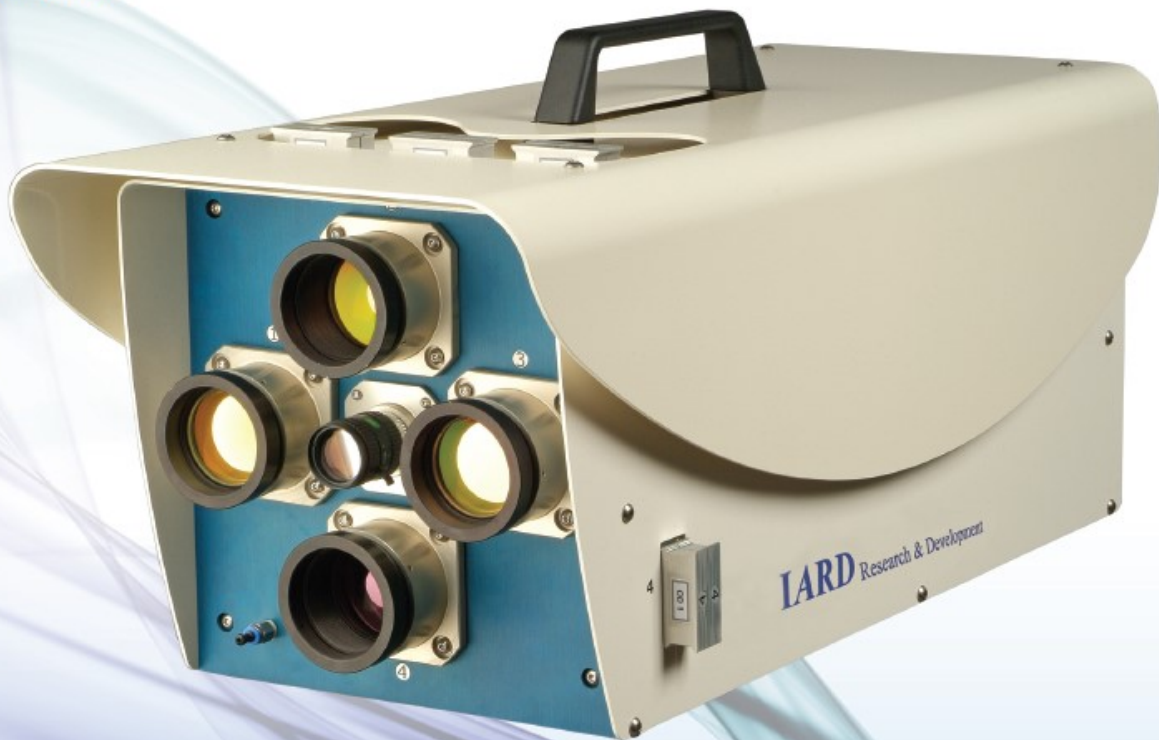


ColoRad

Multi Spectral Fast Radiometer

The ColoRad is a fast multi-channel radiometer which is able to perform simultaneous radiometric measurements in up to 4 channels (two of which can be cryogenically cooled) with high sensitivity and speed.

The ColoRad is the perfect tool for performing field measurements in up to 4 user-defined spectral bands.



- Radiometric channels are customer configurable and cover the range $0.2 \div 14 \mu\text{m}$
- Field of view (FOV) options for 40 or 80 mrad with the ability to add telescopes for wide or narrow FOV (as an example, a ColoRad may be ordered with 40 mrad FOV and an additional set of telescopes to increase the FOV to 80 mrad)
- Two modes of operation:
 - Chopped mode using built in lock-in amplifiers for high sensitivity
 - Direct mode for fast measurements (with rise times $< 10\mu\text{sec}$)
- User replaceable spectral and ND filters easily replaced during operation
- Completely computer controlled
- Built in data acquisition with USB2.0 data connection



יארד פתרונות חישה בע"מ
גור, 30065 טל: 972-4-8216402 פקס: 972-4-8216396
Yagur 30065, ISRAEL Tel:+972-48216402 Fax:+972-48216396
E-mail: INFO@IARD.co.il Web Site: www.IARD.co.il



ColoRad

Multi Spectral Fast Radiometer

Parameter	Value	Comments
Number of Channels	2-4 channels	Up to 2 cryogenic cooled channels, configurable spectral channel combinations
Filters (per channel)	1 spectral filter 1 ND filter	2 filter slides in the optical path
Attenuators	ND1, ND2, ND3	for each channel
Filter Slides	Accommodate 1" dia. filter, 1.6 mm thick	Included for each channel, User mountable
Field of View	2.3° (40 mrad) or 4.6° (80 mrad)	Optional attachable telescopes
Field of View non-uniformity	< 10% of maximum	
Field of view Size accuracy	< ±10% FWHM	
Channel Bore sight Accuracy	±0.2° (±3 mrad)	
Modes of operation	Lock In (LIA) for high sensitivity Direct (DIR) for high speed	AC Coupled DC Coupled
Chopping Frequency	100 - 1000 Hz	SW controlled chopper.
DIR mode Band Width	60kHz (-3db)	Chopper is in hold position
DIR Mode rise time	< 10µsec	
DIR Mode Gain Selection	1, 10, 100	SW selectable
NEI	10 ⁻⁹ ÷10 ⁻¹⁰ W/cm ² for DIR mode 10 ⁻¹⁰ ÷10 ⁻¹² W/cm ² for LIA mode	Depending on the specific channel
Data Acquisition	Up to 200 Ksample/sec/channel	
Control Interface	RS232 (9600 Baud)	
Data interface	USB 2.0	
Optical head to controller distance	5 meter cable to the PC	
Bore sight Viewer	CCD with FOV marker overlay and cross hair	manual contrast control of FOV overlay pattern
Bore sight Viewer FOV	> 5° or > 10°	
Weight of optical head	< 25 Kg	Depending on number of channels
Optical head Dimensions	L 735 x W 294 x H 329 mm	With shade cover
Power supply	100 - 240 VAC 50-60 Hz	External power supply with 5m cable
Environmental Conditions - Work	0°C ÷ 40°C	
Condensation prevention	Dry N ₂ purge valve available	
Environmental Conditions - Storage	-15°C ÷ +70°C	Storage in case
Carry case dimensions	L 857 x W 730 x H 429 mm	Rugged carry case with compartments for cables and accessories

SPECTRAL CHANNELS

Available detectors: Si, PbSe, InGaAs, InSb, MCT, PV-MCT

Available optical apertures: 23/48mm.