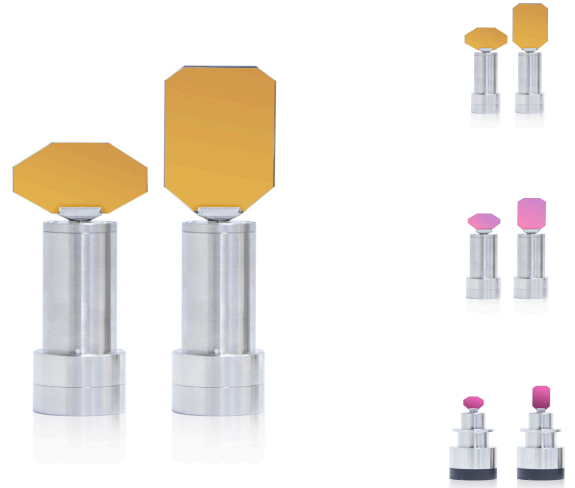


Extra-Galvo Scanner

Compared with the photoelectric analog galvanometer, the installation of the grating requires a larger space, so the encoder part at the bottom of the grating digital galvanometer is higher than that of the photoelectric analog galvanometer. The grating digital galvanometer is more stable than the photoelectric analog galvanometer, and has a smaller drift subject to temperature changes. The 23bit resolution digital galvanometer achieves excellent positioning accuracy and repeated positioning accuracy, supports position monitoring and position feedback of the galvanometer, real-time detection of the status, and ensures safe and reliable operation.



Key Features of Extra-Galvo Scanner

- The single-axis galvanometer consists of a galvanometer part based on moving magnet technology and a high precision sensor as a feedback part.
- Through kinematics and dynamics simulation, the mirror with certain inertia is matched for each galvanometer. Moreover, the rotor of the galvanometer has been optimized and has excellent dynamic properties and response characteristics.
- Grating galvanometer is a kind of galvanometer with grating encoder as feedback system. It has the characteristics of high resolution, very high repeatability and very low drift, and keeps good repeatability even under the condition of ambient temperature change.
- [Galvanometer scanning mirror](#) is available for common laser wavelengths and energy levels. Besides, all the galvanometer mirrors are optimized to take into account the inertial load, rigidity and flatness of the galvanometer mirrors.

Specifications of Extra-Galvo Scanner

Grating Galvanometer	S	M	L
Input Beam Aperture (mm)	10	14	20-30
Moment Of Inertia(g•cm ²)	0.6	1.5	7.2
Force Constant(N•mm/A)	7.5	15	24
Coil Resistance(Ω)	2.7	2.6	1.58
Coil Inductance(μ H)	155	275	385
Maximum Continuous Current(A)	2.5	3.5	5
Peak Current(A)	10	10	10
Rise Time(ms)	0.2	0.3	0.7
Weight(g)	220	300	400

Sensor Parameters	
Max. Scanning Angle ($^{\circ}$) ^①	± 12.5
Nonlinearity (%)	<0.1
Repeatability (μ rad)	<1
Offset Drift (μ rad/K)	<15
Gain Drift (ppm/K)	<8
Position Resolution	23 Bit ^②

① All angles above are mechanical angles.

② After calculation, 18 bit @25 $^{\circ}$ corresponds to 1.7 urad, and 23bit @ corresponds to 0.75urad.

Galvanometer Applications

Laser Welding

Laser Marking

Laser Drilling

Laser Cutting

Micromachining

Medical Aesthetic

Ophthalmic Imaging

3D Printing

Lithium Battery

Laser Cleaning