

# RadOMA Series Spectroradiometers

## PRODUCT SUMMARY

The RadOMA Series Platform is a durable opto-electrical design proven in hundreds of facilities worldwide. Experience the Gamma Scientific RadOMA advantage offering advanced, high-speed spectroradiometers that combines the leading-edge sensitivity of a backside-thinned CCD detector with Gamma Scientific's industry-renowned RadOMA optical multi-channel analyzer (OMA) opto-electrical platform.

The GS-1290 Series features millisecond measurement speed, exceptional low-light measurement capability and superior blue-light region sensitivity at least two times greater than conventional front-illuminated CCD-based systems. The GS-1290 is ideally suited for applications including retro-reflective material color, LED color & luminance, flat panel display and light-source measurements.

Four GS-1290 models cover a very wide spectral range from ultraviolet to the near infrared: 200 nm to 550 nm (GS-1290-0), 260 nm to 900 nm (GS-1290-1), 380 nm to 810 nm (GS-1290-2) or 300 nm to 1100 nm (GS-1290-3).

As with all Gamma Scientific's products, each system is completely modular and interchangeable, so it can be easily upgraded or customized to fit your needs. Automatic Dynamic Range Optimization (65,536:1) ensures system electrical gains are always set for the best results. Interfacing the RadOMA via USB to Gamma Scientific's powerful 32-bit Light Touch spectral data acquisition and analysis software package rounds out a comprehensive solution.

Best of all, RadOMA systems come pre-calibrated per system and can be self-calibrated so they never have to be returned to the factory for calibration. Calibrations take just seconds using any standard NIST-traceable light source.



### FEATURES

- *TE Cooled, back-thinned CCD Array*
- *Exceptional accuracy via high-resolution bandwidth coverage*
- *Very robust and repeatable measurements*
- *Superior wavelength and color accuracy via low thermal expansion coefficient materials*
- *Near-real-time measurement*
- *High resolution: 0.4 nm/pixel*
- *Spectral ranges: 200-550 nm, 260-900 nm, 300-1100 nm and 380-810 nm*
- *USB interface*
- *NIST-traceable accuracy*
- *Self-calibrate (System never has to be returned for calibration)*



**GAMMA SCIENTIFIC**

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## SPECIFICATIONS

Detector and Wavelength Specifications				
Model Numbers	GS-1290-0	GS-1290-1	GS-1290-2	GS-1290-3
<b>Spectral Range (nominal)</b>	200-550 nm	260-900 nm	300-1100 nm	380-810 nm
<b>Wavelength Resolution</b>	0.3 nm	0.6 nm	0.9 nm	0.4 nm
<b>Spectral Bandwidth</b>	Built-In User Selectable Half-Power Bandwidth (HPBW)			
	5.0 nm	10 nm	20 nm	10 nm
	2.5 nm	5.0 nm	10 nm	5.0 nm
	1.3 nm	2.5 nm	5.0 nm	2.5 nm
	0.9 nm	1.8 nm	2.7 nm	1.4 nm
	0.6 nm	1.2 nm	1.8 nm	1.0 nm
<b>Wavelength Repeatability</b>	0.02 nm	0.02 nm	0.03 nm	0.02 nm
<b>Wavelength Accuracy</b>	< 0.5 nm	< 1 nm	< 1 nm	< 0.5 nm
Specifications Below Apply to All Models				
<b>Detector</b>	1044 x 128 back-thinned CCD array			
<b>Calibration</b>	User-Calibration: System never has to be returned to the factory			
<b>Stray Light</b>	Less than $1 \times 10^{-4}$ (at 8 times the HPBW from HeNe Laser Line)			
<b>Shutter</b>	Electric Operation			
<b>Electrical Resolution</b>	16 Bit			
<b>Dynamic Range (single scan)</b>	64,000:1			
<b>Detector Hermetic Seal</b>	Standard			
<b>Detector Temperature</b>	0° C			
<b>Computer Interface</b>	USB 2.0			
<b>Control Software</b>	Light Touch RadOMA <sup>®</sup> for Windows <sup>®</sup> or stand-alone DLL package for customized software integration			
<b>Dimensions:</b>				
<b>Height</b>	11.8" (29.9 cm)			
<b>Width</b>	6" (15.1 cm)			
<b>Length</b>	12.1" (30.8 cm)			
<b>Weight</b>	10 lbs (4.6 kg)			



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