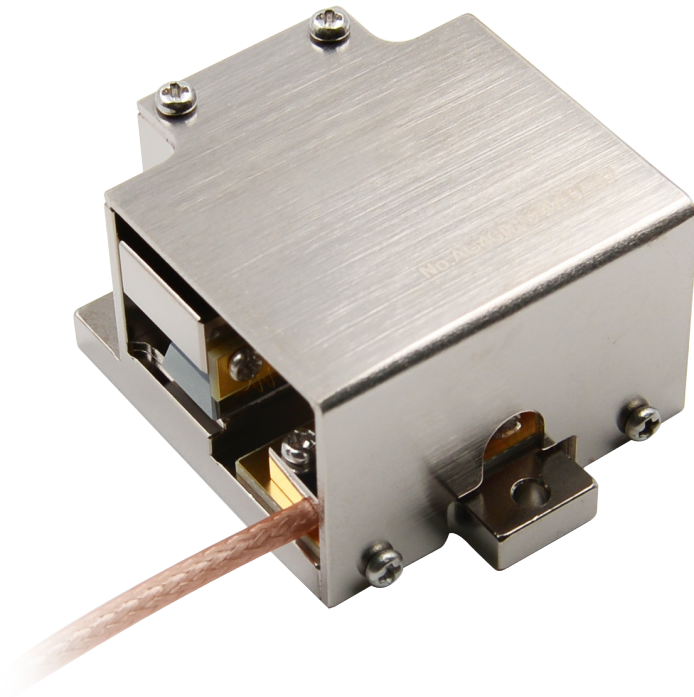


ACOUSTO-OPTICS Q-SWITCHES

AOQS is an important optical component that controls the laser pulse generation inside the laser. By controlling the input radio frequency signal of the piezoelectric transducer, the change of the refractive index inside the quartz crystal is formed, resulting in the diffraction of the incident light, and finally the laser pulse is generated.

Coherent's AOQS has high-quality quartz crystal and AR film with high damage threshold to ensure the use of AOQS in high-power application scenarios. In addition, Coherent's precise crystal processing, bonding, and impedance matching technology enable AOQS products to have excellent performance and reliability.

In order to meet the application requirements of customers, we also have AOQS with various frequencies, mechanical parts, and optical apertures, which can be freely matched. If customers need further customization, welcome to contact us.



FEATURES

- Superior crystal processing technology
- Excellent performance and reliability
- Good beam quality
- High damage threshold
- Customization Capability

