



# Automatic IP Units & Lovibond® colour

***Petroleum oils & fuels  
(IP17 methods A&B)***

## Lovibond® PFX880/IP17

- *Petrochemicals*
- *White Oils & Waxes*
- *Fuel Oils & Lubricants*



## Lovibond® PFX880/IP17 Automatic colorimeter

### Automatic Colorimeter for IP Units and Lovibond® Colour

The Institute of Petroleum's standard method IP17 specifies that the colour of petroleum products is determined in terms of either Lovibond® values (Method A), or a restricted range of 14 colour standards IP Units (Method B). The Lovibond® PFX880/IP17 is a limited-scale, automatic colorimeter for colour measurement according to both Lovibond® RYBN Colour and IP Units. Results can also be displayed in terms of CIE values and spectral data.

Colour scales	Scope	Range	Path length
IP Units	Light coloured products such as refined, undyed motor fuel, white spirit or kerosine.	Water White (0.25) to Standard White (4.0)	6"
Lovibond® RYBN Colour	Petroleum products in terms of Lovibond® Red, Yellow and Blue units	0 - 70 Red, Yellow; 0 - 40; Blue; 0 - 3.9 Neutral	1/16" - 5 1/4"
CIE Values (ASTM E308)	X Y Z tristimulus values; x y Y chromaticity coordinates; CIE L*a*b* colour space; ΔE colour difference	Defined by spectrum locus	
Spectral data (420 - 710 nm)	Transmittance	0 - 100%	

### Colour Analysis made Simple

The Lovibond® PFX880/IP17 colorimeter is an easy to use, automatic 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. When measuring IP Units of clear, water-white products, the long sample path length ensures precise colour measurements, without multiplying errors.

### Confidence in Instrument Performance

The PFX880/IP17 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 colorimeters are also supplied with a coloured glass filter from the appropriate colour scale.

### Optional Items for Individual Applications

<b>Integrated heater unit</b>	A factory fitted option for melting solid samples such as waxes and preventing them from solidifying in the cell.
<b>Windows software for data capture on PC</b>	Allows data sets to be automatically downloaded to a PC computer where they can be processed or stored
<b>Conformance filter sets</b>	For quick and simple calibration checks, sets of graded glass filters, representing a spread of colours from the Lovibond® RYBN Colour scale or IP Units, are available.
<b>Certified colour reference standards</b>	Ideal for routine calibration and verification of test data.

*The precision filament lamp is easily accessed and changed from outside the instrument.*



### TECHNICAL SPECIFICATION

Measuring principle	16 interference filters
Spectral response	420 - 710 nm
Bandwidth	20 nm
Repeatability	
- chromaticity (x y)	± 0.0002
- transmittance	± 0.25 %
- Lovibond® values	± 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 515 mm, depth 195 mm, height 170 mm
Weight	7.75 kg

*The Lovibond® PFX880/IP17 is supplied complete with three optical glass cells (1", 5 1/4" and 6"), a calibrated glass conformance filter, a spare lamp and instructions.*