

N7744A-01

# Modification Recommended Service Note

Supersedes:  
NONE

## N7744A multiport optical power meter

Serial Numbers:

MY48102429 - MY48102491, SG48101090 - SG48101092

Correction of calibration data recommended for absolute power measurement. The contribution of temperature dependence has been improperly applied in the data saved on these units, which offsets the power readings at longer wavelengths. Relative power changes are not impacted.

Parts Required:

NONE

### ADMINISTRATIVE INFORMATION

ACTION	<input type="checkbox"/> ON SPECIFIED FAILURE	STANDARDS			
CATEGORY:	<input checked="" type="checkbox"/> AGREEABLE TIME	LABOR:	1.0 Hours		
LOCATION	<input type="checkbox"/> CUSTOMER INSTALLABLE	SERVICE:	<input type="checkbox"/> RETURN	USED	<input type="checkbox"/> RETURN
CATEGORY:	<input checked="" type="checkbox"/> ON-SITE ( <i>active On-site contract required</i> )	INVENTORY:	<input type="checkbox"/> SCRAP	PARTS:	<input type="checkbox"/> SCRAP
	<input checked="" type="checkbox"/> SERVICE CENTER		<input type="checkbox"/> SEE TEXT		<input type="checkbox"/> SEE TEXT
	<input type="checkbox"/> CHANNEL PARTNERS				
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL:	Aug/30/2021		
	<input checked="" type="checkbox"/> Calibration Required	PRODUCT LINE:	[3E]		
	<input type="checkbox"/> Calibration NOT Required	AUTHOR:	[PSC]		

ADDITIONAL INFORMATION:

**Situation:**

The N7744A and N7745A units in the above serial number ranges have received improperly calculated calibration data. This resulted from a mismatch between the reference power meter used for calibrating the temperature dependence of the responsivity of these units and the calibration data used for the reference power meter.

- This results in an offset of the measured absolute power level that increases with increasing wavelength. For example, at 1550 nm, the offset is about 2.5% and at 1610 nm about 3.7%. These offsets are within the specifications for total uncertainty but not within the specifications for reference conditions at wavelengths above about 1550 nm. The offset is smaller at shorter wavelengths.
- Relative power measurements, such as insertion loss measurements are not compromised when the power is related to a reference measurement made with the same power meter.
- Since the offset is consistent, power measurements related to reference power measurements from other units in the above serial number ranges are also within the expected uncertainty of such measurements.
- But measurements relating the power between an impacted unit and a not impacted unit will be offset in a similar way as the absolute power measurements.

**Solution/Action:**

If your instrument is in the range of impacted serial numbers and your application is requiring absolute power measurements at higher wavelengths, please return your instrument to a Keysight location for an adjustment free of charge. Please contact Keysight to arrange for correction in accordance with your urgency and convenience.

**Revision History:**

Date	Service Note Revision	Author	Reason for Change
23 Jul 2019	01	PSC	As Published