APPLICATIONS

- Q-switching for pulsed laser
- Light modulating
- Frequency shifter

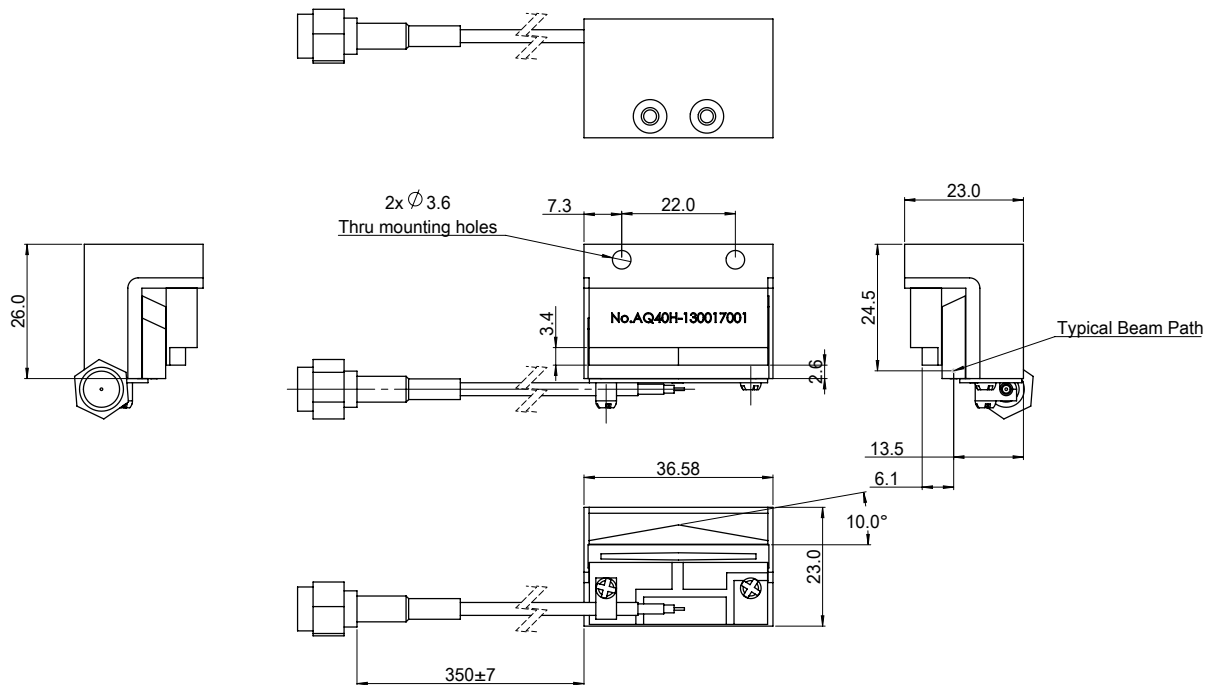
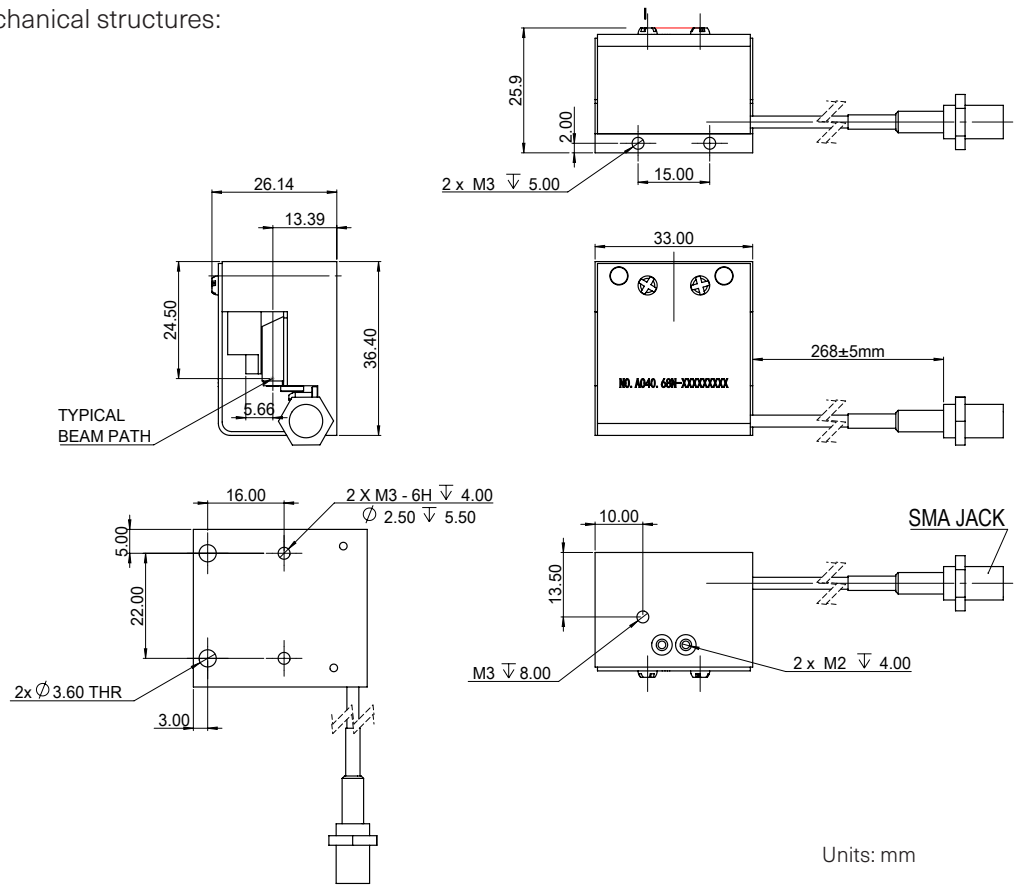
Specification

40.68 MHz

Parameters	Unit	Value
AO Medium	—	Crystal Quartz
Center Wavelength	nm	1064 ±30
RF Frequency	MHz	40.68
Active Aperture	mm * mm	3 * 1.5
Deflection Angle	mrad	7.54
Max. Insertion Loss	%	1
Polarization	—	90° to Mounting Plane
Loss modulation	%	> 85
Rise Time & Fall Time	ns	< 180
Optical power Density	MW/cm ²	1000
Max Operational RF Power	W	20
Input Impedance	Ω	50
VSWR	MHz	< 1.2:1
Coating	—	AR R < 0.2% @1064 ±5 nm
Cooling	—	Conduction
Operating Temperature	°C	0 - 50

