CMOS Test Systems

Testing the conversion efficiency of CMOS image sensors

Model CTS

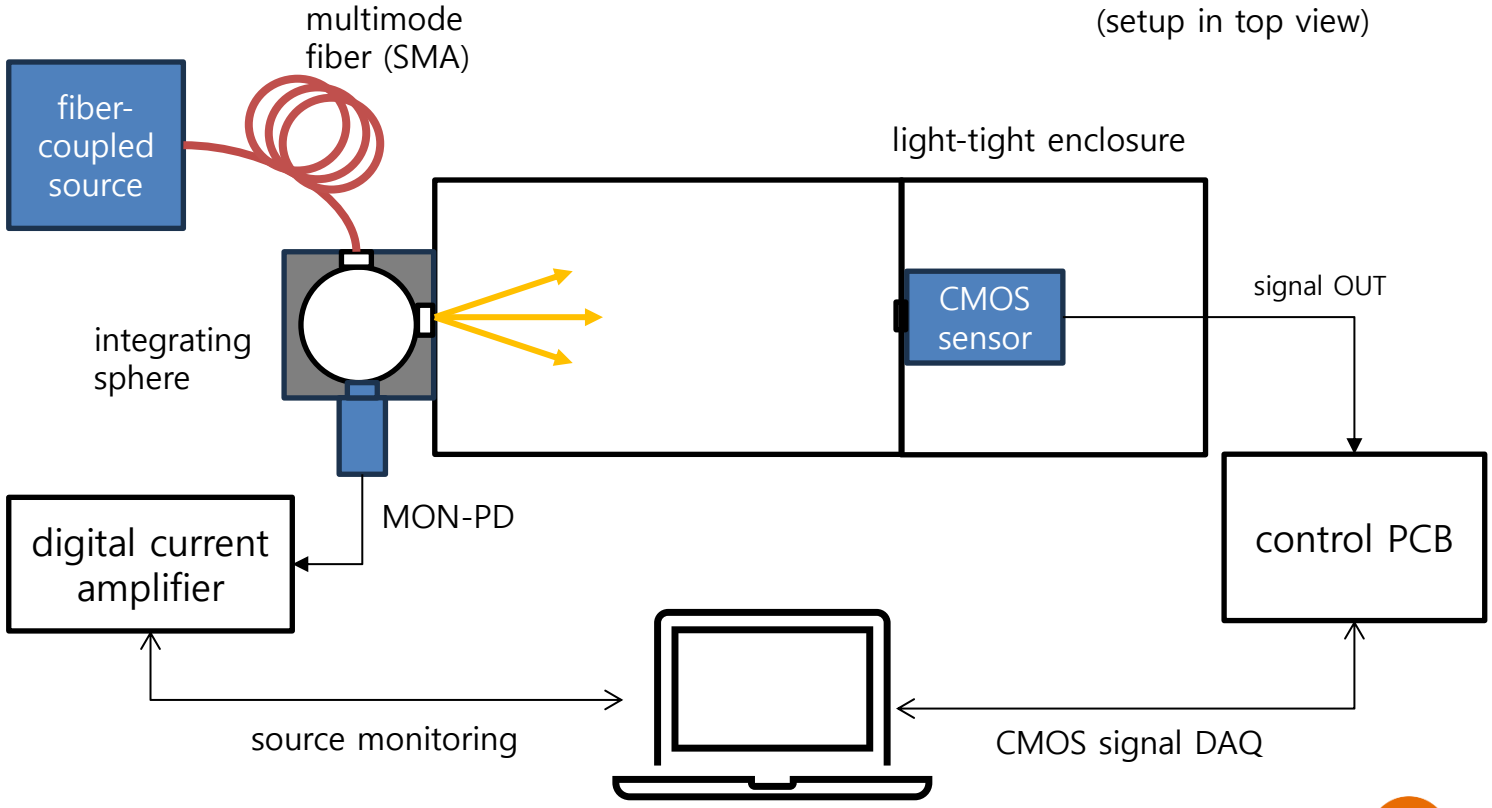
- CTS-QE (Quantum efficiency measurement with a spectrally tunable source)
- CTS-PTC (Photon Transfer Curve measurement with variable input level)

QRAD
Quality in Optical Radiometry
QRAD Inc., Bd. 309, Room 110, Korea Research Institute of Standards and Science, Gajeong-Ro 267, Daejeon, Korea
TEL +82-42-868-5706 contact@qrad-inc.com

- CTS
- CTS-QE
- CTS-PTC

The System

- Automated measurement of conversion efficiency of a CMOS image sensor at a selected source (monochromatic or white)
  - Uniform irradiation on the whole image sensor area > 20 mm x 20 mm
  - Sensor input calibrated and monitored for radiance (W/m^2sr) or irradiance (W/m^2)
- Customized instrumentation solution including a software

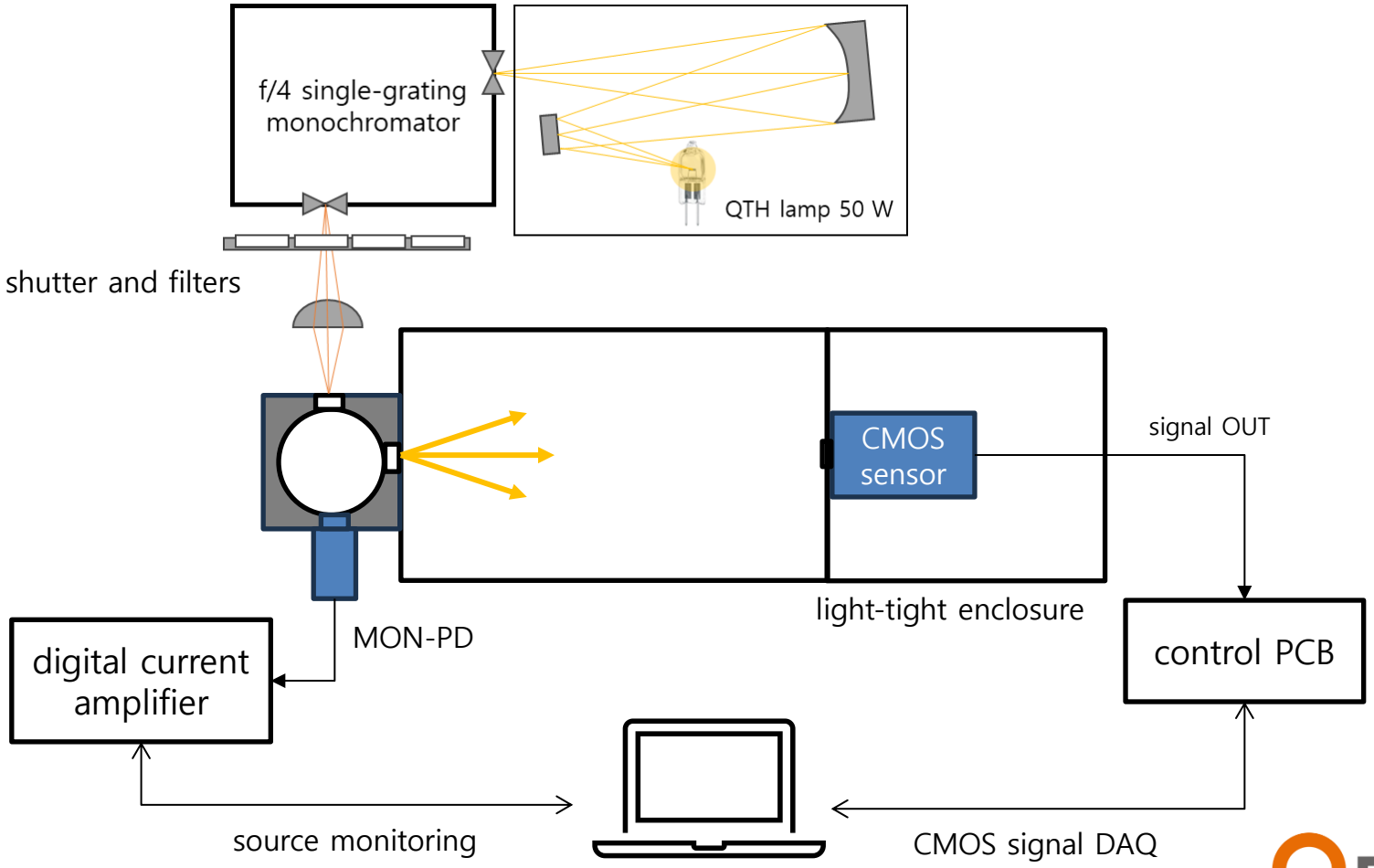


QRAD
Quality in Optical Radiometry

- CTS
- CTS-QE
- CTS-PTC

Spectrally Tunable QE Measurement

- CTS combined with a spectrally tunable monochromatic light source
  - QE measured as a function of wavelength from 300 nm to 1000 nm
  - Sensor input calibrated and monitored for spectral irradiance (W/m^2)
- Fully automated measurement of QE with traceability to KRISS

