

# SR

# VIAVI

# Smart Reporter

## Getting Started



Managing measurement results of

- **SmartClassFiber** devices
- **SmartPocket** devices

| <b>Manual Version</b> | <b>Date</b> | <b>Based on SR-Version</b> | <b>Comment</b>   |
|-----------------------|-------------|----------------------------|--|
| V. 0.7                | 2018-05-09  | V. 2.70                    | Preliminary (Author: Reinhard Beneken)   |
| V. 1.0                | 2018-05-25  | V. 2.70                    | Initial version (same author)  |
| V. 1.1                | 2018-05-25  | V. 2.70                    | Layout issues (same author)  |
| V. 1.2                | 2018-05-28  | V. 2.70                    | Some debugging (same author)   |
| V. 1.3                | 2018-08-21  | V. 2.80                    | Downloads are now running interactively. Supports "devices" on USB pen drives.           |
| V. 1.4                | 2018-08-27  | V. 2.82                    | New: "Sync". New: "RC", "Sync", "Screenshot" dialogs aren't modal ("blocking") any more. |
| V. 1.5                | 2018-10-05  | V. 2.90                    | Supports "devices" anywhere on disk  |
| V. 1.6                | 2018-11-30  | V. 2.93                    | Text "Export Result" edited.   |
|                       |             |                            |  |



Fig. 2: SmartReporter splash screen

## Functions of the VIAVI SmartReporter

### Scope:

- Supports all VIAVI (formerly: JDSU) **SmartClassFiber** and **SmartPocket** devices.

### Reporting measurement results:

- Lists all supported devices that are connected via USB cable or via USB pen drive.
- Downloads measurement results from any displayed application of any listed device.
- Supports browsing, sorting and filtering (but not: editing) the measurement results.
- Exports measurement results as CSV (“Comma Separated Values”) file (→“Excel”).
- Stores meta information (about the customer etc.) to include in reports.
- Creates customized reports as PDF or HTML files.

### Miscellaneous:

- Offers various screenshot functionalities ..
  - .. for classroom purposes.
  - .. for long-time logging of measurement results.
- Offers loss-less storing and recalling of all downloaded measurement results.
- Offers a RC window to enable a “SCPI communication” with the connected device.
- Offers to synchronize the connected device’s clock with the PC’s system clock.

# Installing the VIAVI SmartReporter

## including the necessary drivers



Before connecting any SmartClassFiber or SmartPocket device to your PC you have to make sure that all the necessary drivers are installed.

On Microsoft Windows, start the "SmartReporter\_xx.yy\_Setup.msi" installation file, and proceed according to the instructions of the SmartReporter Setup wizard.

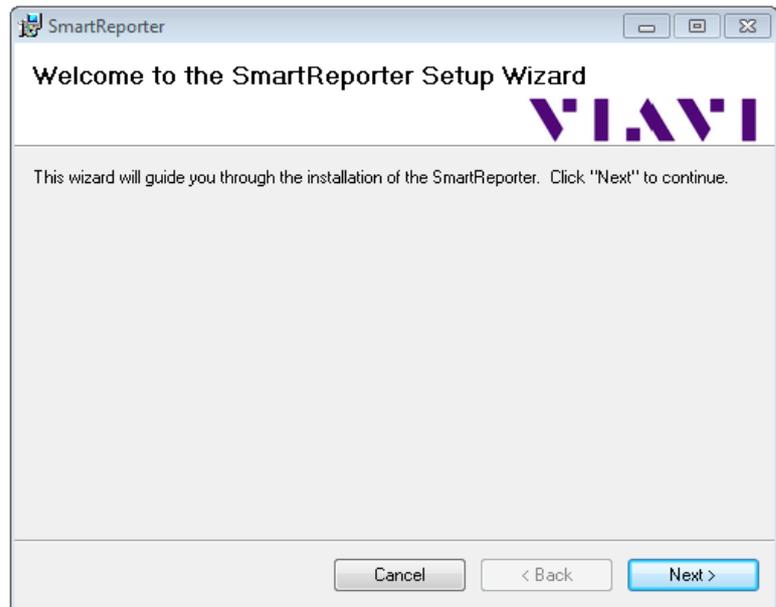


Fig. 3:  
SmartReporter Setup wizard



Fig. 4:  
Start menu entry



Fig. 5:  
Desktop shortcut

The installation setup software proposes

"C:\Program Files (x86)\ViaviSolutions\SmartReporter\" as installation directory and copies all necessary files into the selected directory.

It will also create a folder "SmartReporter" within the start menu and a shortcut on the desktop.

Finally, all drivers needed for

- OLx-3y (**SmartPocket** devices)
- OLx-5y (**SmartClass** devices)
- OLx-8y (**SmartClassFiber** devices)

will be installed.

# Connecting devices

After completing the setup, connect any number of SmartClassFiber and / or SmartPocket device(s) to an available USB port of your computer, using a USB-A to Micro-USB-B cable for each device.

