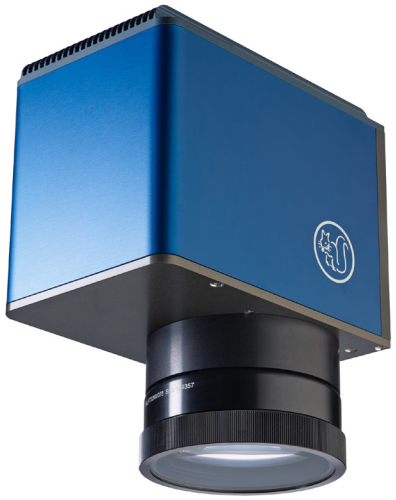
Novanta PHOTONICS

SQUIRREL 2-AXIS SCAN HEAD

COMPACT AND VERSITILE 2-AXIS SCAN HEAD FOR FAST SCANNING PERFORMANCE



Novanta develops photonics solutions through our globally recognized brands— ARGES, Cambridge Technology, Laser Quantum and Synrad— specializing in cutting-edge components and sub-systems for laser-based diagnostic, analytical, micromachining and fine material processing applications. Powerful lasers, coupled with advanced beam steering and intelligent sub-systems incorporating software and controls, deliver extreme precision and performance, tailored to our customers' demanding applications.

MULTI-USE SCANNER

Engineered by ARGES, the SQUIRREL is our fastest, smallest 2-axis scan head offering apertures of 11 mm and 16 mm in a compact housing design. Built for a variety of applications including: marking, scribing, soldering, laser trimming and micro materials processing.

Our scan heads are available with a variety of apertures, mirror coatings and f-theta lenses as complete scan solution for industrial system manufacturers and integrators.

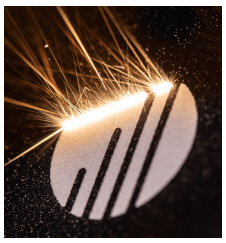
The electronic design in state of the art surface mount technology maximizes thermal stability, static and dynamic optical performance in robust housings.

The compact scan head series can be purchased with various interfaces: standard analog inputs, standard XY2-100 protocol or our proprietary interface implementing new features and Plug & Play operation.

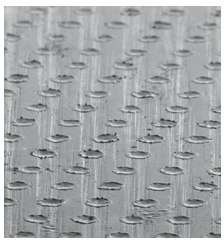
TAILORED ENGINEERING CAPABILITIES

Through our highly specialized expertise and resources we can provide tailored solutions for your application needs. With a large selection of different laser sources, scan heads and handling systems to choose from, we can develop laser processes that are perfectly tailored to a wide variety of customer-specific products, components and materials.

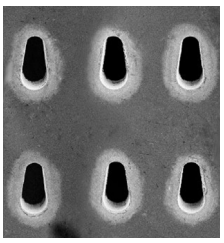
- Laser-specific customization
- Sub-systems that include laser and beam path
- Customer-specific software extensions
- Laser process development
- Sample production



Laser Marking



Laser Structuring



Laser Perforation

SQUIRREL 2-AXIS SCAN HEAD

Specifications	11 mm	16 mm
Aperture	11 mm	16 mm
Beam Displacement	12.6 mm	18.4 mm
Step Response 1%	0.30 ms	0.42 ms
Step Response 10%	0.70 ms	0.80 ms
Step Response 100%	6.00 ms	9.0 ms
Typical Tracking Error	0.22 ms	0.30 ms
Repeatability	< 1.5 µrad	
Longterm Offset Drift[1]	< 0.3 mrad	
Scan Angle	0.785 rad	
Skew	< 1.2 mrad	
Linearity	> 99.9%	
Supply Voltage, DC	+/- 24 V	
Supply Voltage, Tolerance	+/- (13.5 ... 28)	
Max Standby Power Consumption	15 W	
Max Current[2]	4 - 6 A	
Ambient Operating Temperature	10°C ~ 40°C	
Ambient Storage Temperature	0°C ~ 50°C	
Non-condensing Humidity	10% ~ 80%	
Cooling Water	DI-water-proof cooling unit with corrosion resistant types of steel	
Pressure	3 - 5 bar	
Max Inlet Temperature	30°C	
Recommended Tubing Material	Polyether Polyurethane	
Weight (excluding lens)	2.7 kg	
Dimensions (L x W x H)	170 mm x 115 mm x 139 mm	

References:
1. Under constant load and environment over 8 hours. 2. Depending on model

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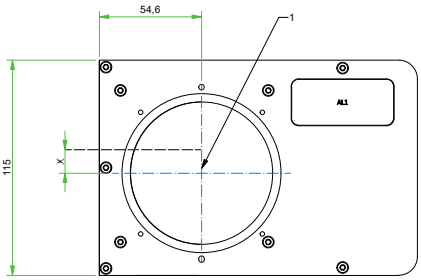
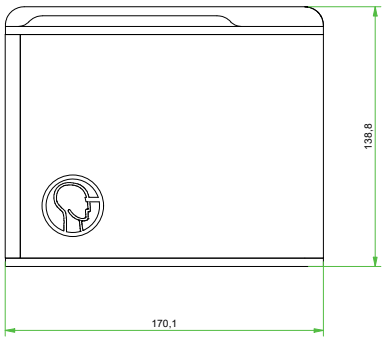
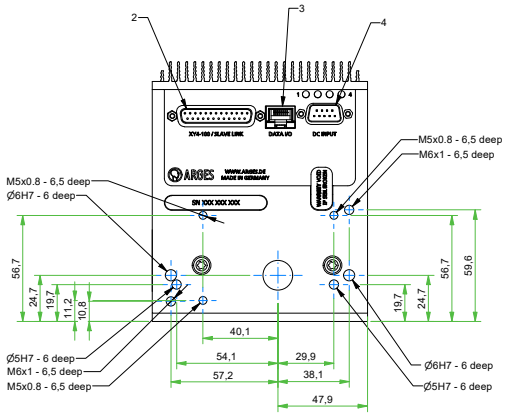
DIMENSIONS (MM)







Notes:
All angles are in optical degrees, unless otherwise noted. Dimensions are in millimeters. All specifications are subject to change without notice.

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