



LUMETRICS®

Precision Measurement Solutions

Reference Signal Generator II

Product Manual



1 Revision History

Revision	Description	Author	Date
Revision 1	Initial Release	Jeremy Crouse	8/27/15

2 Introduction

The Reference Signal Generator II (RSG II) is an OptiGaugell peripheral, which allows an operator to use OptiGaugell for distance and surface profile measurements. The RSG II contains a high quality optical mirror integrated within a fixed metal housing. Part of the infrared light from OptiGaugell is deflected onto the mirror surface.

The RSG II is designed to produce a signal peak in the OptiGauge Control Center software (OCC) waveform, which acts as a stationary reference point at a fixed distance from the optical probe. Therefore, the thickness of Layer 1 in OCC software indicates the distance between the reference point of the optical probe to the closest surface of the material of interest. The optical probe can then be raster-scanned along the material of interest, and the Layer 1 readings can be used to extract the physical profile of the surface. Layers 2 and higher (in case of single- or multi-layer transparent materials) can then be used to reconstruct the overall 3D shape of the material of interest.

2.1 Notices

2.1.1 Required Software

The following software packages must be installed in order to use the equipment:

1. OptiGauge Control Center

2.1.2 Required Hardware

The following hardware is required to use the equipment:

1. OptiGauge II
2. Computer
3. Fiber Optic cable to attach OptiGauge II to Reference Signal Generator



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2.2 Safety

Exercise good judgment when handling this equipment. This product contains precision metals and optical components that may become damaged if handled improperly or dropped.

3 Getting Started

3.1 Unpacking

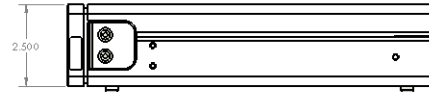
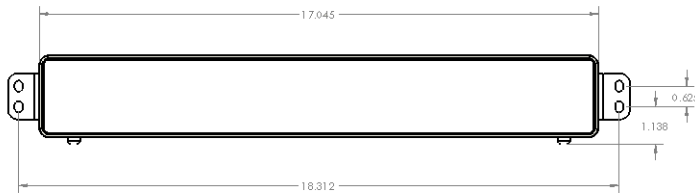
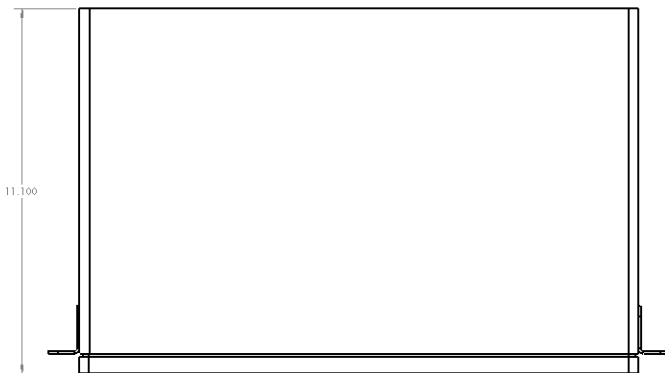
Inspect the packaging for damage. If the shipping container(s) seems to be damaged, contact Lumetrics immediately.

The packing container should contain the following:

1. Reference Signal Generator II
2. Product Manual

3.2 Physical Properties

Dimension	Standard	Metric
Height	2.5 in	63.5 mm
Width	17.0 in	432 mm
Depth	11.1 in	282 mm
Weight	2.7 lbs	1.22 kg