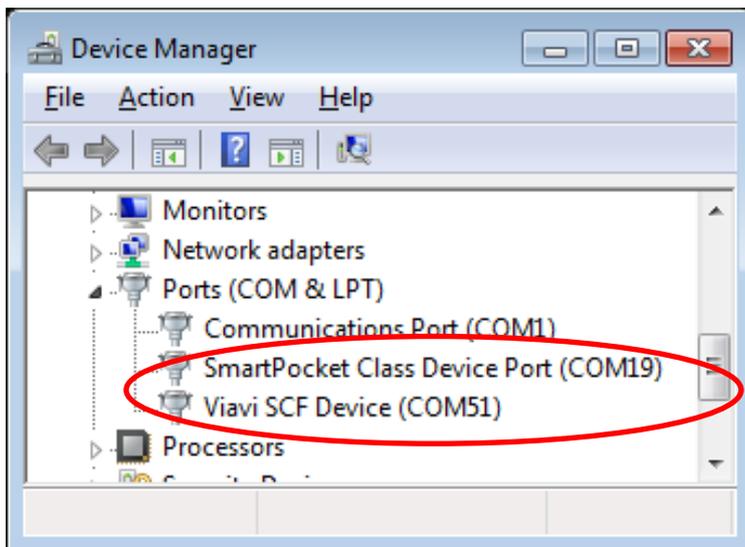
Make sure the devices have completed their boot process before connecting them.



Fig. 6: Connecting the device to a computer.

## Note:

Connecting a device for the first time, your system will detect the new hardware and complete the driver installation. This may take several seconds or even minutes.



To be sure that the drivers are working properly, you may check the assigned COM-Port of the SmartPocket device or the SmartClass Fiber device within the Device Manager located inside the Control Panel of Microsoft Windows (e.g. "COM19" or "COM51") as shown.

The installation is completed now.

Fig. 7: Microsoft Windows device manager

# First steps



After starting the SmartReporter and having waited for the splash screen to disappear the SmartReporter HomeScreen will show up.

For the moment, just ignore both rows of application buttons. They are needed to later recall any measurement results downloaded and stored before.

Fig. 8: HomeScreen (no devices connected)

If you haven't done it already, please connect one or more SmartPocket or SmartClassFiber devices via USB cable to your PC.

SmartReporter will automatically detect them and provide an interface area for each device.

Fig. 9: HomeScreen with 2 devices  
 • OLP-34  
 • ORL-85  
 connected to your PC.



# The device interface area

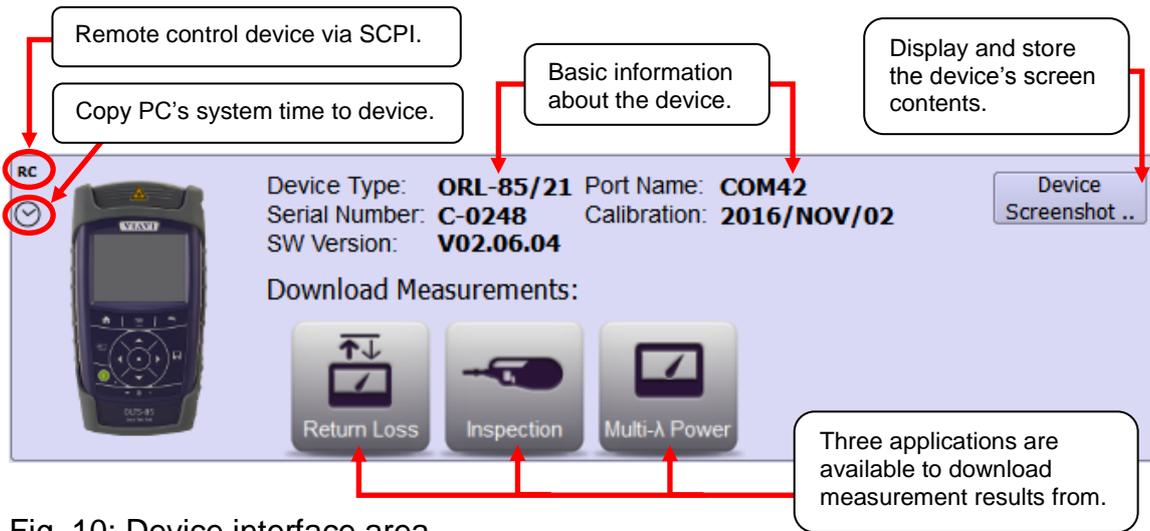


Fig. 10: Device interface area

The “**Device Screenshot**” feature \*) moves a copy of the device’s current screen to your PC display (and maybe a beamer) to enable or improve

- classroom situations.
- logging tasks.
- long term monitoring.

Device screenshots can be

- displayed 100 / 200 / 300 % of its original size (“Zoom”).
- manually triggered (“Reload”) or saved as \*.png (“Save”).
- automatically triggered (“Live”) or saved as \*.png following user defined rules (“Options..”).

