

Your QLX1 Quotation

Introduction – QuantoLux and Laser-OES

The QuantoLux Approach

QLX1 is a portable optical emission spectrometer (OES) with laser excitation source.

This innovative concept has many **benefits** compared to the classical arc/spark source. Here are just a few of them:



- Completely maintenance free, no down time for cleaning, no labour time consumed from your team members
- Higher stability; instabilities in power supply do not affect the stability of plasma. Pumped laser pulses always have the same level of energy.
- Rapid analysis! Shorter analysis time; readings are typically completed within 1-3 seconds, allowing you to perform more analysis per day and make results available much quicker.
- Dramatically lower argon consumption; apart from labour probably the highest operational cost factor. Argon 4.8 (99.998%) is sufficient for most applications. More than 80% cost savings on Argon (depending on price and number of analyses)
- Small samples can easily be analysed without compromise or complicated sample prep;
- Polished samples (very smooth surface) can be analysed without further preparation (don't need to be rough like for spark-OES)
- Simple sample preparation
- Almost non-destructive, very small "burn spot" (near-NDT)
- Standard and control samples last much longer (maybe even for the lifetime of the instrument)
- No cross-contamination from previous samples
- Applications beyond metals; other than spark spectrometers, laser OES is not limited to metals. In future we will offer numerous applications for non-metal matrices (like slags, ferro-alloys, geochemical, etc.).

QLX1 offers even more benefits:

- Simple and intuitive user-interface.
- Big 12" touch screen display
- Extremely light-weight probe
- Covers complete workday with a single battery charge



- Attachable argon container for hundreds of measurement
- UV coverage analysing elements like C, P, Sn and also N, B, Sn, As, etc. (depending on selection of apps)
- No “light element dilemma” – all elements are available and measured in the same timeframe (typically 3 seconds)
- Analytical check with single drift monitor sample
- QuantoLux Up! – automatic software updates (requires online connection)
- Additional analytical apps can be purchased online (available January 2019)
- Optional cloud database for analysis results and quality library (optional, requires online connection, available January 2019)

System Description

Optical Systems

- Spectral range UV & VIS
- Multi-optic spectrometer system.
- High resolution UV optic
- Sealed, dust-proof optical system.
- CCD/CMOS Linear array detectors

Excitation Source

- Q-switched diode laser.
- 1064 nm – class 3b.

In certain countries radiation safety officers are required for companies using laser applications. Please consult your local representative for further information and support.

Sample Probe

- Argon purge with minimised argon consumption.
- Protector arm with laser status indicator LED.
- <3 mm sample stage opening/aperture
- max. 50 kg sample load
- No adapters needed for small samples, sheets, foils or odd shapes
- Completely maintenance free





Controller & Display

- 12.3" screen size
- Full HD 1920 x 1080 or better
- Capacitive "incell" Touch Screen
- Interfaces WLAN; Bluetooth; connected to instrument via USB; other interfaces not available
- Possibility to connect keyboard and mouse
- power supply integrated
- pre-configured cable set to easily connect controller unit
- Windows 10



Software

- Proprietary QuantoLux spectrometer software QLX 4.0
- Password protected
- Simple operation with graphical user interface
- Touch screen operation; keyboard and mouse possible
- Security through password protection with different user profiles

Analysis

- Factory calibrated per matrix/base element
- Automatic switching of spectral lines.
- Automatic additive and multiplicative corrections.
- Logon screen with help window or news display
- Analysis functions
 - Matrix and method selection
 - Automatic method loading
 - Selectable number of burns for average.
 - Auto-average function
 - Deletion of bad burns from average
 - Display of mean, SD and RSD
- Drift monitor
- 2-point User standardisation and type standardisation available
- Quality/grade library with coloured quality control function
- Work modes "Analysis", "PMI"* and "Sort"* (* =optional feature)
- Share results function (Export to Excel, Print to PDF, e-Mail, send to smartphone)
- Formula editor to calculate Carbon Equivalent, sum of tramp elements; theoretical tensile strength and anything else you want to calculate based on obtained element concentrations



Electrical and Physical Specifications

- Protection class IP 54
- 110/230 VAC 60/50 Hz.
- 300 VA power
- Physical size of console
360 x 300 (340 incl handle) x 140 mm
(14.2 x 11.8 (13.4) x 5.5 inches)
- Packing Weight - Gross 5.7 kg (12 lbs)
- 6mm Argon Connection



Lithium Ion Battery 12.8V, 6 Ah, 77 Wh

One battery is included in your instrument and will be supplied locally. The lithium-ion battery is rechargeable and typically lasts a whole working day (depending on usage).

