ScannerOptics

Ultra-Galvo Scanner

The galvanometer scanner laser using photoelectric sensor as feedback system is characterized by high repetition accuracy and linearity, and high cost performance. Mirror coating film selection is rich, UV, green light, optical fiber, CO2 and other coating options, strict lens quality testing to ensure the requirements of lens flatness and damage threshold, photoelectric mirror is widely used in galvo laser welding, flight marking, precision marking, precision cutting, and other industries.

Key Features of Ultra-Galvo Scanner

- Through kinematics and dynamics simulation, the mirror with certain inertia is matched for each galvo meter. Moreover, the rotor of the galvanometer has been optimized and has excellent dynamic properties and response characteristics.
- In addition, high precision miniature bearing axial preloads ensure high rigidity and low friction operation, and special attention is paid to bearing life.
- Photoelectric galvanometer is a kind of galvo meter which uses photoelectric sensor as feedback system. It is characterized by high repetition accuracy and linearity, and high cost performance.
- Galvanometer scanning mirror is available for common laser wavelengths and energy levels. Moreover, all the mirrors are optimized to take into account the inertial load, rigidity and flatness of the lenses.
- Photoelectric galvo meter is widely used in flight marking, precision marking, precision cutting, precision welding, and other industries.

Specifications of Ultra-Galvo Scanner

Photoelectric Galvanometer	S	M	L
Input Beam Aperture (mm)	10	14	20-30
Moment Of Inertia(g•cm2)	0.34	1.2	5.1
Force Constant(N•mm/A)	7.5	15	24
Coil Resistance(Ω)	2.7	2.6	1.58
Coil Inductance(μH)	165	275	300
Maximum Continuous Current(A)	2.5	3.5	5
Peak Current(A)	10	10	10
Rise Time(ms)	0.18	0.3	0.7
Weight(g)	220	300	400

Sensor Parameters	
Max. Scanning Angle (°) ①	±12.5
Nonlinearity (%)	<0.4
Repeatability (μrad)	<2
Offset Drift (μrad/K)	<10
Gain Drift (ppm/K)	<25
Position Resolution	18 Bit ②
Output signal, Common mode	Typical 170uA with AGC current of 30-40mA
Output signal, differential mode	9-10uA/° with AGC current of 30-40mA

Galvanometer Applications

- Laser Welding
- Laser Marking
- Laser Drilling
- Laser Cutting
- Micromachining
- Medical Aesthetic
- Ophthalmic Imaging
- 3D Printing
- Lithium Battery
- Laser Cleaning