\*) Not supported by SmartPocket devices (“OLx-3y”)

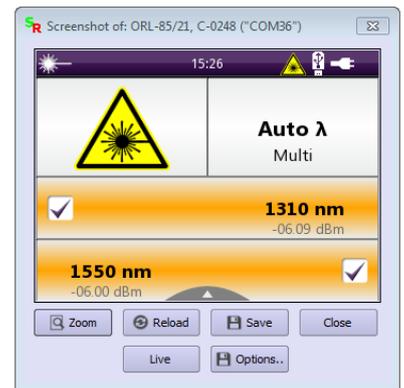


Fig. 11: Screenshot window



Fig. 12: Remote control (“RC”) window

The “**Remote Control**” feature (“RC”) establishes a SCPI session to talk with the connected device.

You might

- use the “\*IDN?” button to check the connection.
- send any SCPI command or query and read any response from the device.
- monitor the device’s error queue.

# Importing from USB pen drive or from disk



In some cases you might want to use an USB pen drive as an intermediate memory for downloading:

Fig. 13:  
Downloading via USB pen drive

Reasons:

- Minimize the risk of data loss by regularly creating backups.
- Provide preliminary reports to your customer.
- Avoid carrying your SCF device(s) physically to the report creation site.
- Speed up downloading of huge amount of measurement results.

**Import:** How to read the backup:

- Connect the USB pen drive to your PC. The device interface area(s) appear(s).  
or use “File” → “Open device..” to select a device directory from disk.
- In case of multiple backup timestamps, select one of them before downloading results.

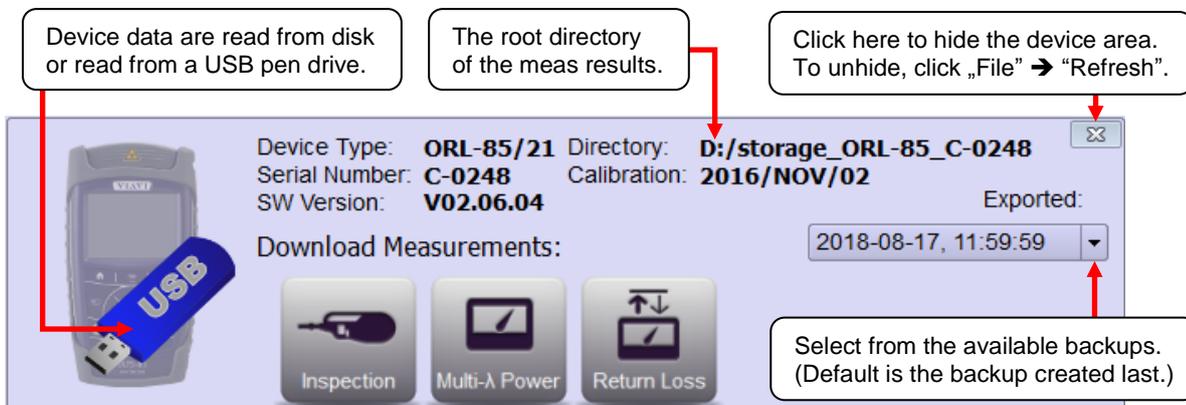


Fig. 14: Device interface area of an “imported” device

**Performance:** For huge amounts of data (like hundreds of PCM or MSCOPE results) the export plus import procedure is around 2 to 3 times faster than the direct download using a USB cable.

**Flexibility:** The Smart Reporter identifies the backups by device type, serial number and the date/time of creation. Therefore you can use a single USB pen drive to export any number of backups from any number of SCF devices.

# Excursus: Creating a SCF backup (“export”)

Fig. 15:  
The management home screen  
of a SCF device



**Export:** How to create the SCF backup:

Step 1: Bring up the device’s management home screen.

Step 2: Insert any USB pen drive in either one of the device’s USB connectors.

Step 3: **SCF Software V02.06.x  
and before:**

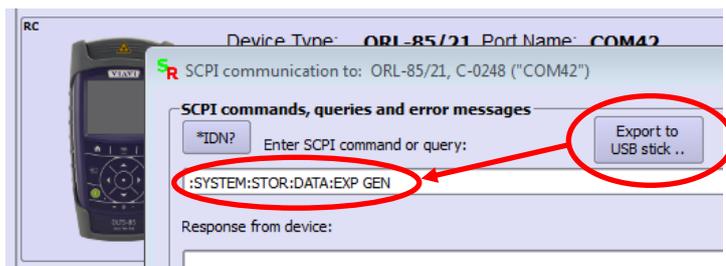


Fig. 16

Use the SmartReporter (or any other RC interface) to send “:SYSTEM:STOR:DATA:EXP GEN”

**SCF Software V02.07.x  
and later:**

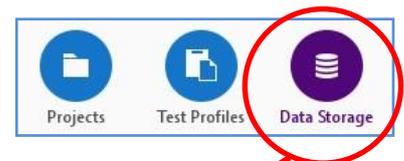


Fig. 17

Select “Data Storage”, then select “Export Results to USB CSV and Memory Image.”.

Step 4: A user message displayed in the SCF management home screen will reflect the begin and the end of the result export.

