

OL 770-420

Software Development Kit

The OL 770-420 Software Development Kit (SDK) for the OL 770 and OL 771 spectroradiometers enables programmers to develop their own custom applications or integrate the OL 770/ 771 application into existing automated test and measurement systems. It is recommended that the user become familiar with the OL 770/ 771 Windows® Application Software before developing their own application.

The SDK for the OL 770/ 771 is comprised of:

- OL770 Application Software CD ROM with ActiveX™ control and license file
- Automation Server Test Panel with help file, source code and license file
- LabVIEW™ Panel Application with help file and source code
- Delphi™ Application Panel with source code
- Visual Basic® 6.0 Panel Application with source code
- Visual C#® Panel Application and source code

The ActiveX™ Control

This control allows the user to have low-level control of the instrument. Absolute measurement results are not included. This control is actually used by the OL 770/ 771 application to communicate with the OL 770/ 771 spectroradiometer. (An ActiveX™ control is not a stand-alone program but relies on a container application to activate it.)

The ActiveX™ Automation Server

The automation server is actually part of the OL 770/ 771 application. Functionality is “exposed” to the programmer, allowing function calls that perform very high level capabilities. The user can acquire absolute measurements and retrieve calculated values, such as chromaticity, correlated color temperature, etc. Since the server is actually the OL 770/ 771 application, the user can load and save CFG files with customer configurations. In most cases, users will want to use this method of programming.

Most programming environments such as Visual C++®, Visual Basic®, Excel VBA, or LabVIEW can use any of the ActiveX technologies.

LabVIEW Panel Application

The LabVIEW panel application connects to the instrument via serial or USB ports. This program provides control of the instrument and is supplied as a sample program. It employs the ActiveX Automation Server. Source code (VI files) used to develop this application is also included. The VIs function as LabVIEW instrument drivers for customers who own LabVIEW and wish to develop their custom applications in this development environment.

Delphi Panel Application

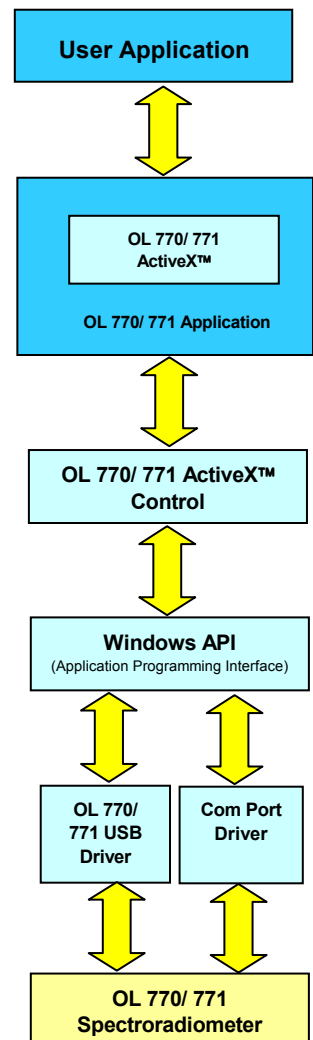
This is a program that serves as an instrument controller, as an example ActiveX container, and also as a diagnostic tool. It employs the ActiveX Automation Server. The provided source code is written in Delphi and was developed in Borland® Delphi 6.0.

Visual Basic Panel Application

This is a program that serves as an instrument controller, as an example ActiveX container, and also as a diagnostic tool. It employs the ActiveX Automation Server. The provided source code is written in Visual Basic and was developed in Visual Basic 6.0.

Visual C# Panel Application

This is a program that serves as an instrument controller, as an example ActiveX container, and also as a diagnostic tool. It employs the ActiveX Automation Server. The provided source code is written in Virtual C# and was developed in Visual Studio® 2005.



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The two sample executable programs in the OL 770-420 Software Development Kit each create a panel to control the OL 770/ 771 Spectroradiometer. However, only the Automation Server provides absolute results and calculated values utilizing the high level capabilities of the OL 770/ 771 application. The two samples are supplied with their source code.

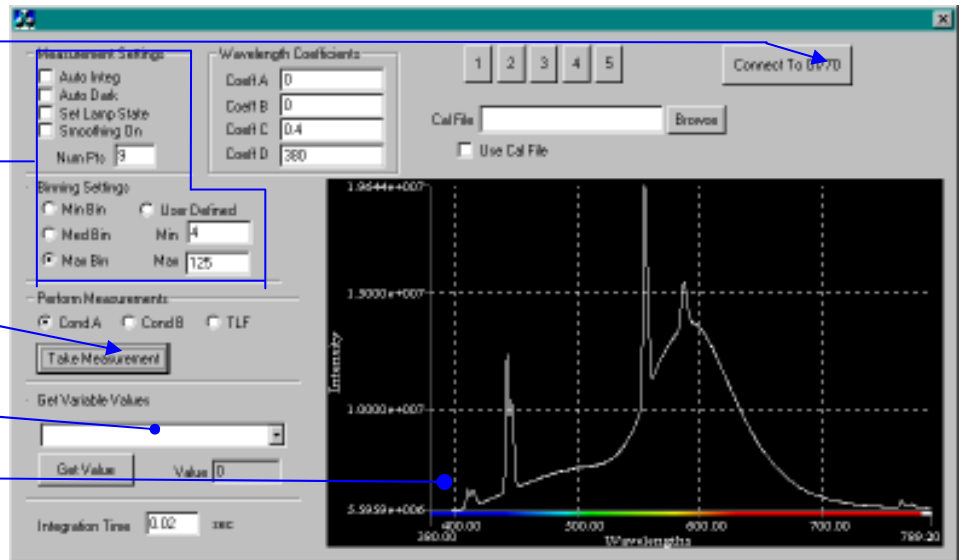
Communication via USB or RS232 interfaces

OL 770/ 771 Spectroradiometer system settings

Automation Server utilizes the OL 770/ 771 application software measurement routines

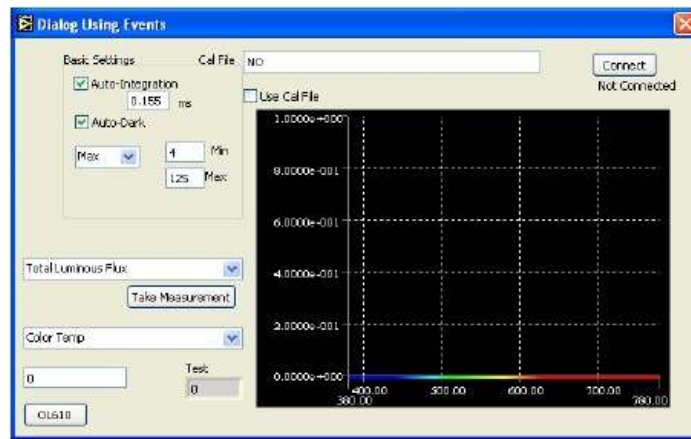
More than 50 calculated spectral and chromaticity values available

ActiveX Control – OL 770Plot



Sample Automation Server program

LabVIEW Panel Application



NOTE:

Due to some incompatibility with LabVIEW 6.0, the OL 770 Software Development Kit (SDK) is not guaranteed to work in the LabVIEW 6.0 environment. However, the SDK has been tested on LabVIEW 5.0 and LabVIEW 7.0.

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LabVIEW is a trademark of National Instruments Corporation. Delphi is a trademark of Borland Software Corporation