

# Photonics USA



**AO Modulator**  
**Model: TSGMN-5**  
**P/N: CETC-TSGMN-5-xxx-yyyy-zz**  
**Rev: A**

**Acousto-optic Modulator**  
 Various frequencies, various wavelengths



## Description

TSGMN-5 belongs to the high-speed Acousto-optic pulse modulator which realizes the intensity modulation over the laser according to the inputted pulse signal and gets corresponding digitally coded optical signal by inputting the digital signal of different codes and frequencies (TTL level) into the driving power supply of modulator.

It is mainly used in such field as laser text-image processing and laser digital communication.

## Characteristics:

- ❖ Quick modulation rate
- ❖ Small volume
- ❖ High efficiency
- ❖ High extinction ratio
- ❖ Easy coding and convenient use

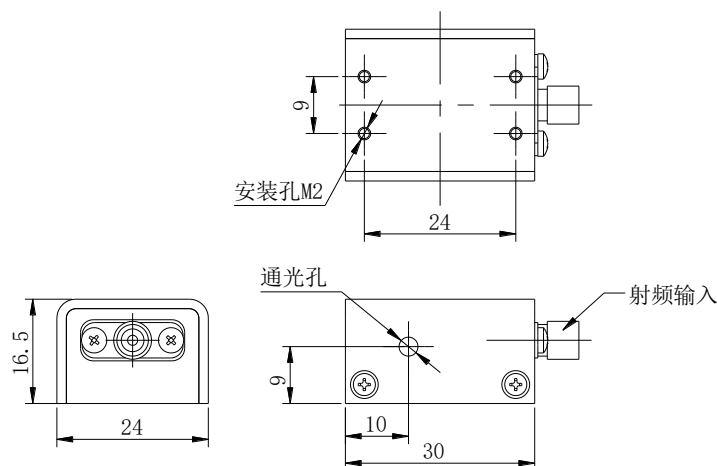
## Applications:

- ❖ Laser text-image processing
- ❖ Laser digital communication

## General Specification

Interaction Material	Lead Molybdate (PbMoO4) or Tellurium Oxide (TeO2)
Wavelength	532nm, 633nm, 1064nm, 1550nm (or else)
Transmittance	> 93%
Operating Frequency	100MHz (60~150MHz, or else)
Diffraction Efficiency	> 80% @ 532nm > 80% @ 1064nm > 70% @ 1550nm
Light Aperture	1mm (or else)
Extinction Ratio	1000:1
Pulse Repeat Frequency	≥ 4MHz
RF Power Rating	< 1.5W
RF Connection	SMA
<b>Recommended Q-Switch</b>	Model #: TSGMN-5Q

## Outline: Dimensions (mm)



## Order Information

Model #	Operating Frequency	Wavelength	Aperture Size
<b>CETC-TSGMN-5</b>	<b>-xxx</b>	<b>-yyyy</b>	<b>-zz</b>
CETC-TSGMN-5	-060 = 60MHz -080 = 80MHz -100 = 100MHz -150 = 150MHz or else	-0532 = 532nm -0633 = 633nm -1064 = 1064nm -1550 = 1550nm, or else	-09 = 0.9mm -10 = 1.0mm -12 = 1.2mm, or else

Example Part #: **CETC-TSGMN-5-100-0633-10** (CETC AO Modulator, 100MHz, 633nm, 1.0mm aperture size)

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As part of our policy of continuous product improvement, we reserve the right to change the specification at any time.

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## About CETC 26<sup>th</sup>



The 26<sup>th</sup> Institute of China Electronic Technology Group Corporation (CETC 26<sup>th</sup>) is specialized in R&D of piezoelectric and Acousto-optic technologies. Its R&D center of AO technology was started in 1972, with strong design capability and a complete production line, has developed dozens of varieties of AO products. Custom-made service and quality solutions can also be provided to meet customers' special interest.

CETC 26<sup>th</sup> has passed ISO9001-2000, GB/T24001-2004 and GB/T28001-2001 certification. Quality is strictly controlled at each production phase, covering material selection, processing, assembling and testing.

AO devices of CETC 26<sup>th</sup> are widely used for various laser applications.

Main products include:

- **Free space coupled AO device & Driver:** Q-Switch, modulator, frequency shifter, deflector, adjustable filter and mode locker, etc.
- **Pigtail coupled AO device & Driver:** fibered AO Q-Switch, fibered modulator, fibered frequency shifter, etc.