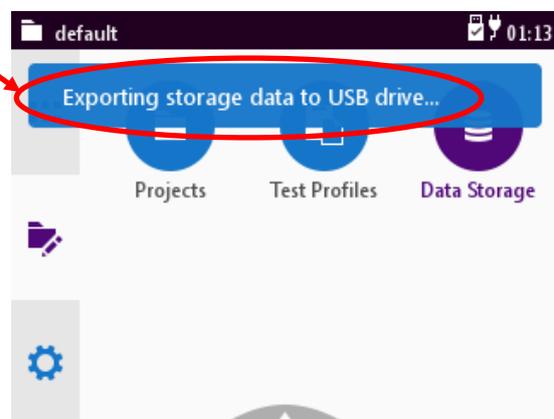


Fig. 18:  
Result export in progress.

# Application windows: Common properties

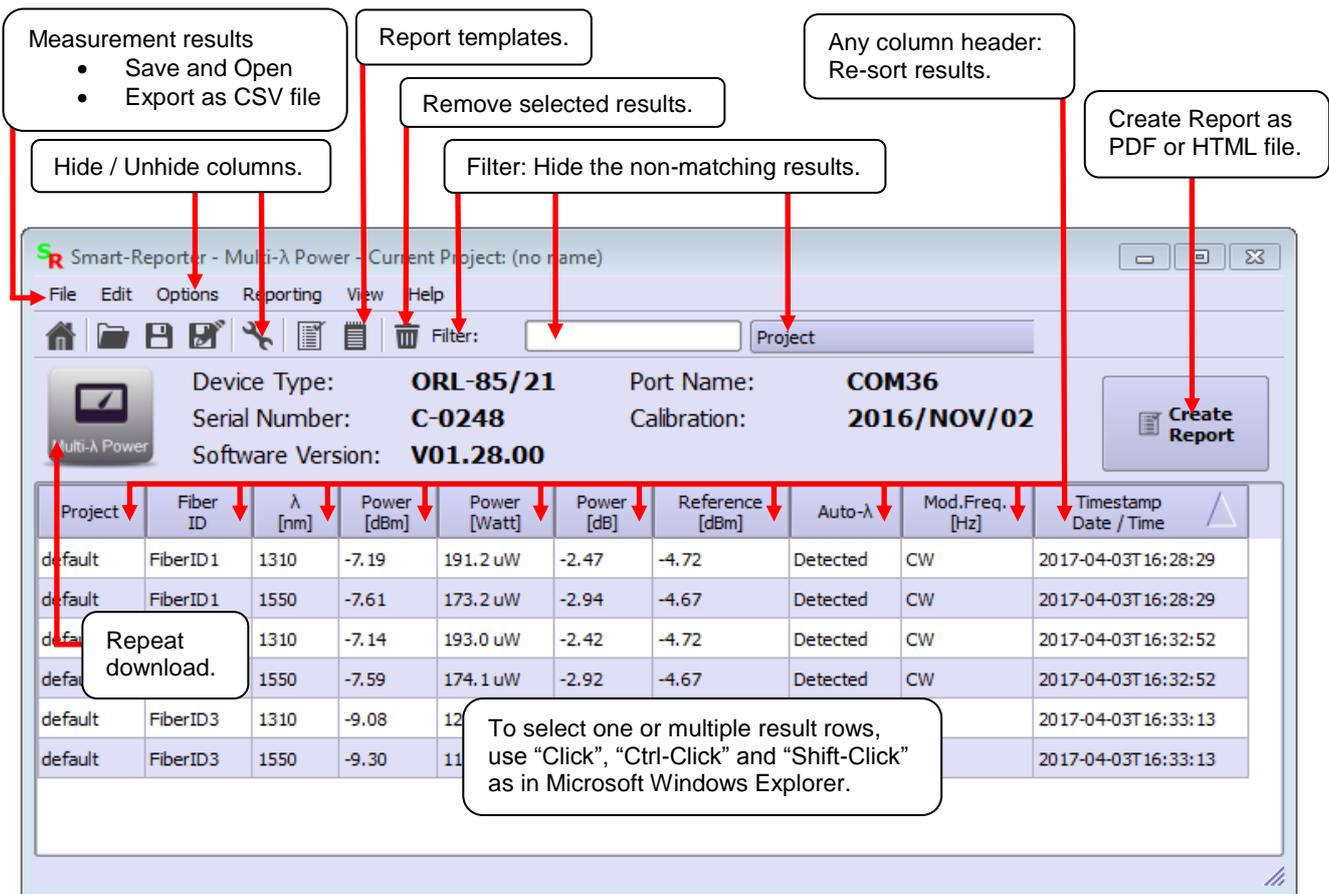


Fig. 19: The application window for the “Multi-λ-Power” application

After downloading start, an application window will pop up automatically displaying the application’s measurement results in a table.

