

RAMSES

Hyperspectral Radiance and Irradiance Sensors for the UV, VIS or UV/VIS range

RAMSES radiometer are stand-alone and highly integrated hyperspectral radiometer for the UV, VIS and/or UV/VIS spectral range. Small size and very low power consumption make them suitable for hand-held and autonomous applications. The RAMSES radiometer family is especially designed for combining precision hyperspectral light measurement with a maximum of flexibility. The modular measurement system reduces the price and many accessories as well as custom made solutions grant a broad range of applications like installations on ships, handheld usage or autonomous measurements in remote places, like the Arctic or Antarctic.

Applications:

- water quality monitoring
- field measurements
- satellite data validation
- biology
- photosynthesis
- colour measurements
- climatology



RAMSES

Info

				
	ACC-UV	ACC-VIS	ARC-VIS	ASC-VIS
	<i>hyperspectral UV A / UV B irradiance</i>	<i>hyperspectral UV / VIS irradiance</i>	<i>hyperspectral UV / VIS radiance</i>	<i>hyperspectral UV / VIS scalar irradiance</i>
wavelength range*	280 - 500 nm	320 - 950 nm		
detector type*	256 channel silicon photodiode array			
spectral sampling*	2.2 nm/pixel	3.3 nm/pixel		
spectral accuracy*	0.2 nm	0.3 nm		
usable channels	100	190		
typical saturation (IT: 4ms)**	20 W m ⁻² nm ⁻¹ (at 300nm) 17 W m ⁻² nm ⁻¹ (at 360nm) 18 W m ⁻² nm ⁻¹ (at 500nm)	10 W m ⁻² nm ⁻¹ (at 400nm) 8 W m ⁻² nm ⁻¹ (at 500nm) 14 W m ⁻² nm ⁻¹ (at 700nm)	1 W m ⁻² nm ⁻¹ sr ⁻¹ (at 500nm)	20 W m ⁻² nm ⁻¹ (at 400nm) 12 W m ⁻² nm ⁻¹ (at 500nm) 15 W m ⁻² nm ⁻¹ (at 700nm)
typical NEI (IT: 8s)**	0.85 μW m ⁻² nm ⁻¹ (at 300nm) 0.75 μW m ⁻² nm ⁻¹ (at 360nm) 0.80 μW m ⁻² nm ⁻¹ (at 500nm)	0.4 μW m ⁻² nm ⁻¹ (at 400nm) 0.4 μW m ⁻² nm ⁻¹ (at 500nm) 0.6 μW m ⁻² nm ⁻¹ (at 700nm)	0.25 μW m ⁻² nm ⁻¹ sr ⁻¹	0.8 μW m ⁻² nm ⁻¹ (at 400nm) 0.6 μW m ⁻² nm ⁻¹ (at 500nm) 0.8 μW m ⁻² nm ⁻¹ (at 700nm)
collector type	cosine response		FOV: 7° in air	spherical detector 2 Pi
accuracy	better than 6-10% ***		better than 6% ***	better than 5% ***
integration time	4 ms - 8 sec			
telemetry interface	RS-232			
data rate (RS-232)	1,200 - 19,200 baud			
power requirements	1.5 - 11 VDC; 0.85 W (data acquisition active); 100mW (interface active); 0.5mW (stand-by modus)			
connector	SubConn micro series 5 pin, male			
size	d= 48mm x 260mm	d= 48mm x 260mm	d= 48mm x 280mm	d= 48mm x 260mm
weight in air	0.85 kg (titanium: 0.65 kg)		0.9 kg (titanium: 0.7 kg)	
depth rating	300m			
operation temp.	-10 to +50°C			
*) specifications from Carl ZEISS AG, Germany; **) IT: integration time; ***) depending on spectral range				

order codes

11 0010	RAMSES ACC-UV	20 1000	PS101 (powersupply, 1 channel)
11 0014	RAMSES ACC-VIS	20 1010	IPS104/2+ (powersupply, 2 channels)
11 0018	RAMSES ARC	20 1013	IPS104/3+ (powersupply, 3 channels)
11 0020	RAMSES ASC-VIS	20 1017	IPS104/4+ (powersupply, 4 channels)
11 9001	GPS module	41 0000	TriBox2 (controller), 85 - 265VAC
21 2000	FieldCAL	41 0001	TriBox2 (controller), 24VDC
21 9002	Inclination and pressure module		

all versions are available with stainless steel (standard) or titanium housings and can be upgraded with an inclination and pressure module

contact us for transport boxes, sensor frames, customized or communication solutions