

**86105C-03**

**S E R V I C E N O T E**

Supersedes:  
None

**86105C Optical/Electrical Sampling Module**

**Serial Numbers: US44270101 - US46411788 (see special instructions for details)**

**The 86105C has the ability to store Extinction Ratio Correction Factors (ERCF) to enhance the accuracy of extinction ratio measurements. Agilent Service centers now have the ability to calculate and store custom ERCF values for individual 86105C modules to enhance the accuracy and repeatability of ER measurements.**

See Special Instructions below. Customers may not require this special characterization for their application.

**Parts Required:**  
None

**Time 1.5 hours as a standalone service or 0.5 hours as part of a standard calibration.**

**ADMINISTRATIVE INFORMATION**

SERVICE NOTE CLASSIFICATION:		<b>MODIFICATION AVAILABLE</b>	
ACTION CATEGORY::	AGREEABLE TIME	<input checked="" type="checkbox"/> PERFORMANCE ENHANCEMENT <input type="checkbox"/> SERVICE / RELIABILITY ENHANCEMENT	
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> SERVICE CENTER <input type="checkbox"/> CHANNEL PARTNERS	AVAILABILITY:	
AUTHOR: DJS	PRODUCT LINE: 8F		
ADDITIONAL INFORMATION:			

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**Situation:**

86105C optical modules vary in the consistency and accuracy of extinction ratio measurements on the eye. Custom ERCF characterization enhances the accuracy and repeatability of ER measurements on the Agilent 86105C Optical Sampling Module.

**Solution/Action:**

ER characterization is done at 1550 nm only and the ERCF values are applied for all wavelengths resulting in more consistent and accurate ER measurements when comparing ER results with other 86105C modules.

86105C must go to an Agilent service center equipped for a special ER characterization. The ER characterization can be done as a standalone service or as an addition to an annual calibration or repair service.

All units starting with serial number prefix US4902 or later have custom ER characterization implemented at the factory.

**Special Instructions:**

Custom ERCF Characterization is required after any repair in the optical measurement path for units that:

1. Have serial number US49020101 or later.
2. Have had service note 86105C-03 implemented as indicated on rear panel sticker.
3. Where customer has requested service note 86105C-03 as either a standalone service or as part of a regular calibration or repair for units with serial number prefix US46411788 or earlier.

Custom ERCF Characterization is not required during a standard annual calibration unless specifically requested by the customer (or if repairs have been made in the optical measurement path).

The Agilent technician must run "Measure ER Factor" program under the Adjust/Cal menu in the appropriate Agilent test system after normal warm-up period either as a standalone test or part of a full calibration.

Attach "SN 86105C-03 Implemented" sticker to rear panel of module for future reference..

**Special Note: Ask customer for permission before implementing custom ER correction factors on older units as this change will result in different ER measurements than the customer may expect in their environment.**

**For further information, refer customers to the following document:**

**Application Note 1550-9 "Improving the Accuracy and Consistency of Optical Transceiver Extinction Ratio Measurements"**

<http://cp.literature.agilent.com/litweb/pdf/5989-2602EN.pdf>