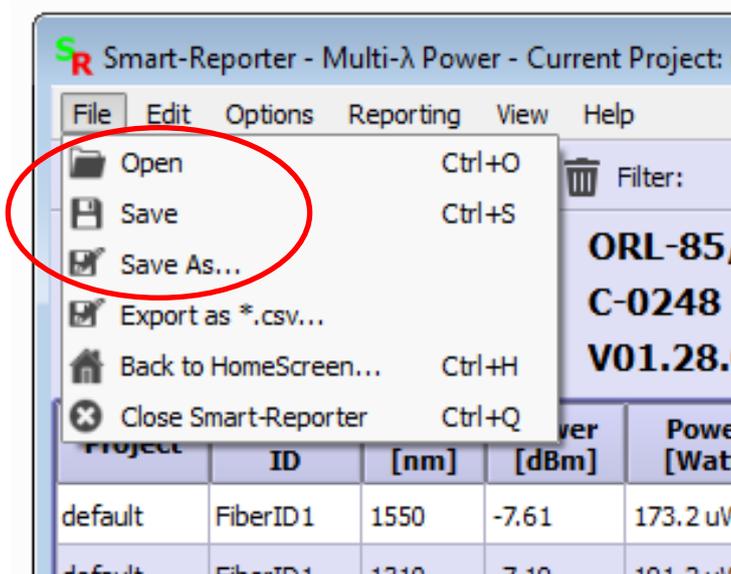
As indicated in figure 19, you can now ..

- .. re-sort the results according to any column’s contents.
- .. hide any non-relevant column.
- .. filter out any non-matching measurement result.
- .. delete any non-relevant measurement result.

As soon as the table fits your needs, you can ..

- .. create a copy of the current table for spread sheet use (like Microsoft Excel).
- .. create a copy of all download data for database storage.
- .. create a report for your customer.

# Storing and recalling the measurement results



As usual,

- “Save”,
- “Save As..” and
- “Open”

is used for storing downloaded measurement results and recalling them within the SmartReporter.

Fig. 20:  
“Open / Save / Save As...”

## Notes:

- Any “Save” or “Save As ..” will create a \*.project file containing some device information and also a project directory of the same name:

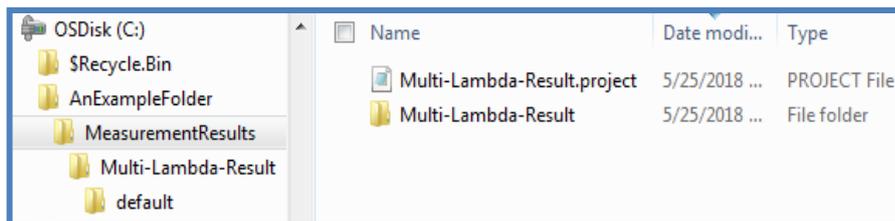


Fig. 21:  
Clip from  
Windows  
Explorer

The subdirectories (like “default”) of the project directory are filled with files containing the single measurement results.

- The images related to the “Inspection” and “PCM” application are stored as VGA (640 x 480 pixel) sized \*.jpg files.

## Recalling:

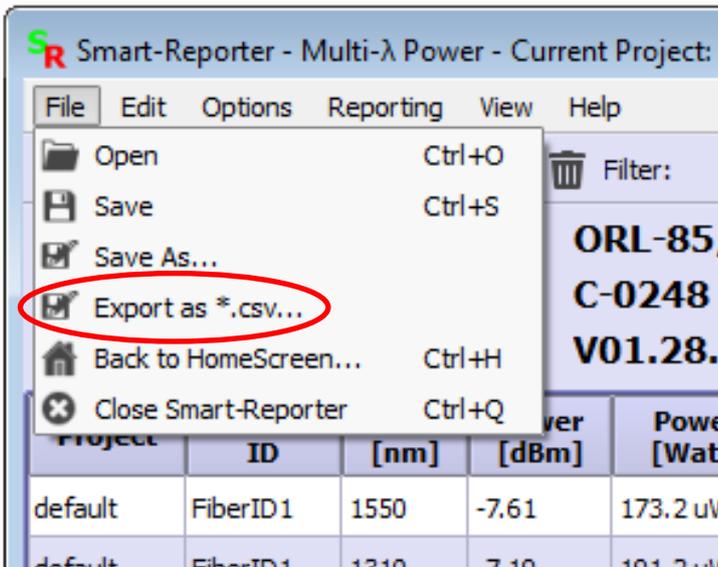
To recall the results, select “File” → “Open” from the application window, then select and open the \*.project file.

If no device is connected to the SmartReporter, you can open any of the applications windows by tapping the respective button on the home screen.



Fig. 22: HomeScreen application buttons

# Exporting the measurement results



Select

“File” → “Export as \*.csv ...”

if you want to export the measurement results as a “comma separated values” file.

There are two reasons you might want to create a \*.csv file:

Fig. 23: “Export as \*.csv...”

## Reason 1: “Copy of current table”:

You want to create a copy of the current table for spread sheet use (like Microsoft Excel).

Only the rows and columns presently displayed are transferred.

Fig. 24:

You can open the \*.csv file directly with Microsoft Excel.