Mechanical Structure

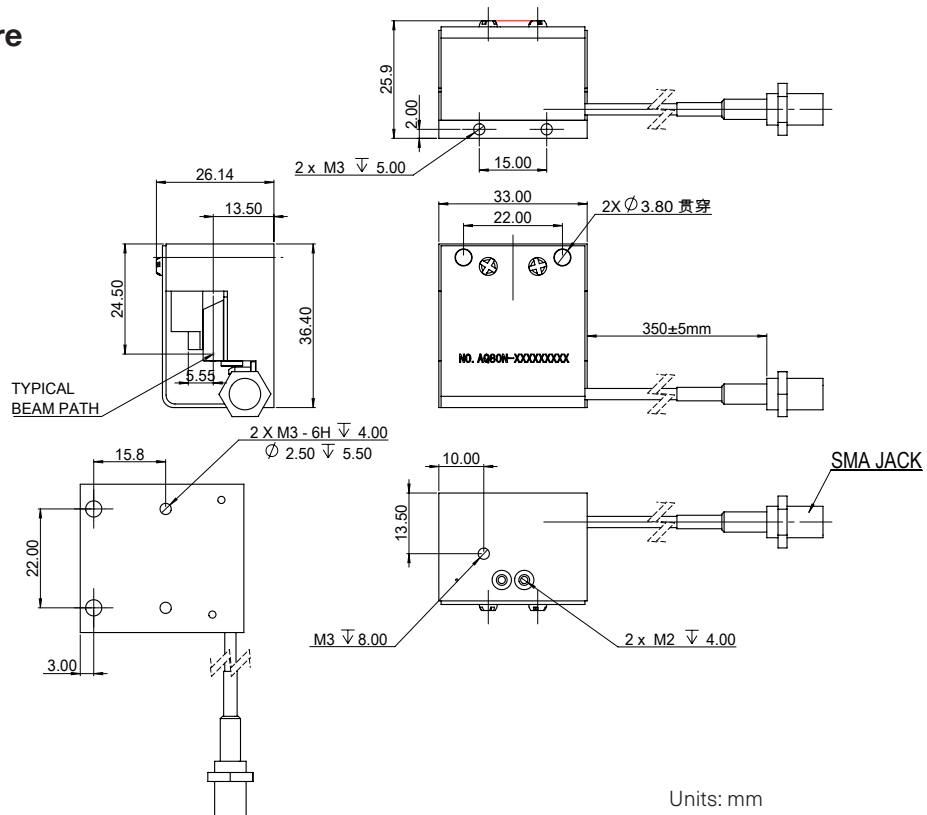
There are two mechanical structures:



68 MHz

Parameters	Unit	Value
AO Medium	—	Crystal Quartz
Center Wavelength	nm	1064 ±30
RF Frequency	MHz	68
Active Aperture	mm * mm	4 * 3
Deflection Angle	mrad	12.6
Max. Insertion Loss	%	1
Polarization	—	90° to Mounting Plane
Loss modulation	%	> 85
Rise Time & Fall Time	ns	< 180
Optical power Density	MW/cm ²	1000
Max Operational RF Power	W	20
Input Impedance	Ω	50
VSWR	MHz	< 1.2:1
Coating	—	AR R < 0.2% @1064 ±5nm
Cooling	—	Conduction
Operating Temperature	°C	0 - 50

Mechanical Structure



80 MHz

Parameters	Unit	Value
AO Medium	—	Crystal Quartz
Center Wavelength	nm	1064 ±30
RF Frequency	MHz	80
Active Aperture	mm * mm	3 * 1.5; 4 * 2.5
Deflection Angle	mrad	15.2
Max. Insertion Loss	%	1
Polarization	—	90° to Mounting Plane
Loss modulation	%	> 85
Rise Time & Fall Time	ns	< 180
Optical power Density	MW/cm ²	1000
Max Operational RF Power	W	20
Input Impedance	Ω	50
VSWR	MHz	< 1.2:1
Coating	—	AR R < 0.2% @1064 ±5nm
Cooling	—	Conduction
Operating Temperature	°C	0 - 50

Mechanical Structure

There are two mechanical structures:

