

SDL-XR

SPACE DYNAMICS LABORATORY TRANSFER RADIOMETER

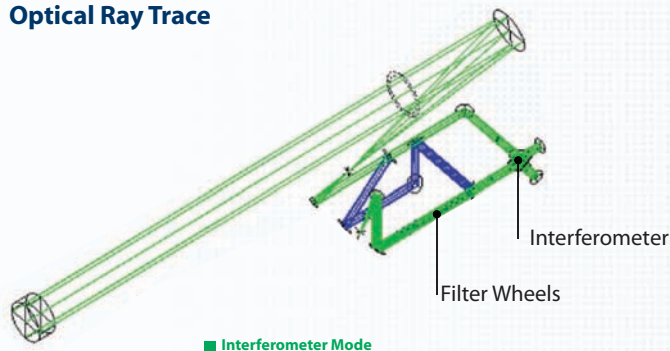


Used for high-accuracy calibration of IR sources, the **SDL-XR** is an IR transfer radiometer with two modes of operation:

- **RADIOMETER MODE** includes various narrow and wide band IR filters for high accuracy radiometric measurements.
- **INTERFEROMETER MODE** is used for spectral characterization of sources.

With its two modes of operation and large-scale spectral range, the SDL-XR provides superior calibration accuracy when compared to other transfer radiometers.

Optical Ray Trace



Selected with flip in mirrors (bypasses interferometer)

OPERATING CONFIGURATIONS

- Can operate in a laboratory environment with a KBr window at the entrance.
- Can mate directly to other equipment.
- Can operate inside larger TVAC (thermal vacuum) chambers.

SPECIFICATIONS

ENTRANCE APERTURE DIAMETER	65 mm (2.56")
FIELD OF VIEW	1 mrad
SPECTRAL RANGE	2 - 30 μm
SPECTRAL RESOLUTION <small>(INTERFEROMETER MODE)</small>	4 cm^{-1} (upgradable to 0.5 cm^{-1})
OPTICAL FILTERS	28 filters (4 filter wheels with 7 filters per wheel). Filters include ND filters to increase the dynamic range and spectral filters to select the bandpass.
ADDITIONAL INFORMATION	SiAs bib detector operated at 11 K (LHe cooled). Optical bench operates at < 20 K to maintain a low background.

The design can use existing interface hardware to be calibrated at NIST's LBIR (low background IR) calibration facility.

WEIGHT & DIMENSIONS

LENGTH	64"
HEIGHT	48" (above support)
WIDTH	37"
VACUUM SKIN OD	20"
WEIGHT (RADIOMETER)	620 Kg (1,370 lbs)
WEIGHT (WITH CART)	1,000 Kg (2,200 lbs)



Space Dynamics
LABORATORY
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