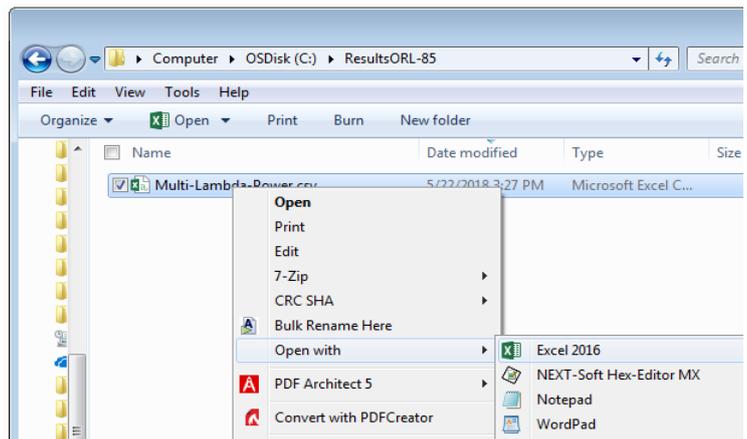


Fig. 25:

A database symbol

## Reason 2: “Copy of download data”:

You want to store all downloaded measurement results into a \*.csv file to feed a database designed to meet your own requirements.

Included:

- Hidden columns
- Results filtered out

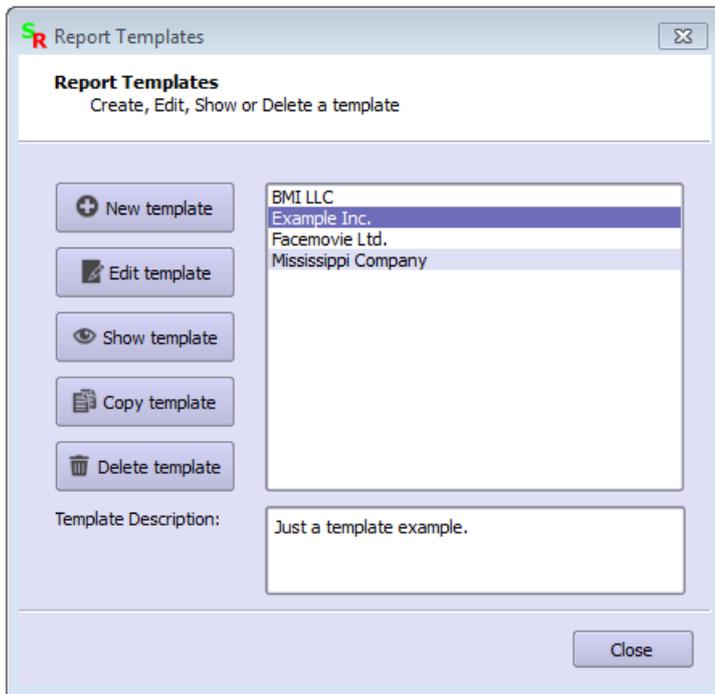
Not included:

- Results deleted

**Notes:**

- Each value has an associated description placed before.
- From within SCF instruments select “Data Storage” → “Export Results to USB” to create \*.csv files using the same format.
- If present, images can be stored optionally.

# Creating a template (a report header) and a report



Templates contain information about the technician, the contractor and / or the customer associated with a report.

To create a new template or edit an existing one, select

“Reporting” → “Report Templates” from the application window.

**Note:** Unused (empty) fields will not be inserted into the report.

Fig. 26: “Report Templates” dialog

To finally create a Report, first click on the “Create Report” button to open a dialog for customizing the report:

