	No.	FUNCTION
1	NC	8	LD cathode
2	NC	9	Thermistor
3	NC	10	Thermistor
4	NC	11	NC
5	MEMS coil	12	NC
6	MEMS coil	13	NC
7	LD anode	14	NC

ABSOLUTE MAXIMUM RATINGS ($T_{th} = 25^{\circ}\text{C}$)

Item	Symbol	Rating	Unit
LD Forward Current	I_F	180	mA
LD Reverse Voltage	V_R	2	V
MEMS Driving Coil Application Signal	—	Wavelength sweep width should not exceed 32.5 nm	—
Operating Thermistor Temperature ¹⁾	T_{th}	+20 to +30	$^{\circ}\text{C}$
Storage Temperature ²⁾	T_{stg}	-20 to +60	$^{\circ}\text{C}$

*Exceeding the absolute maximum ratings may cause device failure.

1) Relative Humidity: $\leq 85\%$, No condensation

2) Relative Humidity: $\leq 95\%$, No condensation

OPTICAL AND ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Conditions	Rating	Unit
Optical Connector	—	—	FC/APC	—
Optical Fiber Length	—	SMF	750 ± 50	mm
Oscillation Mode	—	—	Single longitudinal and mode-hop-free	—
Optical Output Wavelength Change Method	—	—	Sinusoidal	—
Center Wavelength	λ_C	At 30 nm sweep	1060 ± 5	nm
Wavelength Sweep Range	—	—	30	nm
Sweep Frequency ³⁾	—	—	1250 ± 50	Hz
Average Optical Output	P_f	—	$\geq 10^{4)}$	mW
Light Source Connector	—	—	HIROSE; DF1B-14DES-2.5RC	—
Connector Cable Length	—	—	60 ± 10	mm
Thermistor Resistance	R_{th}	$T_{th} = 25^{\circ}\text{C}$, $B = 3450\text{K} \pm 2\%$	$9.8 \leq R_{th} \leq 11.7$	k Ω
MEMS Coil Resistor	—	—	7 ± 2	Ω
Dimensions ⁵⁾	—	Excluding protrusions	$40 (W) \times 27 (H) \times 31.6 (D)$	mm
Mass	—	—	<200	g

3) The sweep frequency depends on the mechanical oscillation frequency of the MEMS device built into the wavelength swept light source and cannot be adjusted by the user.

Do not use a drive signal outside the 1250 ± 50 Hz frequency range of the MEMS device, otherwise it may be damaged.

4) The AQA0600A (this product) is designed as a component for use in customers' electronic products. As a result, it is excluded from 21 CFR 1040.10 compliance.

5) This product is mounted using four M2.5 bolts in the bottom face. Use a torque driver to tighten these bolts to 0.07 to 0.08 N·m.

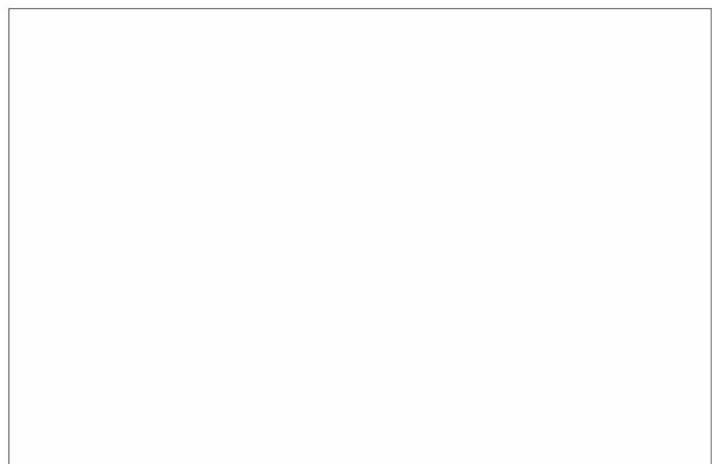


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