



compact and economic

SCANLAB's basiCube scan heads are the ideal entry-level 2D scan systems for deflecting and positioning laser beams in the working plane.

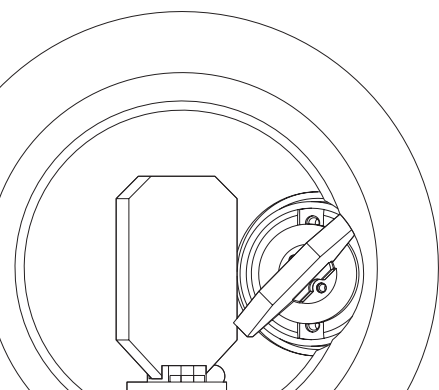
Key Features

- Compact & light-weight design
- Very fast writing speed
- Excellent price/performance ratio

The basiCube scan head series offers superior cost effectiveness and is optimized for coding and marking.

Typical Applications

- Marking
- Processing-on-the-fly



Specifications

Dynamics

	basiCube 10	basiCube 14
Aperture [mm]	10	14
Tracking error [ms]	0.14	0.18
Typical speeds ⁽¹⁾		
Marking speed [m/s]	2.5	2.0
Positioning speed [m/s]	12.8	12.8
Writing speed ⁽²⁾		
Good writing quality [cps]	800	600
High writing quality [cps]	570	375
Step response time ⁽³⁾		
1% of full scale [ms]	0.35	0.45
10% of full scale [ms]	1.0	1.4

⁽¹⁾ with F-Theta objective, f = 160 mm

⁽²⁾ single-stroke characters of 1 mm height

⁽³⁾ settling to 1/1000 of full scale

Precision & Stability

Repeatability (RMS) [μrad]	< 2.0
Positioning resolution [Bit] ⁽⁴⁾	16
Nonlinearity	< 3.5 mrad/44° ⁽⁶⁾
Temperature drift	
Offset [μrad/K]	< 30
Gain [ppm/K]	< 160
Long-term drift	
8-h-drift (after 30 min warm-up) ⁽⁵⁾	
Offset [μrad]	< 100
Gain [ppm]	< 250

⁽⁴⁾ based on the full angle range (e.g. positioning resolution 11 μrad for angle range ±0.36 rad)

⁽⁵⁾ at constant ambient temperature and load

⁽⁶⁾ 44° = 0.768 rad

Further Specifications

Optical performance

Typical scan angle [rad]	±0.35
Gain error [mrad]	< 5
Zero offset [mrad]	< 5

Power requirements

basiCube 10	±15 V DC; max. 3 A each
basiCube 14	available variants: 24 V DC, 30 V DC; max. 3 A each

Interface (digital)

Interface (digital)	SL2-100, XY2-100
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IP protection class

IP protection class	IP 50
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Operating temperature [°C]

Operating temperature [°C]	25 ± 10
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(all angles are in optical degrees)

Options & Variants

Extensions

- varioSCAN: Extension into a 3-axis scan system

Optics

- Coatings for the following wavelengths:
basiCube 10: 355 nm, 532 nm, 1064 nm, 10600 nm
basiCube 14: 355 nm, 1064 nm, 10600 nm
- Suitable objectives available for various image fields and focal lengths

Control Boards

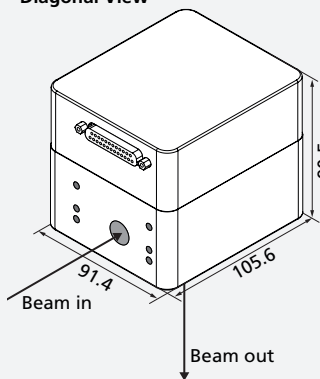
- RTC4 (PCIe, Ethernet) and RTC5

Software

- Flexible calibration solutions:
correXion pro, CALsheet

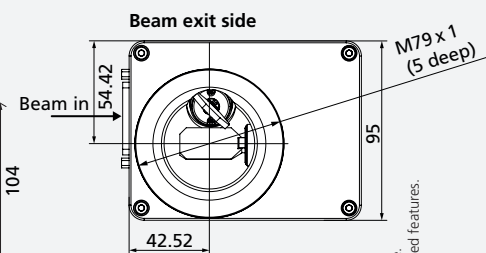
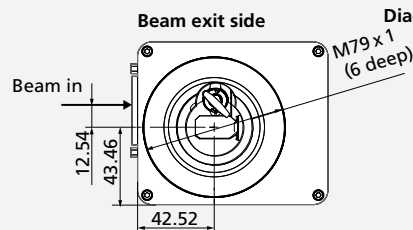
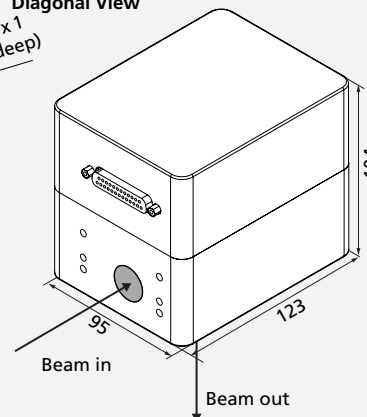
basiCube10

Diagonal View



basiCube14

Diagonal View



	basiCube 10	basiCube 14
Aperture	10 mm	14 mm
Beam displacement	12.54 mm	16.42 mm
Weight	1.5 kg	2.15 kg

all dimensions in mm

SCANcalc App



Google Play

App Store

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Product photos are non-binding and may show customized features.