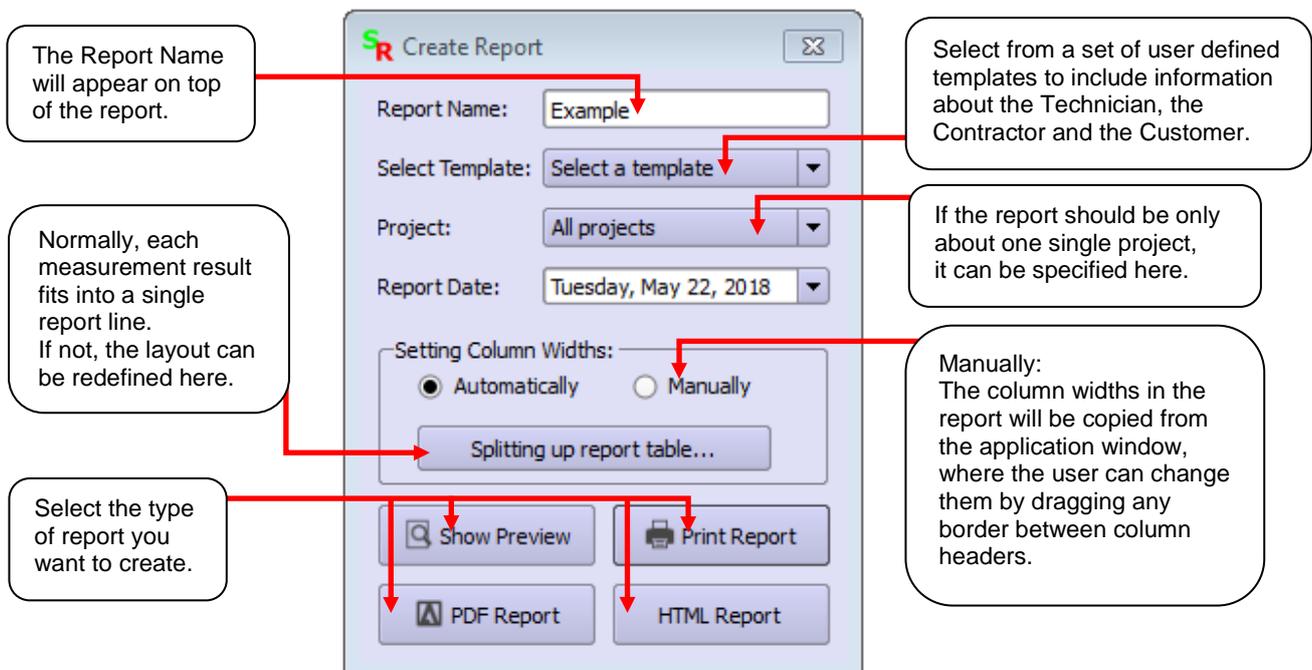


Fig. 27: “Create Report” dialog

## Multi-λ Power Report - Example

### Technician Information

Company Name: Technician AG  
 Technician Name: Mr. Technican  
 Address: Techniciansstreet 12  
 Postal Code: 72770  
 City: Reutlingen  
 State: Baden-Württemberg  
 Country: Germany  
 Phone: 0163438574  
 Email: technician@office.com



### Contractor Information

Company Name: Contractor AG  
 Contact Person: Mr. Contractor  
 Address: Contractorstreet 10  
 Postal Code: 66638  
 City: Reutlingen  
 State: Baden-Württemberg  
 Country: Germany  
 Phone: 9388847776  
 Email: contractor@office.de



### Customer Information

Company Name: Customer AG  
 Contact Person: Mr. Customer  
 Address: Customerstreet 32  
 Postal Code: 98327  
 City: Reutlingen  
 State: Baden-Württemberg  
 Country: Germany  
 Phone: 928387363  
 Email: customer@office.de



|  |                |                  |                   |                    |
|--|----------------|------------------|-------------------|--------------------|
|  | Device Type:   | <b>ORL-85/21</b> | Calibration Date: | <b>2016/NOV/02</b> |
|  | Serial Number: | <b>C-0248</b>    | Software Version: | <b>V01.28.00</b>   |

### Measurement results

| Fiber ID | λ [nm] | Power [dBm] | Power [Watt] | Power [dB] | Project: default |          |                |                       |
|----------|--------|-------------|--------------|------------|------------------|----------|----------------|-----------------------|
|          |        |             |              |            | Reference [dBm]  | Auto-λ   | Mod.Freq. [Hz] | Timestamp Date / Time |
| FiberID1 | 1550   | -7.61       | 173.2 uW     | -2.94      | -4.67            | Detected | CW             | 2017-04-03T16:28:29   |
| FiberID1 | 1310   | -7.19       | 191.2 uW     | -2.92      | -4.72            | Detected | CW             | 2017-04-03T16:28:29   |
| FiberID2 | 1550   | -7.59       | 174.1 uW     | -2.92      | -4.67            | Detected | CW             | 2017-04-03T16:32:52   |
| FiberID2 | 1310   | -7.14       | 193.0 uW     | -2.42      | -4.67            | Detected | CW             | 2017-04-03T16:32:52   |
| FiberID3 | 1550   | -9.30       | 117.5 uW     | -4.63      | -4.72            | Detected | CW             | 2017-04-03T16:33:13   |
| FiberID3 | 1310   | -9.08       | 123.5 uW     | -4.36      | -4.72            | Detected | CW             | 2017-04-03T16:33:13   |

Fig. 28: Printed Report "Example"

# Inspection / PCM: Additional features

Smart-Reporter - Inspection - Current Project: (no name)

File Edit Options Reporting View Help

Filter: [ ] Project [ ]

Device Type: **ORL-85/21** Port Name: **COM37**  
 Serial Number: **C-0248** Calibration: **2016/NOV/02**  
 Software Version: **V01.28.00**

**Create Report**

| Fiber ID | Mode     | Profile Name       | Inspection Tip    | PASS FAIL | A  | B  | C  | D  | Tim Dat |
|----------|----------|--------------------|-------------------|-----------|----|----|----|----|---------|
| FiberID1 | Snapshot | MM (IEC-61300...   | Standard Tips ... | --        | -- | -- | -- | -- | 2018-   |
| FiberID1 | Test     | SM PC & Fiber S... | Standard Tips ... | ✓         | ✓  | ✓  | ✓  | ✓  | 2018-   |
| FiberID2 | Snapshot | SM PC & Fiber S... | Standard Tips ... | --        | -- | -- | -- | -- | 2018-   |
| FiberID2 | Test     | SM PC & Fiber S... | Standard Tips ... | ✗         | ✗  | ✓  | ✓  | ✓  | 2018-   |
| FiberID3 | Test     | SM PC & Fiber S... | Standard Tips ... | ✓         | ✓  | ✓  | ✓  | ✓  | 2018-   |

