Photo-radiometer
HD2402

PORTABLE DATALOGGER PHOTO-RADIOMETER FOR THE MEASUREMENT OF NON-COHERENT OPTICAL RADIATIONS (A.O.R)

INTRODUCTION

The HD2402 is a **portable photo-radiometer with an integrated datalogger**, designed to perform reliable measurements in compliance with regulations governing exposure to non-coherent optical radiation. Its precision and versatility make it the ideal instrument for industrial, healthcare, and research environments where photobiological safety assessments are required in accordance with **European Directive 2006/25/EC and Legislative Decree 81/2008**.

The HD2402 enables the identification and characterization of potentially hazardous incoherent light sources, providing concrete support for occupational health and safety efforts aimed at prevention and protection in the workplace.

FEATURES

Integrated Multi-Sensor Unit

Six optical sensors cover the entire spectral range relevant for the assessment of artificial optical radiation:

- **Photometric sensor (luxmeter)** for illuminance measurements: 380÷780 nm
- **Radiometric sensor for the UV band**: 220÷400 nm
- **Radiometric sensor for the UVA band**: 315÷400 nm
- **Radiometric sensor for the Blue band**: 400÷700 nm
- **Radiometric sensor for the IR band**: 700÷1300 nm
- **Thermopile sensor** for infrared irradiance: 400÷2800 nm

Integrated LASER Pointer

Enables precise targeting of the light source under investigation.

Status LED Indicator

A rear-mounted LED provides a clear visual indication of active data acquisition, ensuring immediate status verification even from a distance.

Simple and Secure Connection

The CP24H cable with M12 – USB-A connector ensures a robust and reliable connection to both a PC and the external SWD05 power supply.

CONFIGURATION & MEASUREMENT

DeltaLog13 Management Software

Allows full configuration of the instrument via PC, including calendar settings, date, time, sampling duration, and interval.

Real-Time Data Acquisition

By connecting the HD2402 to a PC, it is possible to monitor measured values in real time—particularly useful during calibration procedures or for immediate analysis.

Standalone Data Logging

Once configured, the instrument can operate independently from the PC, storing data according to the pre-set acquisition schedule.

Manual Start/Stop Function

A convenient onboard button allows manual initiation or termination of data recording, even when the unit is not connected to a computer.

STANDARDS COMPLIANCE
Full spectral coverage of UV, visible, blue, and IR bands in accordance with Legislative Decree 81/2008 and European Directive 2006/25/EC.

INTEGRATED LASER POINTER
Facilitates the precise identification of the light source to be analyzed, enhancing both measurement efficiency and accuracy.

AUTONOMOUS AND PROGRAMMABLE DATALOGGER
Once configured via software, the device records data completely independently, making it ideal for long-term, unattended monitoring campaigns.

USER-FRIENDLY SOFTWARE FOR DATA ANALYSIS AND MANAGEMENT
The DeltaLog13 software package enables quick configuration, data download, graphical analysis, and real-time acquisition - even for non-expert users.

Measurement characteristics

Illuminance in spectral range 380...780 nm

Measuring ranges	0...399.9 lux 0...3,999 • 10^3 lux 0...39.99 • 10^3 lux 0...399.9 • 10^3 lux

UV irradiance in spectral range 220...400 nm with weighing factor S(λ)

Measuring ranges	0...39.99 • 10^{-3} W/m² 0...399.9 • 10^{-3} W/m² 0...3.999 W/m² 0...39.99 W/m²

Ultraviolet irradiance in UVA spectral range (315...400 nm)

Measuring ranges	0...3.999 W/m² 0...39.99 W/m² 0...399,9 W/m² 0...3.999 • 10^3 W/m²

Irradiance in spectral range 400...700 nm (blue) with weighting factor B(λ)

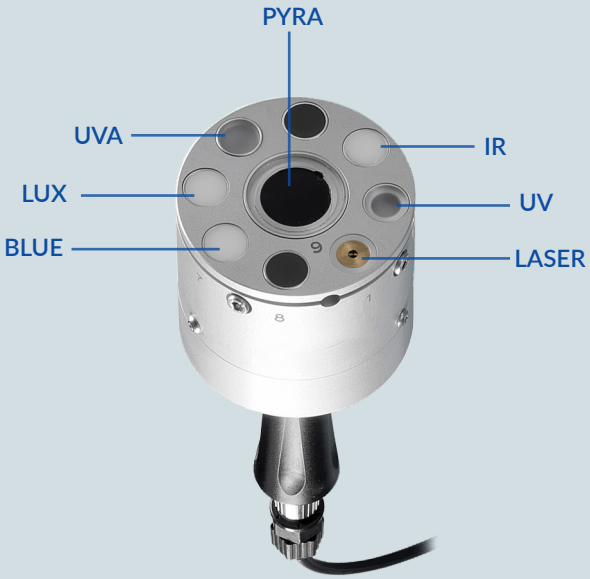
Measuring ranges	0...399,9 • 10^{-3} W/m² 0...3,999 W/m² 0...39.99 W/m² 0...399.9 W/m²

Infrared irradiance in spectral range 700...1300 nm with weighing factor R(λ)

Measuring ranges	0...3,999 W/m² 0...39.99 W/m² 0...399,9 W/m² 0...3.999 • 10^3 W/m²

Infrared irradiance in the spectral range 400...2800 nm

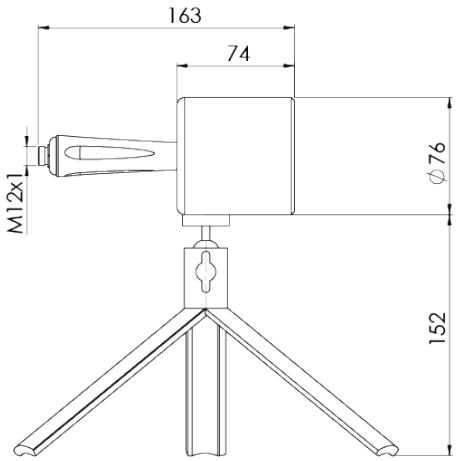
Measuring ranges	0...3.999 • 10^3 W/m²



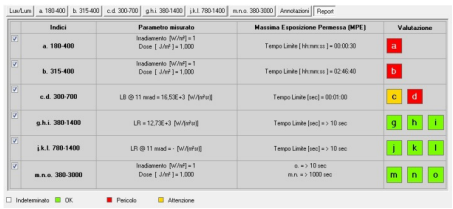
Technical characteristics

Power supply	5 Vdc / 1A (mains adapter SWD05)
Memory capacity	96000 stored data (~26 hours continuous acquisition)
Storage interval	Fixed 1 second
Connection to PC	To an USB port through CP24H adapter cable
Operating conditions	-5...50 °C 0...85% RH no condensation
Storage temperature	-25...65 °C
Weight	500 g approx.
Materials	Aluminium alloy / rubber protection sleeve

Dimensions



DeltaLog13



Through the DeltaLog13 software, you can configure your HD2402 (calendar, date, time, start time and logging time), set the proper measurement ranges and perform your measurement campaign.

The exposure limit values for each risk index are available in a final report table. Colored boxes in the 'assessment' column ease the reading of the risk index states: a safe situation is indicated by a green box while yellow and red boxes indicate dangerous or risky situations.

Ordering codes

HD2402	Multi-sensor photo-radiometer. Supplied with CH20-ROA hardware key for software enablement, CP24H connection cable, SWD05 power supply unit, VTRAP30 tripod, instruction manual, carrying case and compliance report.

vs2.0

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