

## Grating Monochromator

## ATP7300

### Features

- Manual slit is standard configuration, automatic slit is optional;
- Tower-type rotating grating, built-in 3 gratings, a variety of gratings are optional, 90, 150, 300, 400, 500, 600, 900, 1200, 1800, 2400, 3600 lines;
- Dual outlets can be equipped with two detectors at the same time, and various types of detectors are available
- Using C-T structure design, using toroidal coma calibration design;
- The control of the instrument (such as grating conversion, wavelength scanning, etc.) is all controlled by computer
- 15-pin expansion interface;
- A variety of accessories are optional;

### Application

- Raman spectroscopy
- Fluorescence Spectroscopy

### Description

ATP7300 is the grating monochromator launched by Optosky with 20 years of spectrometer development experience. After years of research and development, ATP7300 uses reflective gratings, which are convenient and quick to replace. The grating rollers are controlled by software, which can accurately position the grating and test wavelength.

The ATP7300 system uses a simulation-optimized optical system to ensure high resolution, and the design also provides the possibility of multi-fiber simultaneous imaging by correcting aberrations. The ATP7300 series has a variety of input and output options, providing researchers with endless possibilities, scalability and diversity. Both single-point detectors and various array cameras can be used.

ATP7300 has four models with different focal lengths: 210, 350, 510 and 810mm. Different from prism-type spectrum or transmission-type gratings, each ATP7300 can cover applications from ultraviolet to near-infrared and short-wave infrared bands. You only need to choose the appropriate grating to have more choices in wavelength and resolution. Multiple degrees of freedom.

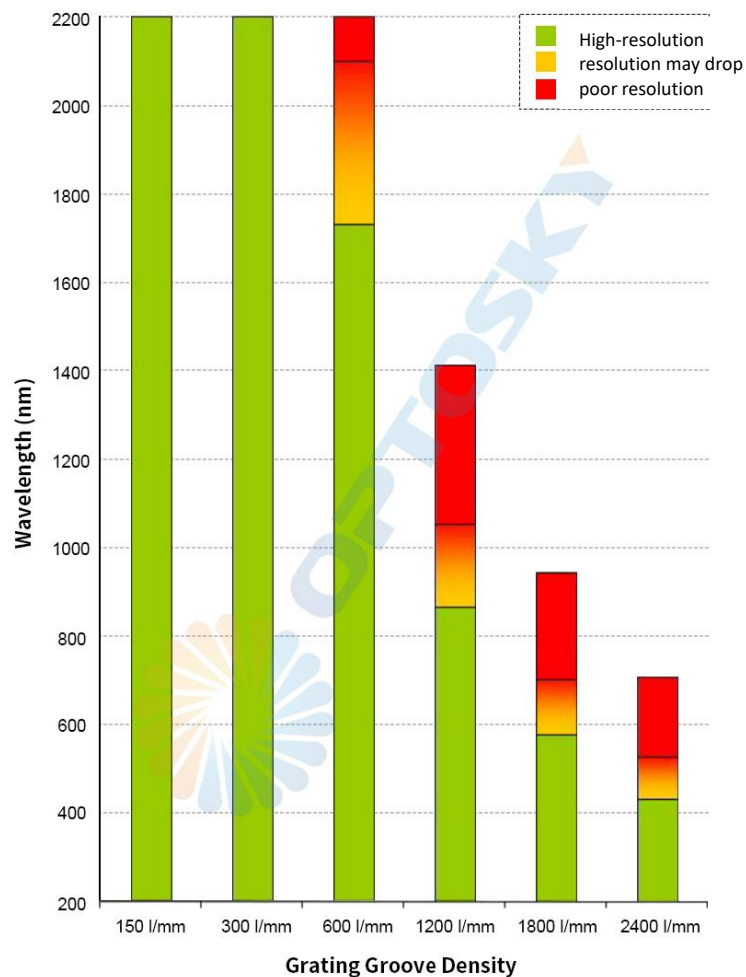


## 1. Performance

PN	Focal Length	Aperture Ratio	PMT Resolution*	CCD Resolution**	Linear Dispersion*
ATP7300-FL210	210mm	F/3.5	0.15 nm	0.27 nm	3.58 nm/mm
ATP7300-FL350	350mm	F/4.2	0.08 nm	0.173 nm	2.29 nm/mm
ATP7300-FL510	510mm	F/6.5	0.05 nm	0.11 nm	1.49 nm/mm
ATP7300-FL760	760mm	F/9.7	0.03 nm	0.077 nm	1.02 nm/mm

Notes:

- 1) \*: with 1200 g/mm grating @ 435.8 nm and 10 $\mu$ m slit width and 4 mm slit height
- 2) \*\*: with 1200g/mm grating @ 435.8nm 14 $\mu$ m pixel, 20 $\mu$ m slit width



Gratings with different line numbers and their applicable wavelength ranges

Model	ATP7300-FL210	ATP7300-FL350	ATP7300-FL510	ATP7300-FL760
Optical parameters				
Maximum wavelength range	0.2-2.5um, different ranges can be customized			
Optical resolution	10pm ~ 5nm(Different focal lengths, slits, and spectral ranges vary greatly)			
Wavelength Accuracy	±0.2nm			
Wavelength repeatability	±0.1nm	±0.025 nm		
Scan step	0.01 nm	0.005 nm		
Optical path parameters				
Optical design	asymmetricCTlight path			
Focal length	210	350	510	760
Relative aperture	F/3.5	F/4.2	F/6.5	F/9.7
Grating	tower rotary grating, built-in3Sheet grating, a variety of grating options,150,300,400,500,600,900,1200,1800,2400,3600Wire;			
Grating rotation method	Electric control			
Grating rotation angle	0.36μrad			
Entrance slit width	5,10,25,50,100,150,200μm, adjustable width, etc., other sizes can be customized			
Incident light interface	Support dual entry:SMA905Fiber optic interface, free space			
Exit light interface	Support dual export			
Electrical parameters				
Integration time	10μs - 256s			
Data output interface	USB 2.0			
ADCbit depth	18bit(output16bit)			
Power supply	12V DC±5%			
Working current	<4A			
Operating temperature	-20°C ~ +45°C			
Storage temperature	-30°C ~ +70°C			

Maximum working humidity	< 90%RH(no condensation)			
Physical parameters				
Size and weight	15Kg	23Kg	35Kg	45Kg

## 2. Removable three-stage grating tower wheel

- Each tower wheel can be installed with three gratings, which can be freely selected when ordering
- The tower wheel has an optical installation interface, which is automatically calibrated after installation
- Wavelength coverage, luminous flux and resolution can be optimized according to requirements

## 3. A variety of accessories are optional

- Various fiber optic bundles;
- filter wheel;
- light source;
- 17 kinds of gratings are optional;
- Wavelength calibration and intensity calibration system;