

TLS120Xe High Power Tuneable Light Source

(280-1100 nm)



1 TLS120Xe

Power supply, lamp and monochromator integrated into single 19" benchtop enclosure

2 Wavelength Control

With direct front panel control, put the power of monochromatic light at your fingertips

3 Display

An OLED display reports wavelength, bandwidth, burn time and stability

4 Output Port

Light output port adapter for 1 mm fiber, including iris

5 Monitor Port

Provided to monitor transmitted optical power to facilitate replacement lamp alignment

6 USB

Take full control of the TLS120Xe over USB 2.0 using SCPI commands, integrated into MultiVu

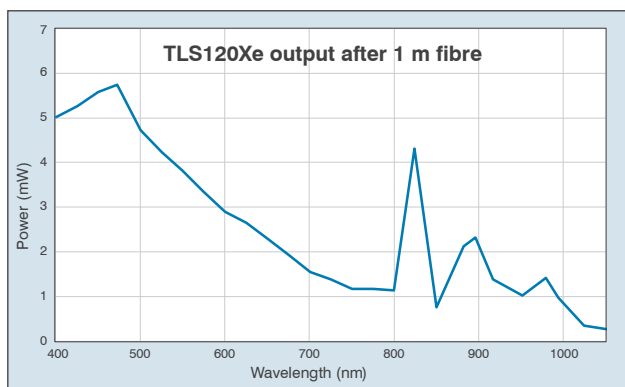
The **TLS120Xe** is a high power tuneable light source that delivers superlative stability, high wavelength agility and the power of continuous tuning.

Designed around a single 19" benchtop enclosure, this compact solution easily fits into a wide range of materials and photodetector characterization applications in research, industry and OEM.

Key benefits:

- Ultra-quiet short-arc xenon light source with starter and constant current power supply
- Integrated solution, housed in 19" benchtop enclosure
- 120 mm focal length monochromator for excellent spectral selection and continuous tuning
- Wavelength control through front panel or over USB 2.0 using SCPI commands, integrated into MultiVu
- Compatible with MPMS® or PPMS® with FOSH option

Specifications	
Light source	
Lamp type	Short-arc OFR xenon lamp (100 W, 14 V)
Operating current	Constant current
Coupling	Ellipsoidal reflector, 60 mm diameter
Nominal lamp life time	500 hours
Monochromator focal length	120 mm effective
Grating mount	Single grating on-axis turret
Grating type	Concave blazed holographic
Grating line density	1200
Nominal blaze wavelength	380 nm
Slit type	Fixed slit
Drive type	Stepper motor
Optical performance	
Wavelength range	280 nm -1100 nm
Bandwidth at FWHM	20 nm
Control	
Interface	USB2.0
Software control	MultiVu™
Electrical/Mechanical	
Overall dimensions	300 mm (Length) x 460 mm (width) x 185 mm (height)
Weight	8.8 kg
Power supply	100-240 V AC 50-60 Hz
Orientation	Horizontal only
Environmental	
Operating temperature range	10-35 °C / 50 - 95 °F
Operating humidity range	30% to 70% (no condensation, less than 70% above 30 °C)



Ordering Information

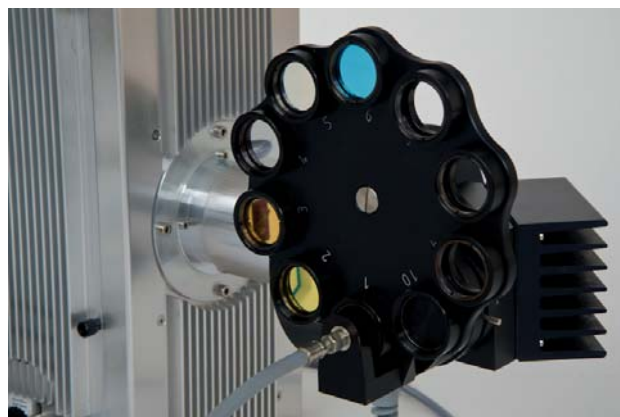
Ordering Number	Description
M/D/P/V 312	TLS120Xe high power light source Spectral Range: 280 - 1100 nm including optional fiber Ø 1 mm
B-19719	100 W short-arc xenon lamp, nominal 500 hours lifetime

Xenon Light Source

The **MLS Xenon Light Source** can be used with the MPMS or PPMS fiber optic sample holder (FOSH) option. The FOSH option is used for measurements of the magnetic moment while the sample is illuminated. This turnkey light source includes all the necessary parts and components to generate light of specific wavelengths. The setup also includes the optics and connector to couple the light to the FOSH option fiber, which is plugged into the light source.

The MLS package includes:

- Xenon lamp bulb
- Lamp housing
- Variable lamp power supply
- 10 position manual filter wheel
- 9 bandpass filters
- Dichroic mirror (400 nm to 900 nm)
- Fiber coupling optics and SMA connector for the fiber delivered with FOSH option
- Manual shutter (blind position in filter wheel)
- Manual iris
- Pair of safety goggles
- Manual

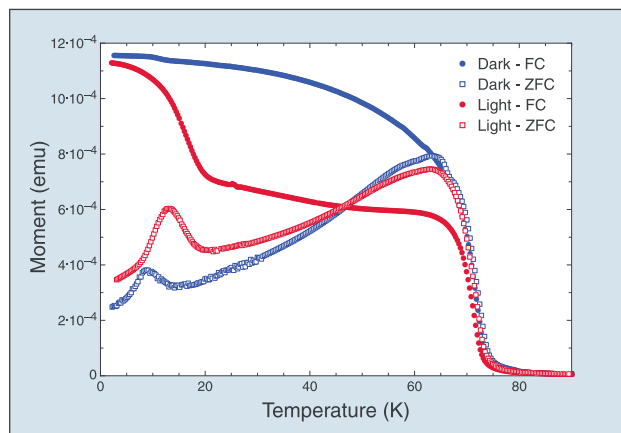


Manual filterwheel with 10 positions

Specification	
Lamp type	Xenon short arc
Lamp power	300 W
Mechanical termination for fiber	SMA for FOSH option
Input	90 – 250 VAC, 48 – 63 Hz

Included filters	
Center wavelength	Full width half maximum
436 nm	20 nm
470 nm	40 nm
500 nm	20 nm
530 nm	30 nm
555 nm	20 nm
585 nm	40 nm
640 nm	30 nm
740 nm	40 nm
850 nm	40 nm

Ordering information	
M/D/P/V 326	Light source with 300 W Xenon lamp



Zero-field-cooled and field-cooled FOSH data, collected using DC scan mode at 100 Oe applied field, on a sample existing of core shell particles of Prussian blue analogues, which is ferromagnetic with $T_c \sim 70$ K, and surrounding cores which are photoactive and ferromagnetic with $T_c \sim 20$ K.

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