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# Datacolor Spectro 55 User's Guide





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### Support Questions?

If you need help with a Datacolor product, please contact one of our top-rated technical support teams listed below for the Datacolor office in your area.

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# Datacolor Spectrophotometers

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## About the Datacolor Spectro 55 Instrument

The Datacolor Spectro 55 instrument is the newest generation of Datacolor’s retail paint measuring instruments. This 45/0 measurement geometry instrument is intended for retail paint applications.

Use Datacolor Spectro 55 to quickly and accurately measure samples to produce quality custom color matches.

Easy integration with Datacolor Paint software or your own retail software, this solution reduces your cost of operation and increases your profitability.

### Datacolor Spectro55

Below is a summary of the features included with the instrument.

Features include the following:

- 45/0 Geometry or d8 SCI Mode
- Simple calibration with built in calibration tile.
- Stainless steel aperture plate, for cleaning.
- Sample viewing port for easy sample alignment.
- Built in measurement button.
- Calibration indicator light.

## Electrical/Environmental Requirements

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<b>Input Power Requirements</b>	5V DC, 150 mA
<b>Operating Environment</b>	<b>Temperature:</b> 5°C to 40°C <b>Maximum Relative Humidity:</b> 20%-85% non-condensing <b>Altitude:</b> Up to 2,000 meters Do not store above 140°F (60°C) Indoor Use Do not crush, short circuit, mutilate, reverse polarity, disassemble, or dispose.

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## Safety Features

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

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### CAUTION

There are no user-serviceable parts for this equipment.

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## Light Source

Do not stare directly into the open port of the instrument when the measurement is in progress.

## **Power**

The USB-C cord supplied with the unit *must* be used to connect to an earthed (grounded) power supply.

The power cord supplied with the unit must be used.

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 **CAUTION**

Disconnect power before servicing.

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## Feature Summary

This instrument employs state-of-the-art features including the spectrometer, light source, and optics. Below is a summary of those features:

<b>Datacolor Spectro 55</b>	
Instrument Type	45/0 Spectro
Geometry Output	45/0 Mode of d8 SCI Mode
Light Source	LED
Spectral Analyzer	8 Channel sensor with dual illumination
Repeatability (Max on White Tile)	0.03 SD / 0.10 Mas CIE2000
IIA (32 Master Standard Tiles)	45/0Mode IIA CIE2000 0.3 avg / CIELAB 0.4 avg SCI Mode IIA CIE2000 0.4 avg / CIELAB 0.6 avg
Wavelength Range	400nm - 700nm
Aperture Size	6 mm
Reporting Interval	10 nm
Data Interface	USB

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## Accessories

All models come with the following standard accessories:

- Power cable
- Micro USB to USB C cable

### Calibration Tile

The white calibration tile is embedded into the sample arm and covered with a protective cap.

Protective cap will be removed only when calibrating, and returned to keep the tile clean and safe from damage.

# Cable Installation

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## Overview

Datacolor Spectro 55 required 2 cables, a power cable and USB cable that connects the instrument to a PC.

Both are plugged into the back of the instrument.



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 **WARNING**

*Turn off the power before working with any cables.*

Read the "Electrical and Environmental Requirements" section **BEFORE** connecting your instrument.

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## Power Supply

Must use supplied Wall mounted AC/DC power adapter.

You need an AC Plug adapter that is specific to your geographical location. This is specified as part of the shipment. AC Clips are available for Greater China, North America, South America, Europe, India Subcontinent and Southeast Asia

### Power Cable Connection

Plug the end of the barrel jack power cord into the power receptacle on the rear panel of the instrument. Insert the plug into a standard AC outlet.

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 **NOTE**

The cable supplied with the instrument **must** be used. No other cords are acceptable.

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## Communications Cable

The instrument is connected to a computer through a Micro USB to USB-C port.

### USB Cable Connection

To connect the instrument to the computer using the supplied cable:

1. Connect the Micro USB cable to the connector on the instrument.
2. Connect the USB-C cable to the computer.

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## Power Switch

The power switch is located on the back of the instrument at the bottom end.

# Controls and Indicators

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## Status Panel



**Power** – Green light indicates Power On

**Calibration** – Indicates if the calibration interval has expired.

Red Light – Calibration has elapsed. Recalibrate instrument to ensure an accurate measurement.

Green Light – Instrument is calibrated.



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## Measurement Button

On board measurement button:

- Able to trigger a measurement from the instrument.
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# Instrument Calibration

## General Calibration Information

Datacolor Spectro 55 must be calibrated regularly to ensure that the measurements are accurate. This section provides instructions for performing a calibration with Datacolor Paint



The recommended calibration interval for the Spectro 55 with Datacolor Paint is every 24 hours to account for any changes in the device over time. The instrument is calibrated through the attached software.

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## Calibration Data

No calibration data is required for the Spectro 55.

## Instrument Setup for Datacolor Paint

Datacolor Spectro 55 device must be added to the manufacturers database via Datacolor Paintlab software.

Paint 2.x

- Select Configuration Settings/Devices/Spectrophotometer
- Select the Spectro 55 from the list (Accept All)
- Restart Paint if instructed
- Before connecting, ensure that the device is on and linked to the PC through the USB cable. Click Connect when prompted.
- Your device is ready to be Calibrated and used.

## Instrument Calibration with Datacolor Paint

YOUR DEVICE NEEDS CALIBRATION



Connection status

**Connected**

Calibrate

Change device

Disconnect

1. Select - Calibrate.
2. Remove white tile Cover from sample arm.
3. Close sample arm.

### Calibrate Instrument

The calibration tile is integrated in the sample arm of the instrument.

1. Remove the calibration cover
2. Close the sample arm (as shown in the picture)
3. Calibrate.

Click to calibrate now

Skip calibration



4. Select – Click to calibrate now
5. Calibration Succeeded – Click Get ready to measure

### Well done

The instrument is now calibrated. Replace calibration cover before proceeding.

Get ready to measure



6. Calibration Failed – Check white tile is up against spec port, Repeat Step 4

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# Measurement

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## Sample Presentation and Measurement

When measuring samples using Datacolor Spectro 55, you must pay close attention to the positioning of the sample to insure an accurate measurement. When positioned correctly, the sample rests between the sample holder and the front panel door. The sample must completely cover the aperture opening.

To position the sample:

1. Grasp the sample holder and pull forward.
2. Position the sample at the port.
3. Return the sample holder to the upright position.

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## Sample Presentation and Measurement

When measuring small samples, you may need to verify that the correct area of the sample is being measured.

To check the sample area being viewed by the lens:

1. Grasp the tab above the aperture plate.
2. Pull the tab down to its full horizontal position. Look at the backside of the door to see the area of the port opening that is covered by the sample. If necessary, adjust the placement of the sample to properly position the sample area to be measured. The sample must completely cover the port opening.
3. Push the door back to its normal position, and start the measurement.

# Appendix

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## Datacolor Global Support

A complete User's Guide is provided with this product. However there are also resources regarding color education on the Datacolor website, including contact information for local Datacolor offices.

<http://industrial.datacolor.com/support/contact-us-2/>