

COL-200 to COL-600 configurations

Full-Spectrum Optical Parameter Testing

A modular optical-test platform combining a collimator, multi-spectral target generator, precision rotation stage and image analyser. Configure UV, visible, SWIR, MWIR or LWIR paths for MTF and imaging-performance measurements.

Measurement method

Present controlled targets to the optical system under test, position the sample and analyse its image. Workflows cover on-axis/off-axis and through-focus MTF, effective focal length, distortion, relative illumination, field curvature, astigmatism, depth of field, lateral chromatic aberration and encircled energy.

Features

- UV through LWIR configurations
- Interchangeable collimator options
- Custom rotation-stage range, encoder resolution and control
- Automated through-focus and imaging-analysis workflows

Applications

- Optical-system development and verification
- Imaging components for communications and sensing
- Biomedical, materials and display research

Collimator options

Model	Diameter (mm)	Focal length (mm)	Optical-axis height (mm)
COL-200	200	2000	450 / 500
COL-250	250	2000 / 2500	450 / 500
COL-300	300	3000 / 3500	450 / 500
COL-350	350	3500	450 / 500
COL-400	400	4000	450 / 500
COL-500	500	5000	450 / 500
COL-600	600	6000	500

Spectral configurations

Parameter	UV	VIS	SWIR	MWIR	LWIR
Optical setup	Infinite	Finite / infinite	Infinite	Infinite	Infinite
Maximum spatial frequency	300 lp/mm	500 lp/mm	150 lp/mm	150 lp/mm	150 lp/mm

System performance

Parameter	Specification
Primary-mirror surface precision	$\leq \lambda/50$ RMS at 632.8 nm
EFL accuracy	$\pm 0.2\%$
Entrance pupil diameter (listed custom range)	5-2000 mm
Maximum collimator diameter	600 mm; custom configurations
Maximum off-axis angle	$\pm 120^\circ$
MTF accuracy	± 0.02 on-axis; ± 0.03 off-axis
MTF repeatability	± 0.01
Load	50 kg; custom configurations

Conditions and configuration notes

The listed 5-2000 mm entrance-pupil range and 600 mm collimator diameter refer to different fields and need configuration confirmation; do not assume a 2000 mm clear aperture.

UV, VIS, SWIR, MWIR and LWIR are selectable configurations; the listing does not define one simultaneous numeric full-spectrum band.

Specify your measurement

- Spectral band, detector and target requirements
- Aperture, focal length and test-field angles
- Load, mounting, MTF frequency range and automation

Prepared by Precisometer. Technical review: 24 October 2026. Confirm the supplied configuration, measurement conditions, accessories and warranty with the quotation.

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