Measurement Information

Project: default  
 FiberID: FiberID2  
 Mode: Test  
 Profile name: ub (IEC-61300-3-35 Ed. 2  
 Inspection tip: Standard Tips (with BAP1  
 Timestamp: 2018-05-23T17:04:42  
 Note: ==

Inspection Pass/Fail

PASS/FAIL: ✗  
 Zone A: ✗  
 Zone B: ✓  
 Zone C: ✓  
 Zone D: ✓  
 Zone E: --  
 Zone F: --

Low Magnification Low Magnification (overlay)  
 High Magnification High Magnification (overlay)

Each Inspection or PCM result contains up to 4 images.

Show details of the selected result (larger images etc.) in a special window.

The „Create Report“ dialog offers several options about how to include the images into the report.

All details of the selected result, even if the matching columns in the table are hidden.

Fig. 29: Application window “Inspection”

# TruePON (OLP-88): Additional features

Almost 50 columns:  
Hide / Show them individually  
or in groups or select from one  
of the predefined patterns.

Project "Pass / Fail"  
overview relating to  
the selected result.

The position within the passing  
range is also shown graphically  
to enable a fast visible check  
(not included in the final report).

As shown on the OLP-88 screen:  
All details of the selected result,  
even if the matching columns  
in the table are hidden.

All values are colored  
**red**, **green** or **neutral**  
depending on  
how they contribute  
to the overall result.

| Project | Fiber ID     | PASS FAIL | Timestamp Date / Time | ODN Class  | Location | U/S 1310 nm Power [dBm] | U/S Graphics | D/S 1490 nm Power [dBm] | Gr |
|---------|--------------|-----------|-----------------------|------------|----------|-------------------------|--------------|-------------------------|----|
| default | FiberID1 (2) | FAIL      | 2016-03-16T09:30:44   | B+         | ONU      | -54.52                  |              | -25.20                  |    |
| default | FiberID1 (3) | PASS      | 2016-03-16T09:31:09   | B+         | ONU      | 2.66                    |              | -25.21                  |    |
| default | FiberID1 (4) | FAIL      | 2016-03-16T09:31:18   | B+         | ONU      | -37.91                  |              | -25.20                  |    |
| default | FiberID1 (5) | FAIL      | 2016-03-16T09:31:30   | B+         | OLT      | 2.59                    |              | -25.21                  |    |
| default | FiberID1 (6) | FAIL      | 2016-03-16T09:31:40   | N/A (Auto) | OLT      | 2.63                    |              | -25.20                  |    |
| default | FiberID1 (7) | FAIL      | 2016-03-16T09:31:47   | C          | OLT      | 2.63                    |              | -25.20                  |    |
| default | FiberID1 (8) | PASS      | 2016-03-16T09:32:26   | C          | ONU      | 2.62                    |              | -25.20                  |    |

**default**  
First meas: 2016-03-16 09:30:44 Duration:  
Last meas: 2016-03-16 09:32:26 0:01:42  
PASS: 2 FAIL: 5 else: 0 Sum: 7

**FiberID1 (4)**  
General:  
Date / Time: 2016-03-16 09:31:18 **FAIL**  
Location: ONU ODN Class: B+

Contributing to PASS / FAIL:  
 U/S 1310 nm  OLT Type  
 D/S 1490 nm  IL 1490 nm  ONU Type  
 Video 1550 nm  ONU State

Power / IL:

|              | U/S 1310 nm | D/S 1490 nm | Video 1550 nm | ODN IL 1490 nm |
|--------------|-------------|-------------|---------------|----------------|
| Upper Thrsh. | 5.0         | -8.0        | 5.0           | 28.0           |
| Margin       | 42.91       | 17.20       | 19.05         | --             |
| Pow. / IL    | -37.91      | -25.20      | -14.05        | --             |
| Margin       | -38.41      | 1.80        | -6.05         | --             |
| Lower Thrsh. | 0.5         | -27.0       | -8.0          | 13.0           |
|              | [dBm]       | [dBm]       | [dBm]         | [dB]           |

OLT:  
OLT Type: G-PON  
PON-ID: --  
TX Opt. Level: -- dBm  
TX Type: --  
ODN Class (det.): --

ONU / ONT:  
ONU State: --  
ONU Type: G-PON  
ONU Ser. Numb.: 41 4C 43 4C F8 A8 0D AD  
ONU ID: --  
Activation Type: --

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Fig. 30: Application window "TruePON"





|               |                  |
|---------------|------------------|
| North America | +1 844-468 4284  |
| Latin America | +1 954 688 5660  |
| China         | +86 21 6859 5260 |
| Germany       | +49 7121 86 0    |

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