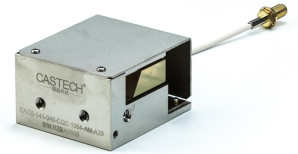


One-Dimensional Acousto-Optic Q-Switches

Acousto-optic Q-switch (AOQS) is a modulator designed for laser Q-switching applications. When applying the RF signal, the losses of cavity increases and the oscillation is hindered. When the RF signal is switched off, the losses of cavity decrease rapidly and then high-energy pulsed laser light is generated.

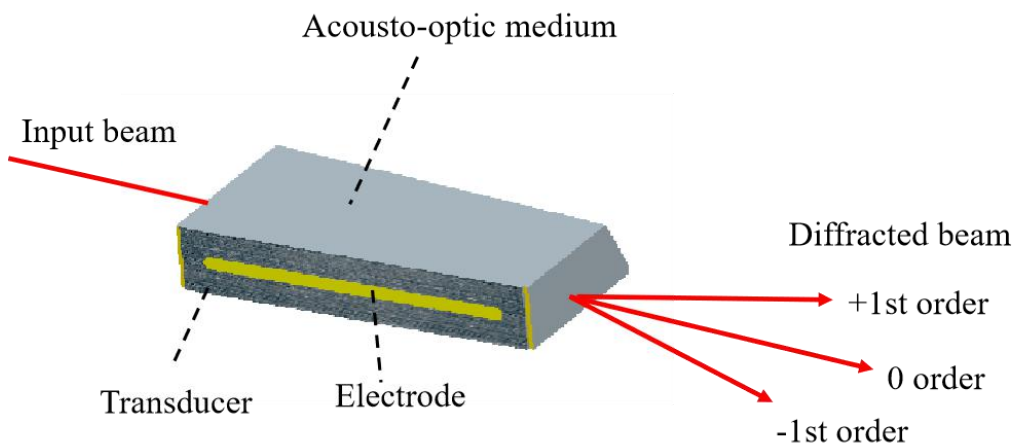
CASTECH provides a variety of A-O Q-switches work at wavelength range of 310 nm-3000 nm. Our products have the advantages of high transmission (up to 99.6%), high switching speed, strong switching off ability, high damage threshold and excellent pulse stability.

To obtain higher diffraction efficiency, it requires larger aperture acousto-optic Q-switch and higher RF power, therefore water cooling is needed to ensure the heat dissipation.



Applications

- Laser marking
- Lithography
- Medical surgery
- Material processing



Schematic diagram of acousto-optic Q-switch

One-Dimensional Acousto-Optic Q-Switches

Q-Switches Model Number: CAQS-f-a-mt-w-c-h

RF Frequency (f)	Aperture (a)	Material (m)	Mode (t)	Wavelength (w)	RF Connector (c)	Housing (h)
024 (24 MHz)	005 (0.5 mm)	FS (Fused Silica) CQ (Crystalline Quartz)	C (Compressional)	310 nm 1030 nm 1064 nm 1342 nm 1550 nm 3000 nm ...	AF (SMA-F)	LXX (Low volatile series) AXX (Conventional packaging series) ...
027 (27.12 MHz)	010 (1 mm)				AM (SMA-M)	
041 (40.68 MHz)	020 (2 mm)				NF (BNC-F)	
068 (68 MHz)	030 (3 mm)				NM (BNC-M)	
080 (80 MHz)	040 (4 mm)				MF (MMCX-F)	
...	050 (5 mm)				MM (MMCX-M)	
...	060 (6 mm)				...	
...	
...	
...	

Typical Specifications*

Frequency	Active Aperture	Wavelength	Transmission	Modulation Losses
27.12 MHz	1~6 mm	1064 nm	≥ 99.6%	≥ 80%
40.68 MHz	0.5~2 mm	1064 nm	≥ 99.6%	≥ 85%
68 MHz	0.5~3 mm	1064 nm	≥ 99.6%	≥ 85%
80 MHz	0.5~3 mm	1342 nm	≥ 99%	≥ 85%

*Damage Threshold: 1GW/cm² @ 1064 nm, 10 ns, 10Hz

Housing dimensions(mm):

