



**PHASICS**  
the phase control company

# R-Cube

## ILLUMINATION MODULE FOR SID4

The R-Cube is an integrated **illumination module** for **double-pass** measurement with PHASICS SID4 wavefront sensors. This compact and easy-to-use add-on device delivers a **high quality collimated beam** (optional lenses can convert to a diverging beam) and directly connects to the SID4. Embedding **all the advantages of PHASICS patented technology**, this simple set-up is used for **alignment of complex optical systems**, measurement of **large flat or curved mirrors**, and **characterization of lens assemblies**.

### KEY FEATURES



Accuracy  
< 20 nm RMS



Resolution  
< 2 nm RMS



Insensitive  
to vibration



Small footprint



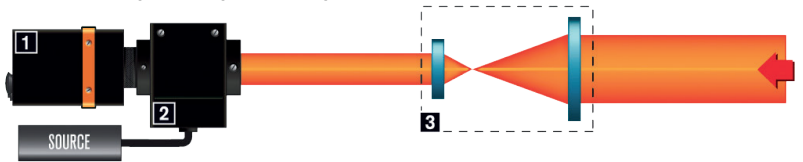
Source wavelength  
customized on demand



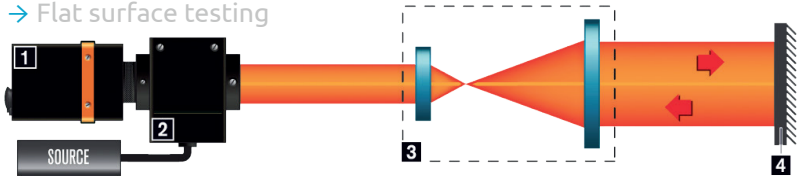
Compatible with  
translation & Tip/Tilt  
stages for alignment

# R-Cube APPLICATIONS

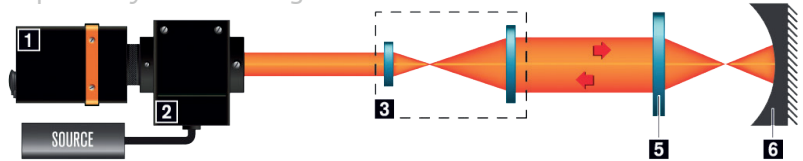
→ Automated removal of telescope aberrations in the analysis arm of adaptive optics loop



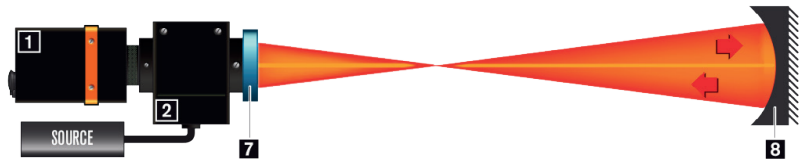
→ Flat surface testing



→ Optics quality control in double-pass: lens, objective, telescope in any size and magnification



→ Concave mirror measurement



- 1 SID4 wavefront sensor
- 2 R-Cube
- 3 Telescope / Beam expander
- 4 Surface under test
- 5 Optics under test
- 6 Reference mirror
- 7 Objective (C-mount)
- 8 Mirror under test

## SPECIFICATIONS

Compatibility	SID4 UV / SID4 / SID4 HR / SID4 SWIR / SID4 SWIR HR / SID4 DWIR
Beam diameter	Adapted to related wavefront sensor pupil
Source wavelength	365 / 405 / 530 / 625 / 740 / 780 / 810 / 850 / 940 / 1050 / 1550 / 3900 nm
Double-pass reference mirror quality	$\lambda/20$ PV (632.8 nm)
Phase resolution (noise)	< 2 nm RMS



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