
## 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.

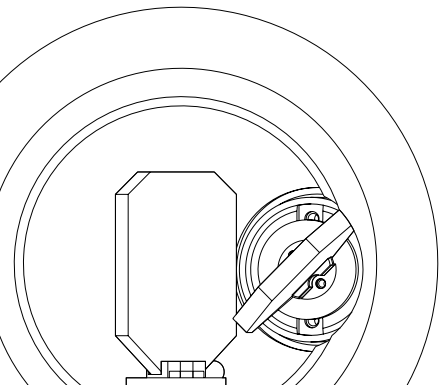
The basiCube scan head series offers superior cost effectiveness and is optimized for coding and marking.

### Key Features

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

### Typical Applications

- Marking
- Processing-on-the-fly



SCANLAB
innovators for industry

# Specifications

## Dynamics

| | basiCube 10 |
|---|---|
| **Aperture** [mm] | 10 |
| **Tracking error** [ms] | 0.14 |
| **Typical speeds** [1] | |
| Marking speed [m/s] | 2.5 |
| Positioning speed [m/s] | 12.0 |
| Writing speed [2] | |
| Good writing quality [cps] | 800 |
| High writing quality [cps] | 570 |
| **Step response time** [3] | |
| 1% of full scale [ms] | 0.35 |
| 10% of full scale [ms] | 1.0 |

[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

| | basiCube |
|---|---|
| **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

| | basiCube |
|---|---|
| **Optical performance** | |
| Typical scan angle [rad] | ±0.35 |
| Gain error [mrad] | < 5 |
| Zero offset [mrad] | < 5 |
| **Power requirements** | ±15 V DC, max. 3 A each |
| **Interface** (digital) | SL2-100, XY2-100 |
| **Operating temperature** [°C] | 25 ± 10 |

(all angles are in optical degrees)

# Options & Variants

## Extensions

- vario*SCAN*: Extension into a 3-axis scan system

## Optics

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

## Control Boards

- RTC4 (PCIe, Ethernet) and RTC5

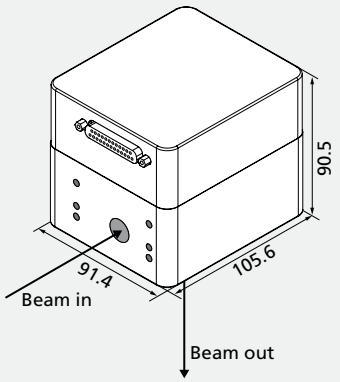
## Software

- correXion pro: System-specific customizing of correction files
- Flexible calibration solutions: correXion pro, CALsheet

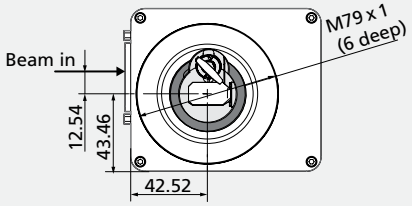
SCANcalc App
Google Play App Store

## Housing

**Diagonal View**




**Beam exit side**




| | basiCube 10 |
|---|---|
| **Aperture** | 10 mm |
| **Beam displacement** | 12.54 mm |
| **Weight** | 1.5 kg |

all dimensions in mm



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