



Nutfield Technology

Photonics in Motion®

- ◆ **Industry Leading Speed
10 and 15mm Mirrors**
- ◆ **Patent Pending Rotor
Design For Faster Step
Response**
- ◆ **Positive Grip Flange
Mirror Mount**
- ◆ **Greater Position
Feedback Signal for
Higher Accuracy**
- ◆ **Ultra High Power
Magnets**
- ◆ **Patented SLR Stator
Design For Higher
Bandwidth**

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QuantumScan-12

Moving Magnet Galvanometer

Nutfield Technology's QS-12 moving magnet galvanometers employ a novel rotor and mirror mount architecture to provide industry leading performance. The QS-12 has faster step response and higher signal-to-noise position detection compared to any scanner in its class.

The QS-12 offers the strongest available magnets, which deliver tremendous torque. When coupled through our Patent Pending rotor design, this galvo delivers exceptionally high bandwidth performance, a requirement for the most demanding high speed applications

The QS-12 Position Detector was designed with a high-output feedback signal for the best possible accuracy. NTI galvanometers have greater signal-to-noise position detection with the most linear output available in the industry. This means greater pointing accuracy and repeatability in your application.



QS-12 Open Frame Heads
For 10, 15 & 20 mm Beam Apertures



QuantumScan-12™
For 10-20 mm Beam Apertures

Another NTI breakthrough is our stator design, which is the first to incorporate Patented Side Load Reduction (SLR) technology to reduce off axis magnetic forces on the rotor. The benefit is higher bandwidth and faster step response resulting from less stator induced side forces.

Nutfield Technology provides a range of digital and analog control options to meet your time to market and budget requirements. Call us today to find out how we can help customize a solution for your application.

Applications Include:

- ◆ **High Speed Marking**
- ◆ **High Speed Drilling**
- ◆ **High Speed Coding**
- ◆ **Fast Raster Imaging**

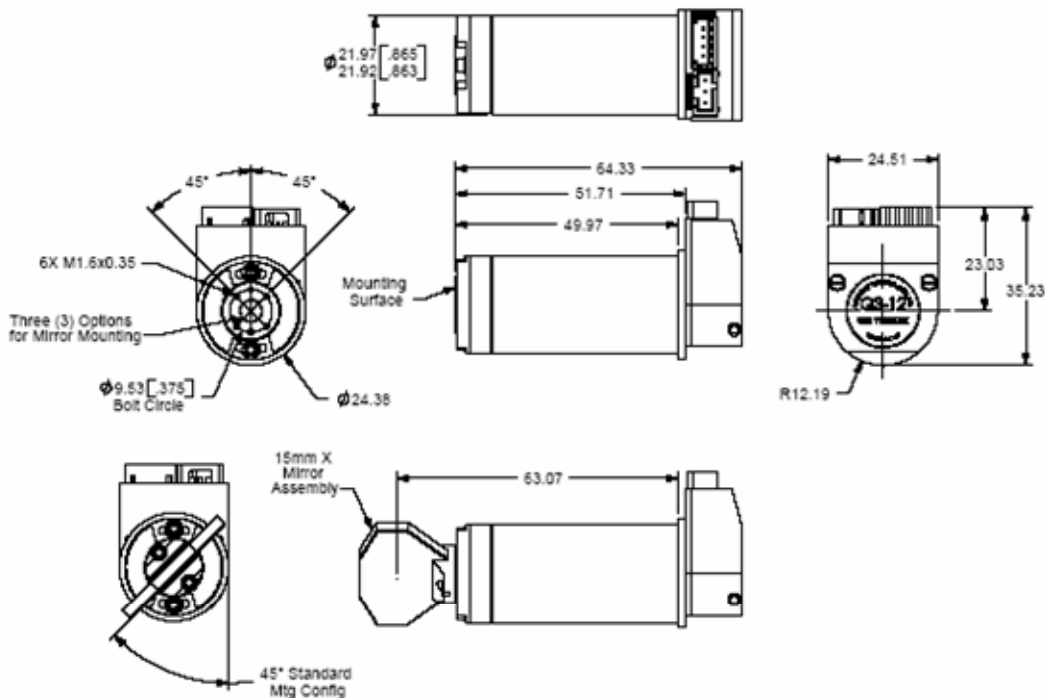
QuantumScan-12

Preliminary Galvanometer Specifications

SPECIFICATION	UNITS	QS-12
Excursion	Degrees Optical	+/- 38
Rotor Inertia	Gram*Centimeters	1.3
Recommended Beam Apertures	Millimeters	10-20
Small Step Response*	Microseconds	250
Torque Constant	Dyne*cm/Amp	220*10 ³
Coil Inductance	Micro Henrys	(at 1000Hz) 530
Coil Resistance	Ohms	6.9
Angular Sensitivity (Diff. Mode)	Micro Amps/Degree	50
Repeatability	Micro Radians	6
Linearity (% over +/- 35° Optical)	Percent, Minimum	99.99
Zero Drift Standard/Low**	μrad/Degree	10/1
Gain Drift Standard/Low**	Parts Per Million/Degree C	30/1

* With QD-4000 Servo Drive Board. ** With Low Drift Thermal Control Option.

*Performance Criteria: Small Step Size = 1% of Field, Settling to 1/1000, Field Size 120x120mm, 1mm Single Stoke Text
 Performance 10mm: Small Step 250μSec, Mark Speed 6000mm/Sec, Position Speed 10000mm/Sec
 Performance 15mm: Small Step 390μSec, Mark Speed 4500mm/Sec, Positioning Speed 8000mm/Sec
 Performance 20mm: Small Step 500uSec, Mark Speed 3000mm/Sec, Positioning Speed 5000mm/Sec



For More Details Contact Nutfield Technology or Go On-Line.

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Specifications subject to change without notice. 2007