



OCR-500 SERIES IRRADIANCE SENSOR - STANDARD AND AUV SERIES

The OCR-500 micro-sensor series is a fully digital optical sensor package that combines precision optics and high performance microelectronics. Satlantic designed this sensor series for applications where performance, size and power are key constraints. The OCR-500 series radiometers can be mounted on real-time profilers, moored, and autonomous deepwater buoys and autonomous underwater vehicles (AUV's).



DOWNWELLING IRRADIANCE SENSOR MODEL OCR-504 / 507 / AUV

SPATIAL CHARACTERISTICS		ELECTRICAL CHARACTERISTICS	
Field of view	In-air or in-water Cosine response (Spectrally corrected)	Telemetry options Network options Input voltage	RS232, RS485 SATNET 6 to 22 VDC (12-volt nominal)
Collector Area Detectors	86.0 mm ² Custom 17 mm ² Silicon photodiodes	Current (4 and 7 channel)	25 mA @ 12VDC 40 mA at 12V
SPECTRAL CHARACTERISTICS		PHYSICAL CHARACTERISTICS	
Bandwidth range Number of channels Spectral bandwidth Filter type	400 - 865 nm standard 4 or 7 channels 10 nm or 20 nm Ion Assisted Deposition (IAD) Custom low fluorescence	Height (4 and 7 channel) Diameter Weight Material	11.0 cm, 12.5 cm 4.6 cm, 6.5 cm 260 grams, 420 grams Acetron / Anodized Aluminum
		Connector (standard) Maximum depth	Micro 8 pin male 350 m / 1000 m
OPTICAL CHARACTERISTICS		SYSTEM ELECTRONICS	
Out of band rejection Cosine Response	10 ⁻⁶ 3% from 0-60° 10% from 60-85°	Sample rate A/D conversion Dynamic range	7Hz (24 Hz optional) 24 bit 18 bit
Typical saturation Typical NEI	300 μWcm ⁻² nm ⁻¹ 2.5 X10 ⁻³ μWcm ⁻² nm ⁻¹	Telemetry Data format Baud rate	32 bit words Binary User selectable from 9.6 to 115.2 kbps
TEMPORAL CHARACTERISTICS			
System time constant	0.011 seconds		

*Specifications may change without notice.
January 2008*



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UPWELLING RADIANCE SENSOR MODEL OCR-504 / 507/ AUV

SPATIAL CHARACTERISTICS		ELECTRICAL CHARACTERISTICS	
Field of view	10° in water (Half angle, half maximum)	Telemetry options	RS232, RS485
Entrance aperture	14° in air (Half angle, half-maximum)	Network options	SATNET
Detectors	9.5 mm diameter	Input voltage	6 to 22 VDC (12-volt nominal)
	Custom 13 mm ²	Current (4 or 7 channel)	25 mA @ 12VDC 40 mA at 12V
	Silicon photodiodes		
SPECTRAL CHARACTERISTICS		PHYSICAL CHARACTERISTICS	
Bandwidth range	400 - 865 nm standard	Height (4 or 7 channel)	11.0 cm, 12.5 cm
Number of channels	4 or 7 channel	Diameter (4 or 7 channel)	4.6 cm, 6.4 cm
Spectral bandwidth	10 nm or 20 nm	Weight	260 grams, 400 grams
Filter type	Ion Assisted Deposition (IAD)	Housing Material	Acetron / Anodized Aluminum
	Custom low fluorescence	Connector (standard)	Micro 8 pin male
		Maximum depth	350 m / 1000 m
OPTICAL CHARACTERISTICS		SYSTEM ELECTRONICS	
Out of band rejection	10 ⁻⁶	Sample rate	7Hz (24 Hz optional)
Out of field rejection	5X10 ⁻⁴ >1.5 FOV	A/D conversion	24 bit
Typical saturation	5 μWcm ⁻² nm ⁻¹ sr ⁻¹	Dynamic range	18 bit
		Telemetry	32 bit words
		Data format	Binary
		Baud rate	User selectable from 9.6 to 115.2 kbps
TEMPORAL CHARACTERISTICS			
System time constant	0.011 seconds		

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