

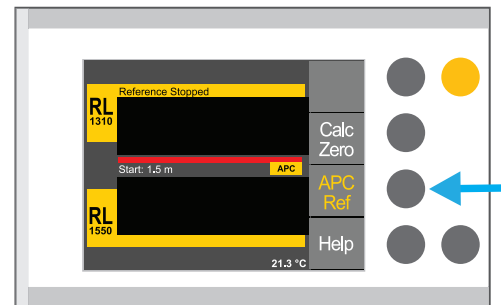
## RL Testing for APC Terminated Cables using the OP940 Front Panel

### Overview

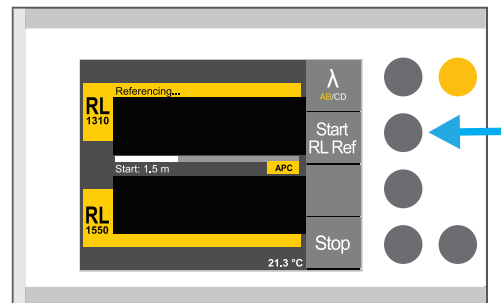
The OP940 was designed as an upgrade to the existing OP930 product line. One of the many additional features is the ability to reference to an angle polished connector through the front panel of the unit. The new feature works by searching for small reflections that the unit would normally bypass. If, after following the instructions below, the unit is unable to reference to the APC connector on the reference cable, it is advised to employ the methods detailed in AN-114 RL Testing for APC Terminated Cables.

### Referencing Return Loss

The OP940 has an option to reference return loss directly to an open angle-polished connector. In the RL Ref screen, navigate to the second set of options and select the APC Ref feature.



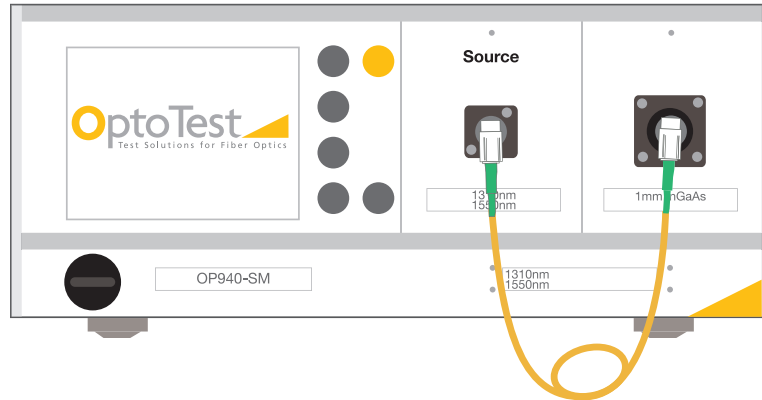
Once this option is selected, simply press the Start RL Ref button.



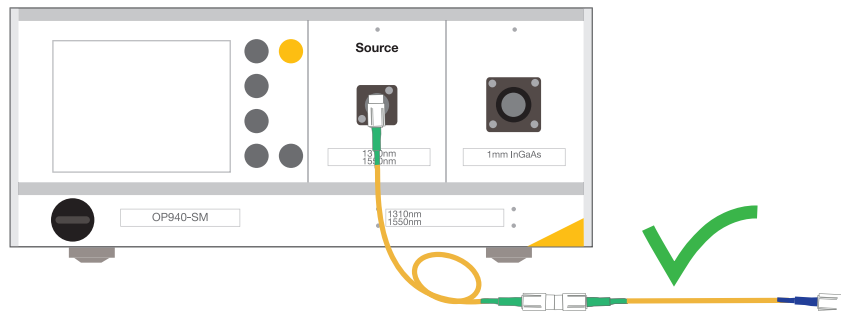
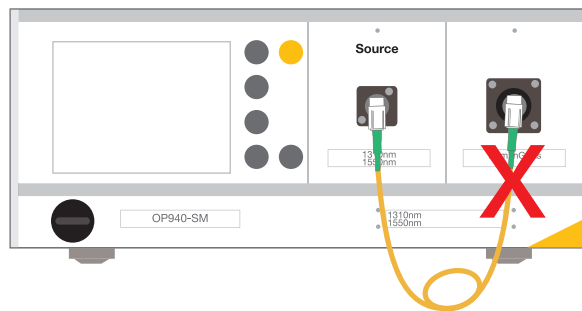
With the APC Reference option selected, the OP940 will scan for reflections much smaller than it would normally consider to be relevant for RL referencing purposes. As a result of the criteria being much broader, the unit is more likely to pick up unintended reflections.

To ensure that the unit references to the proper distance, minimize all reflections between the front panel of the unit and the intended reference location, such as UPC-UPC connections and dirty or damaged interfaces. One way of reducing reflections is to introduce index matching gel. If the unit is unable to reference past a certain reflection, use the Scan Offset feature in the Settings screen to force the unit to begin referencing at a location after that reflection.

Additionally, it is possible that the reflection from some APC cables is small enough that the unit will have a hard time detecting it. In this case, it is suggested to place a dust cap on the end of the fiber to increase the light reflected back at that location, or one can place the open end into the OPM, which will increase the light reflected as well.



If the APC Reference option still does not allow the unit to reference to the APC connector, please consult AN-114 for additional methods of referencing return loss when the reference cable needs to have an angle polish such as using a short APC-to-PC stub cable.



*Note: If the unit is referencing to a UPC connector, the APC Reference option should not be utilized.*