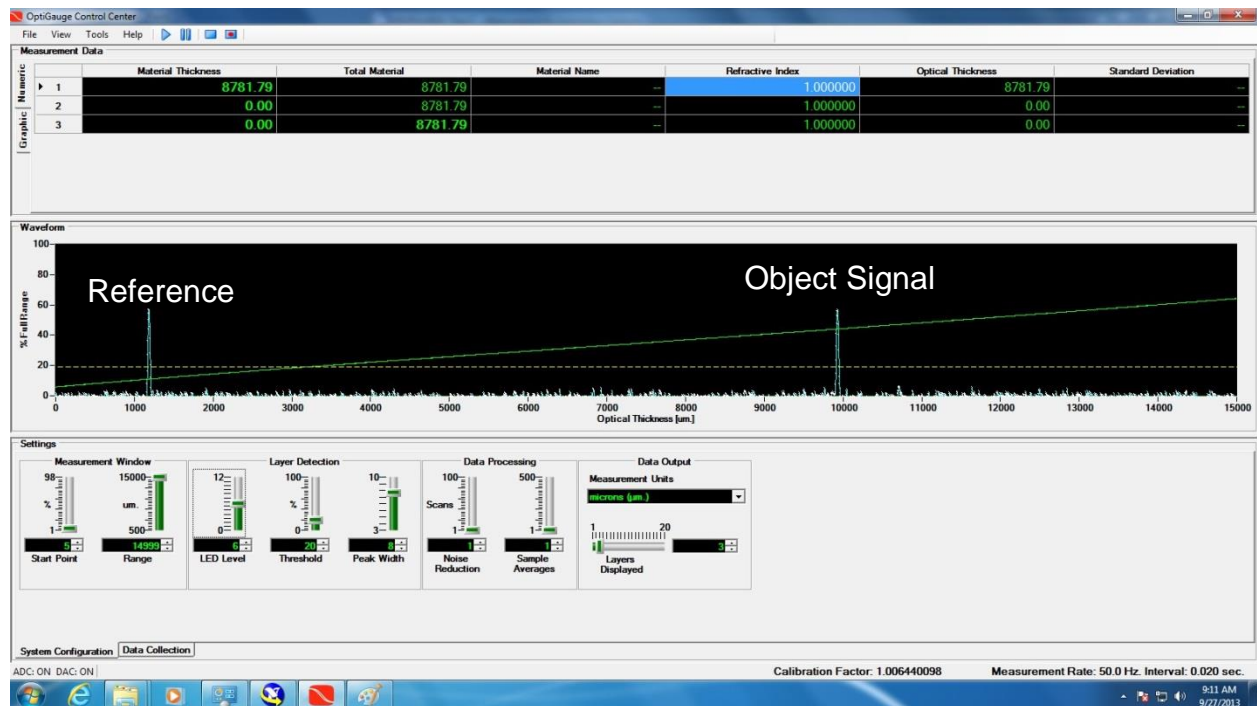




4 Reference Signal Generator II Installation

1. Disconnect measurement probe from OptiGauge (if connected).
2. Connect the measurement probe to the “Probe” port on the Reference Signal Generator II.
3. Connect the extension fiber cable to the “OptiGauge” port in the Reference Signal Generator II.
4. Connect the opposite end of the extension fiber cable to OptiGauge II.

With OptiGauge Control Center open, a reference peak should now be visible on the left side of the waveform. This signal will vary in amplitude based on the OCC settings, but the position of the peak will remain stationary.





5 Troubleshooting

Description	Cause(s)	Solution(s)
No Signal	Reference Signal Generator II not plugged into OptiGauge	Plug in Reference Signal Generator II
	Broken optical fiber	Replace optical fiber
	Reversed fiber cables in ports	Make sure fiber into “Probe” port is from the measurement probe and the fiber into the “OptiGauge” port is to the OptiGauge II.



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6 Contact Us

6.1 Technical Support

You may contact Customer Service by emailing service@lumetrics.com or calling 585-214-2455 x123. Be prepared to describe your issue in detail and have the following information ready:

1. Your Name:
2. Company:
3. Phone Number:
4. Email Address:
5. Street Address:
6. City, State, Zip Code:
7. Country:
8. OptiGauge II Serial Number:
9. Reference Signal Generator II Serial Number:
10. Problem Description:

6.2 Sales Support

Our sales team is eager to assist you with expanding your inspection capabilities. Please call toll-free or email at:

Toll-Free: 585-214-2455

Email: sales@lumetrics.com

Or visit our website at: www.lumetrics.com