

Portable Connector End Face Geometry Interferometer

- Automated, Compact Interferometer Controlled through USB Port
- Precise, Fast Measurements of Radius of Curvature, Apex Offset, and Fiber Height
- User-Friendly Software Compatible with Windows® 7, 8, or 10

3D View Provides Intuitive Understanding of Geometry

Pass/Fail Limit Regions Streamline Production Line Integration

CC6000

Related Items

- Fiber Polishing
- Fiber Inspection
- Fiber Cleaning
- Vytran Fiber Processing

Overview Measurement Software Front & Back Panels Interferograms Feedback

Features

- Automated, Non-Contact Analysis of Single-Fiber Connector End Faces
- Quickly Measure Radius of Curvature, Apex Offset of Polish, and Fiber Undercut or Protrusion
- Minimal Need for Refocusing Coupled with No Regularly Moving Components
- Software can be installed on PC (Not Included) with Windows® 7 or Higher
- Interchangeable Mounts for Ø1.25 mm to Ø2.50 mm Ferrule, PC or APC, Single-Fiber Connectors

Thorlabs' Vytran Portable Connector End Face Geometry Interferometer automatically and precisely measures radius of curvature, apex offset of polish, and fiber undercut or protrusion on any PC or APC, single-fiber connector. The CC6000 Interferometer uses a non-contact tilted-phase analysis technique for fast, reliable measurements of connector end faces. This compact interferometer has a carrying handle and must be attached to a desktop or laptop computer (not included) with a standard USB 2.0 port for operation. The included CC6000 software, which is used to control the interferometer, can be installed on a computer with the minimum requirements in the table below. Designed for use in both the factory and the field, this interferometer provides crucial quality information needed to assure long-term performance of fiber optic connectors. One CC250P Mount for Ø2.50 mm PC Connectors and one RT250P Reference Tool for calibrating the CC6000 are included with the CC6000 interferometer; mounts and reference tools that enable measurement of other PC or APC single-fiber connectors are available separately below. When used with an appropriate mount for APC connectors, the CC6000 Interferometer is also capable of measuring the APC angle and key error.

Software Interface

The user-friendly software allows anyone with minimal experience to accurately measure the end face geometry of a fiber optic connector. After performing a non-contact interferometric measurement of the fiber optic connector and face, the CC6000 interferometer will automatically generate a 3D image showing the measured radius of curvature, apex offset, and fiber height. This immediate visual feedback on the endface geometry of the connector aids users in understanding quality control and quality assurance issues, allowing them to get the most from their high performance fiber optic connectors. The software's user interface is simple and easy to learn, with every option visible under intuitive Menu Tabs: Measure, Setup, Calibration, or History windows can be brought up with a few clicks. Preset scan criteria can be loaded to allow pass/fail measurements of PC connectors using IEC, Telcordia, or your own custom standards. Data can be saved to an Excel file in any directory locally or on a network and is also saved on a SQL database. See the Software tab for more details.

Tilted Phase Analysis

The CC6000 interferometer uses a unique tilted phase analysis, in which the connector is held at a slight tilted angle so that interferometry produces circular fringes across the connector end face. This interferometry provides all the information needed to measure the connector without the need for costly phase-shifting devices. After a simple calibration to measure the tilt, the spherical radius of curvature, spherical fiber height, and apex offset of the connector are calculated using advanced algorithms (see the Measurement tab for more details). An added advantage of tilted phase analysis is that any small angle is suitable, so no mechanical adjustments are required. This lack of mechanical adjustment enables the measurements to be as fast as 1 second and the device to be easily maintained.

Item #	CC6000		
Measurement Specifications	Range	Repeatability^a	Reproducibility^b
Radius of Curvature	3 - 50 mm	1%	2%
Apex Offset	0 µm - 100 µm	2 µm	4 µm
Spherical Fiber Height	±160 nm	5 nm	10 nm
Interferometer Specifications			
Dimensions (L x W x H)	13.9" x 8.8" x 5.9"		
Light Source	LED (660 nm)		
Camera Sensor	CCD, 5.79 mm x 4.89 mm Sensing Area		
Measurement Lateral Resolution	1 µm		
Magnification	10X Objective		
Field of View (H x V)	358 µm x 336 µm		
Computer Minimum Requirements			
Speed	Pentium IV 1.5 GHz		
USB	2.0		
Operating System	Microsoft® Windows® 7		
RAM	1 GB		

a. Defined as the 1σ variance for 50 consecutive undisturbed measurements.
 b. Defined as the 1σ variance for 50 consecutive measurements with connector reinsertion between each measurement.

