

## 2-Axis Packaged Scan Heads XLR8 and Xtreme Series

XY2-100 Digital Input Signals  
Available with Fiber Laser Scan Kits  
Aperture range - 7 mm to 20 mm

Optional 20 mm Digital Beam Shutter  
Wide selection of scan lenses  
Affordable

Nutfield Technology's Packaged 2-Axis Scan Heads provide XY deflection capability for all laser applications. Heads consist of two galvanometers, two mirrors, two servo amplifiers, and communication electronics. The synchronized actions of two turning mirrors direct the laser beam to specific locations on a target material surface. Adapters are available for a wide range of f-theta focusing lenses and laser collimators.

Nutfield Technology's **XLR8 Series Packaged 2-Axis Scan Heads** provide excellent value as the building block for the construction of a laser beam positioning system. Available in 7 mm and 10 mm mirror apertures for a variety of wavelengths, the XY2-100 digital interface integrates with PC-based hardware and software packages for marking and micromachining. Analog input versions are also available.

The **Xtreme Series Packaged 2-Axis Scan Heads** provide superior high speed performance for demanding laser applications. Available in 10 mm, 15 mm, and 20 mm apertures, and for various wavelengths, the Xtreme also integrates the XY2-100 digital interface with PC-based hardware and software packages for marking and micromachining. Analog input versions are also available. Featuring the QS-12 OPD Galvanometer with Nutfield's Optical Position Detector, the Xtreme series packaged scan heads are a perfect building block for your laser beam positioning system. Innovative QS-12 galvo rotor and mirror mounts designs reduce resonances, allowing faster scanning.



XLR8  
Series

**Xtreme Series**

Both of Nutfield Technology's Packaged Scan Head series are easily interfaced with Nutfield's WaveRunner Scan Control Software and Pipeline/SurfBoard Scan Controllers.

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Since 1997, Nutfield Technology has been designing and manufacturing the most advanced galvanometer-based optical scanners, scan heads, laser control electronics, and software products available. Nutfield Tech offers a wealth of knowledge and expertise to select the proper products best suited for any application. Contact Nutfield Technology today for solutions.

#### APPLICATIONS:

Marking  
Solar Scribing  
Welding with Metal or Plastic

Micromachining  
Textiles Cutting and Patterning  
Surface Treatment



**Specifications\***  
\*Specifications are subject to change without notice.

### Optical

	XLR8 Series	Xtreme Series
Scan Angle	±22.5°	±22.5°
Resolution	16 µrad	10 µrad
Linearity	99.90%	99.90%
Repeatability	20 µrad	10 µrad
Gain Drift	< 100 ppm/°C	< 70 ppm/°C
Offset Drift	15 µrad	15 µrad

### Dynamic

	XLR8 Series	Xtreme Series
Step Response (1% of full scale, 99% settled)		
XLR8-7 with 7 mm aperture	250 µs	
XLR8-10 & Xtreme-10 with 10 mm aperture	350 µs	400 µs
Xtreme-15 with 15 mm aperture		600 µs
Xtreme-20 with 20 mm aperture		605 µs

### Power Supply

	XLR8 Series	Xtreme Series
Voltage (max volt ±18 volts)	±15 volts	±15 volts
Current (RMS) Peak ±10A	±3 Amps	±3 Amps

### Control Interface

	XLR8 Series	Xtreme Series
Digital	XY2-100	XY2-100
Analog (volts)	±5, ±10	±5, ±10

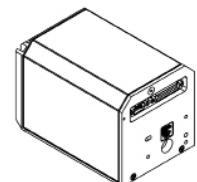
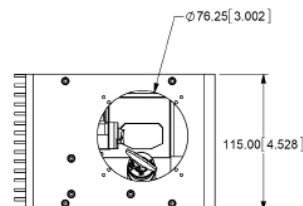
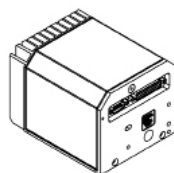
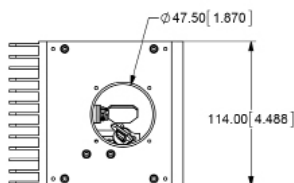
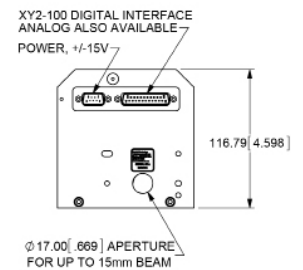
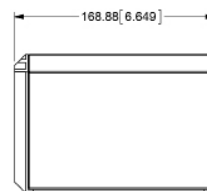
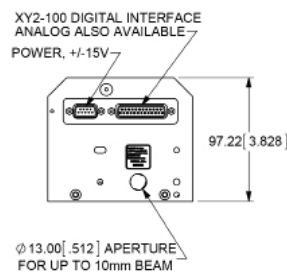
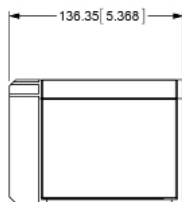
### Environmental

	XLR8 Series	Xtreme Series
Operating Temp	0° - 40° C	0° - 40° C
Storage Temp	-10° - 60° C	-10° - 60° C
Humidity (non-condensing)	≤ 80%	≤ 80%

### Mechanical

	XLR8 Series	Xtreme Series
Weight	1.4 kg	1.8 kg

**CAD Drawings\***  
\*Measurements in mm.



SHOWN IS THE XLR8-10. THE XLR8 IS ALSO AVAILABLE IN 7 MM.

**XLR8**

SHOWN IS THE XTREME-15. THE XTREME IS ALSO AVAILABLE IN 10 MM AND 20 MM.

**Xtreme**