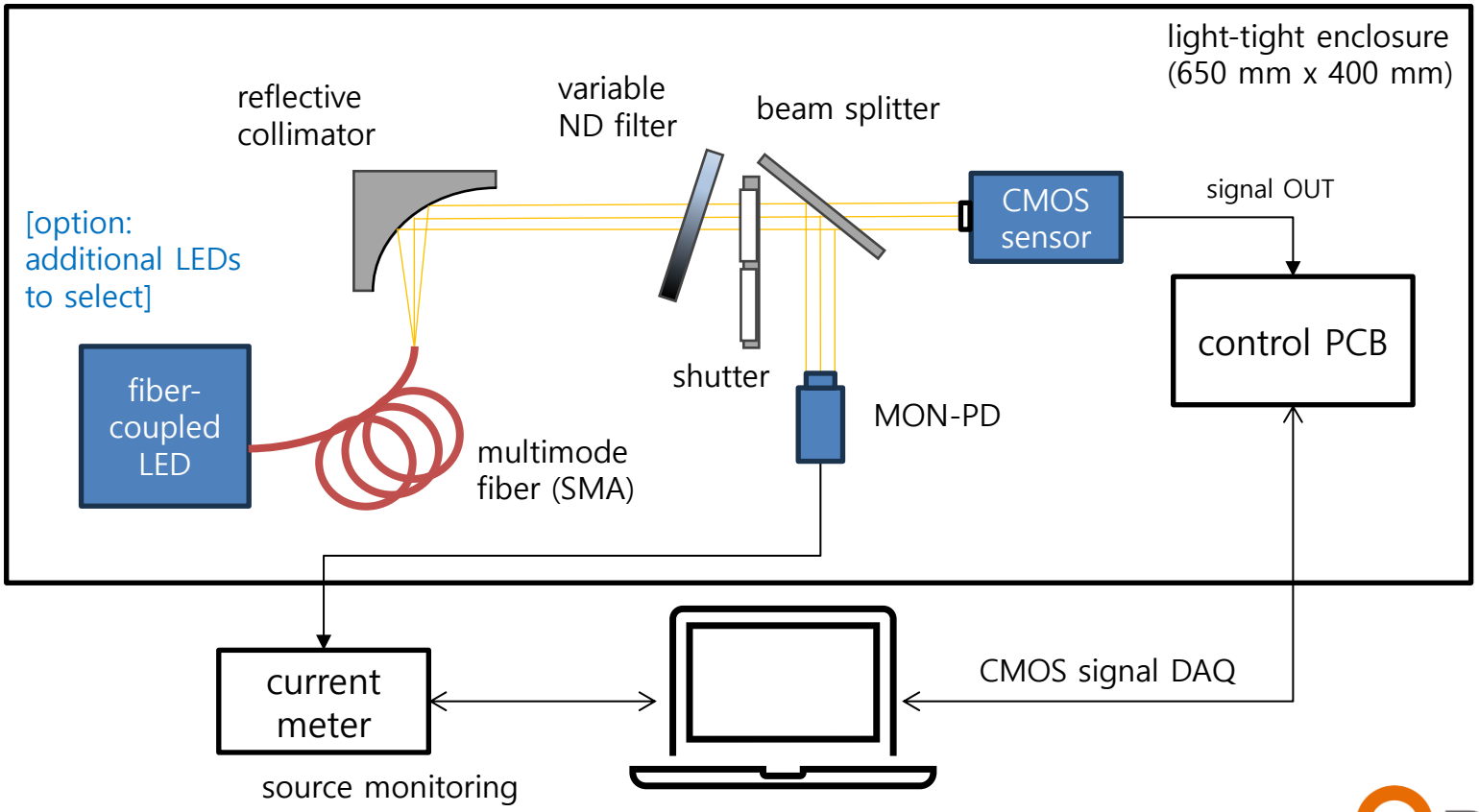


QRAD
Quality in Optical Radiometry

- CTS
- CTS-QE
- CTS-PTC

PTC Measurement in High Dynamic Range

- High-dynamic range variation of light input
  - Collimated beam from the fiber-coupled LED source (beam diameter > 5 mm)
  - Computer-controlled variable ND filter for light input variation at up to 100 points
- Light input to the sensor monitored via a beam splitter
  - Calibrated for irradiance (W/m^2) and illuminance (lx) at the sensor position



QRAD
Quality in Optical Radiometry

QRAD for Quality in Optical Radiometry

QRAD

Quality in Optical Radiometry