Portable Interferometer

CC6000

- Robust, Compact Construction
- Integrated Carrying Handle for Ease of Transport
- Recalibration Only Needed After Attaching Mount
- Additional Mounts and Reference Tools Sold Below

The CC6000 Portable Interferometer is a compact unit for non-contact analysis of connector end face geometry. It is shipped with all the items described to the right, allowing for measurements of 1.5 mm PC connectors once connected to a computer (not included) with the minimum requirements described in the Overview tab. To measure a wide variety of other connector types, additional locking V-groove mounts must be purchased, for which a corresponding reference tool is needed for calibration (see table below). The CC6000 interferometer will measure the radius of curvature, apex offset, and fiber height of all connectors. For APC connectors, the CC6000 interferometer can also measure the APC angle and the key error.

The CC6000 interferometer is designed for accurate measurements in production or field environments. Precision offset measurements are facilitated by our locking V-groove mount (sold below) which holds the connector in an exact, repeatable position during calibration and measurement. The system has been optimized to provide maximum stability, eliminating the need for recalibration except when reattaching or exchanging mounts. Refocusing is also reduced with no regularly moving components and limited exposure of optical components to environmental contamination.

Components Included

- CC6000 Connector End Face Geometry Interferometer
- External Power Supply
- Region-Specific Power Cord
- End Face Geometry Measurement Software*
- Operation Manual
- CC250P Mount for Ø2.5 mm PC Connectors
- RT200P Reference Tool for Calibration of Mount
- Fiber Connector Cleaner

Optional Purchases

- Locking V-Groove Mounts
- Reference Tools

*Computer with USB 2.0 port required for operation (not included). See minimum requirements in the Overview tab.

Based on your currency / country selection, your order will ship from **Newton, New Jersey**

+1 Qty	Docs	Part Number - Universal	Price	Available / Ships
<input type="text"/>		CC6000 NEW/Portable Connector End Face Geometry Interferometer	\$14,995.00	Lead Time

Locking V-Groove Mounts

- Mounts for Connectors with Ø1.25 to Ø2.5 mm Ferrule
- Each Mount Requires Calibration with Reference Tool (Sold Separately Below)
- Locking V-Groove Design Ensures Stable, Repeatable Connection

The Locking V-Groove Mounts sold below can be swapped out for the Ø2.5 mm PC mount that comes standard with the CC6000 portable interferometer, allowing a wide variety of connectors to be tested with the CC6000 interferometer. For each insertion of a mount, a calibration must be performed using the corresponding reference tool sold below. Once this calibration is performed on a mount, the measurements can be accurately calculated for all connectors measured in that mount.

The table to the right provides a guide for choosing the right mount and reference tool for each type of connector. For more help, contact [Tech Support](#).

Locking V-Groove Mount Item #	Compatible Connector Type	Required Reference Tool Item #
CC125LP	Ø1.25 mm Ferrule LC/PC Connectors	RT125P
CCDUPLP	Ø1.25 mm Ferrule Duplex LC/PC Connectors	RT125P
CCLMFA	Ø1.25 mm Ferrule LC/MU/F3000 APC Connectors	RT125A
CC125LAF	Ø1.25 mm Ferrule LC/APC Connectors (Flex Mount)	RT125A
CC125LA	Ø1.25 mm Ferrule Lucxis APC Connectors	RT125LA
CC158P	Ø1.58 mm Ferrule PC Connectors	RT158P
CC200P	Ø2.00 mm Ferrule PC Connectors	RT200P
CC200A	Ø2.00 mm Ferrule APC Connectors	RT200A
CC250P	Ø2.50 mm Ferrule PC Connectors	RT250P
CCDUPSP	Ø2.50 mm Ferrule Duplex SC/PC Connectors	RT250P
CC250A	Ø2.50 mm Ferrule FC/APC Connectors	RT250SA
CCE20A	Ø2.50 mm Ferrule E2000 APC Connectors	RT250SA
CC250SAF	Ø2.50 mm Ferrule SC/APC Connectors (Flex Mount)	RT250SA
CC250SAD	Ø2.50 mm Ferrule SC/APC Connectors	RT250SAD

Based on your currency / country selection, your order will ship from **Newton, New Jersey**

