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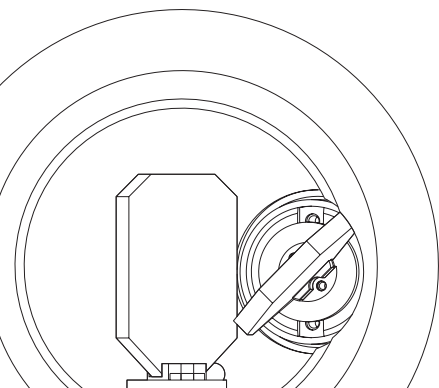
The basiCube scan head series offers superior cost effectiveness and is optimized for coding and marking.

Key Features

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

Typical Applications

- Marking
- Processing-on-the-fly

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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 heigth
[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)	SL2-100, XY2-100
IP protection class	IP 50
Operating temperature [°C]	25 ± 10

(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
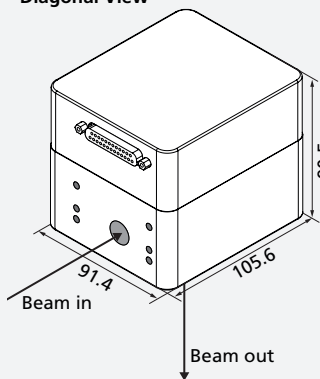
Control Boards
- RTC4 (PCIe, Ethernet) and RTC5

Software
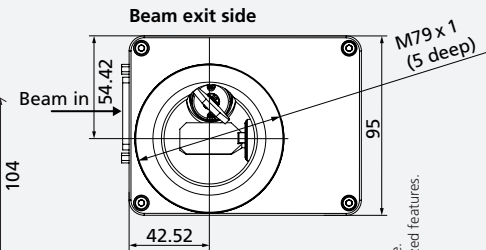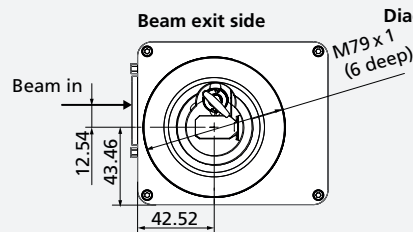- Flexible calibration solutions:
  correXion pro, CALsheet

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basiCube10

Diagonal View

Beam exit side

basiCube14

Diagonal View

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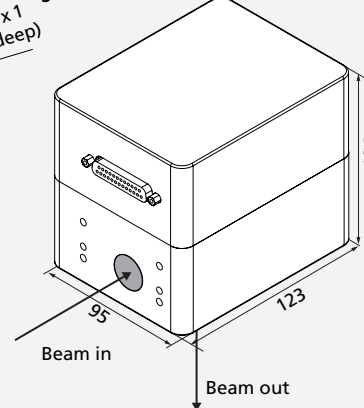
	basiCube 10	basiCube 14
Aperture	10 mm	14 mm
Beam displacement	12.54 mm	16.42 mm
Weight	1.5 kg	2.15 kg

all dimensions in mm

SCANcalc App

Google Play   App Store

04/2020 Information is subject to change without notice.
Product photos are non-binding and may show customized features.

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