

# Lovibond® Tintometer® PFXi-950/P

The Lovibond® PFXi-950/P is a high precision spectrophotometer incorporating the core color scales for mineral oils and petrochemicals. It includes both Saybolt Color and ASTM Color, scales that are accepted internationally for oil analysis, as well as Platinum-Cobalt Color for oil derivatives and petrochemicals. Results can also be displayed in terms of CIE values and spectral data.

## Remote Calibration & Maintenance Service via internet (RCMSi)

Color measurement instruments need regular checking with calibration standards to ensure correct operation and compliance to established international standards. RCMSi is the process in which a number of tightly controlled calibration liquids are measured in a 50 mm cell\* via the Calibration function of a PFXi. The data is communicated via the internet to a secure server and compared to Master Data. If the data passes within tolerance, then a Certificate of Calibration is e-mailed to the user. This allows The Tintometer Ltd to ensure a PFXi instrument is operating correctly and fully calibrated using ISO 17025 certified standards. So, users can be 100% confident that all PFXi readings are reliable. In addition, RCMSi eliminates the timely and costly need to return equipment to a service center unnecessarily.

*Note: Please register before performing your first calibration. Certificates of Calibration are provided post process.*

*\*(Please note 50mm cell must be used when performing RCMSi calibration.)*

Color Scales *	Scope	Range	Resolution
Saybolt Color (ASTM D6045,	Light colored petroleum products including aviation fuels, kerosene,	-16 (darkest) to +30 (lightest)	1
ASTM D156, JIS K 2580)	naphthas, white mineral oils, hydrocarbon solvents and petroleum waxes		
ASTM Color (ASTM D6045, ASTM D1500, JIS K 2580)	A wide range of petroleum products including lubricating oils, heating oils and diesel fuel oils	0.5 – 8 units	0.1
Pt-Co/Hazen/APHA (ASTM D1209)	Clear liquids such as petroleum spirits, solvents and alcohols	0 – 500 mg Pt/l	1
CIE Values (ASTM E308)	X Y Z Tristimulus values, x y Y Chromaticity coordinates, CIE L*a*b* Color space; E color difference	Defined by spectrum locus	-
Spectral data (420 – 710 nm)	Transmittance, (full spectrum & specified wavelengths)	0 – 100%	0.01%

## Brings Precision and Reliability to Color Measurement

The accuracy, repeatability and reproducibility of data provided by the Lovibond® PFXi950/P allow for tighter color specifications and greater color consistency, giving companies the confidence needed to make important decisions regarding high value consignments and refining operations. When measuring Saybolt or Pt-Co Color of clear, water-white products, the long sample path length enables the PFXi950/P to obtain precise color measurements, without multiplying errors.

## **Color Analysis made Simple**

The Lovibond® PFXi950/P is an easy to use, automatic instrument, which eliminates time-consuming procedures of visual methods. There is no need to build up calibration curves as they are already established in the instrument. The menu system guides operators through the selection of operating parameters. Thereafter, measurements are initiated by just a single key press and take less than 25 seconds to complete.

## **Confidence in Instrument Performance**

The PFXi950/P is a rugged colorimeter with a fabricated steel housing which is designed to function equally as a QC instrument within the laboratory or on 24 hour operation in a production environment. A diagnostic test routine allows users to conduct periodic checks on the instrument or identify faults. For regular conformance testing the colorimeter is also supplied with a colored glass filter of known Saybolt value.

## **Tintometer – A Century of Excellence in Color Measurement**

Tintometer is recognized around the world as a leading supplier of equipment for color analysis. Over the years the Lovibond name that appears on its instruments has become a hallmark for color measurement, acknowledged by the widespread use of Lovibond® systems in process industries. This unparalleled knowledge and experience are embodied in the Lovibond® PFXi950/P, ensuring excellent correlation with visual grading instruments.

## **Optional Items for Individual Applications**

Integrated heater unit

A factory fitted option to prevent heated samples such as waxes from solidifying in the cell.

Windows software for data capture on PC

Allows data sets to be automatically downloaded to a PC computer where they can be processed or stored.

Conformance filter sets

For quick and simple conformance checks, sets of graded glass filters, representing a spread of colors from the Saybolt, ASTM Color or Pt-Co scales, are available.

Certified color reference standards

Ideal for routine calibration and verification of test data.

## TECHNICAL SPECIFICATION

Measuring principle	16 interference filters
Spectral response	420 – 710 nm
Bandwidth	20 nm
Repeatability	
- chromaticity (x y)	$\pm 0.0002$
- transmittance	$\pm 0.25 \%$
- Saybolt values	$\pm 1$
Measurement time	Less than 25 seconds
Calibration	Single key press; fully automated
Light source	5 Volt, 10 Watt tungsten halogen lamp (lens ended)
Illuminant	CIE Illuminant C
Observer	2°
Path length	0.1 – 153 mm
Interface	Parallel printer port, RS 232 port
Input voltage	Universal, via external power supply
Approvals	CE
Display	2 x 40-character, back-lit LCD
Keypad	21-key membrane keypad; washable polyester with audible feedback
Instructions	7 languages: English, French, German, Spanish, Italian, Portuguese, Dutch
Heater unit	Factory fitted option, 95°C max
Instrument housing	Fabricated sheet steel with tough, textured paint finish
Dimensions	Width 515mm, depth 195mm, height 170mm
Weight	7.75 kg

The Lovibond® PFXi-950/P is supplied complete with 2 optical glass cells (100mm & 33mm), a calibrated glass conformance filter, a spare lamp and instructions.