+1 Qty	Docs	Part Number - Universal	Price	Available / Ships
<input type="text"/>		CC125LP NEW/Locking V-Groove Mount for Ø1.25 mm LC/PC Connectors	\$895.00	Lead Time
<input type="text"/>		CCDUPLP NEW/Locking V-Groove Mount for Duplex LC/PC Connectors	\$1,545.00	Lead Time
<input type="text"/>		CCLMFA NEW/Locking V-Groove Mount for LC/MU/F3000 APC Connectors	\$1,050.00	Lead Time
<input type="text"/>		CC125LAF NEW/Locking V-Groove Flex Mount for Ø1.25 mm LC/APC Connectors	\$1,050.00	Lead Time
<input type="text"/>		CC125LA NEW/Locking V-Groove Mount for Ø1.25 mm Lucxis APC Connectors	\$1,500.00	Lead Time
<input type="text"/>		CC158P NEW/Locking V-Groove Mount for Ø1.58 mm PC Connectors	CALL	Lead Time
<input type="text"/>		CC200P NEW/Locking V-Groove Mount for Ø2.00 mm PC Connectors	\$945.00	Lead Time
<input type="text"/>		CC200A NEW/Locking V-Groove Mount for Ø2.00 mm APC Connectors	\$1,500.00	Lead Time
<input type="text"/>		CCDUPSP NEW/Locking V-Groove Mount for Duplex SC/PC Connectors	\$1,545.00	Lead Time
<input type="text"/>		CC250P NEW/Locking V-Groove Mount for Ø2.50 mm PC Connectors	CALL	Lead Time
<input type="text"/>		CC250A NEW/Locking V-Groove Mount for Ø2.50 mm FC/APC Connectors	\$1,050.00	Lead Time
<input type="text"/>		CCE20A NEW/Locking V-Groove Mount for E2000 APC Connectors	\$1,050.00	Lead Time
<input type="text"/>		CC250SAF NEW/Locking V-Groove Flex Mount for Ø2.50 mm SC/APC Connectors	\$1,050.00	Lead Time
<input type="text"/>		CC250SA NEW/Locking V-Groove Mount for Ø2.50 mm SC/APC Connectors	\$1,200.00	Lead Time
<input type="text"/>		CC250SAD NEW/Locking V-Groove Mount for Ø2.50 mm SC/APC Connectors	\$2,000.00	Lead Time

Add To Cart

Reference Tools

- Reference Tools for Calibrating Locking V-Groove Mounts
- Simple, Accurate Calibration Process

The Reference Tools sold below are designed to be used for calibration of the locking V-groove mounts used with the CC6000 interferometer (sold above). The RT250P reference tool is shipped with the CC6000 interferometer for use with the default CC250P mount. The table above serves as a guide for purchasing the appropriate reference tool for any additional mounts purchased. For more help, contact [Tech Support](#).

Based on your currency / country selection, your order will ship from **Newton, New Jersey**

+1	Qty	Docs	Part Number - Universal	Price	Available / Ships
	<input type="text"/>		RT125P NEW/CC6000 Interferometer Reference Tool for Ø1.25 mm PC Connectors	\$350.00	Lead Time
	<input type="text"/>		RT125A NEW/CC6000 Interferometer Reference Tool for Ø1.25 mm APC Connectors	\$350.00	Lead Time
	<input type="text"/>		RT125LA NEW/CC6000 Interferometer Reference Tool for Ø1.25 mm Luxcis APC Connectors	\$350.00	Lead Time
	<input type="text"/>		RT158P NEW/CC6000 Interferometer Reference Tool for Ø1.58 mm PC Connectors	CALL	Lead Time
	<input type="text"/>		RT200P NEW/CC6000 Interferometer Reference Tool for Ø2.00 mm PC Connectors	\$350.00	Lead Time
	<input type="text"/>		RT200A NEW/CC6000 Interferometer Reference Tool for Ø2.00 mm APC Connectors	\$350.00	Lead Time
	<input type="text"/>		RT250P NEW/CC6000 Interferometer Reference Tool for Ø2.50 mm PC Connectors	\$350.00	Lead Time
	<input type="text"/>		RT250SA NEW/CC6000 Interferometer Reference Tool for Ø2.50 mm APC Connectors	\$350.00	Lead Time
	<input type="text"/>		RT250SA9 NEW/CC6000 Interferometer Reference Tool for Ø2.50 mm 9° SC/APC Connectors	\$350.00	Lead Time

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Additional Fiber Fusion Splicers and Processing Equipment

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