- 90 x 70 x 109 mm
- (3.5 x 2.8 x 4.3 inch)
- 0,8 kg (1.8 lb)
- protection class IP 65



Argon Bottle (optional)

For certain applications argon is required.

A standard bottle can be connected via 6 mm hose.

For portable use a special argon cartridge is available containing an argon reservoir for approx. 100 day use.

- Length 230 mm
- Diameter 50 mm
- Volume 0,2 liter
- Weight 0,49 kg
- Max pressure 200 bar
- Max content 40 liter
- Connection M 19 x 1,5 LH



Regulatory

- CE, RoHS certified
- Class 3b laser classification
- Factory certified calibration
- DAKKS Accredited calibration (optional)

Customs Tariff Number

- The customs tariff number (HS Code) for this product is **90 27 30 10**.



Services & Support

Warranty

The warranty period is 12 months from date of installation and registration or 14 months from date of shipment, whichever is the sooner and unless otherwise quoted. QuantoLux warrants the instrument against defects in material and workmanship. All defective material will be replaced providing damage was not caused by improper use. Warranty applies to parts and labour only on a return to factory basis.

Online Training

An online training course covering first start-up and routine operation of your instrument is available free of charge. You only need to register and activate your instrument. Further trainings in various languages will be made available. Your instrument will inform you. This also applies to local offers like events or presence trainings.

Installation, Commissioning and On Site Training

The QLX1 is a modern instrument and is easy to install. QuantoLux technical service partners are ready to support you to complete the installation and put the instrument into proper operation.

The accompanying documentation materials explains the unpacking of the unit, how to connect the controller/computer and finally also connecting the unit to the Argon supply including regulator (supplied by customer) and power system (supplied by customer).

To accommodate all operators with the new instrument, we recommend to order a two day instruction and training session with the local QuantoLux service partner.

Individual Training

Further training and on-site assistance is available at additional cost provided it is undertaken at the same time as the installation and commissioning. This quote may already include extra days if mentioned in the quoted items list.



Terms & Conditions

Validity

This quotation is valid until the date as specified in the commercial quotation.

Payment Terms

Payment is due as mentioned under "Payment terms" on commercial quotation.

Price Basis

All prices are delivered EXW Kleve, Germany Production Facility unless otherwise quoted (EXW as defined in Incoterms 2010). Quoted shipping term as mentioned on commercial quotation.

Delivery

Delivery is normally 6 to 8 weeks from receipt of your order and clarification of all technical and analytical details. This is typically documented with the issuing of an order acknowledgement.

Shipping

Unless otherwise mentioned or requested, all shipping will be via MSG Speditionsgesellschaft mbH. Unless otherwise agreed or quoted the costs of shipping will be added to the invoice.

Origin

All goods are Made in Germany unless otherwise stated.

Technical Changes

QuantoLux reserves the right to make any changes which are of a technical development nature without notice.

General Terms & Conditions

If not otherwise stated or indicated in the above our general terms & conditions (T&Cs) apply. They are published under www.quantolux.de/terms-and-conditions !



Further Information

About QuantoLux and our product portfolio QLX

QuantoLux GmbH was founded in April 2016 by thought leaders in optical emission spectroscopy with a joint experience of more than 40 years.

Our innovative solutions enable our users to perform analytical tasks simpler, faster, and better, and at lower cost. For some analytical needs it is even the first time that a simple solution becomes available.

Our analytical instruments help you getting things done – period.

The product range aims at different analytical applications at different levels. We will find the right instrument that matches your needs – and beyond.

Maybe the **QLX1** is already “your” instrument? A benchtop mid-range solution ready for all metal analysis jobs. Let’s talk further.

QLX Analytical Solutions & Services

QuantoLux offers complex analytical solutions to meet and exceed your requirements. Right now our instruments cover all common metal matrices. They are ready to measure any form and shape of solid sample. But they are already prepared for the future. The application team at QuantoLux will continue to develop standard calibrations for other matrices from within metal processes (like slags, ferro-alloys, etc.) to non-metal applications in ceramics, mining, environmental, and many other fields. If you have special analytical requirements, let us know; maybe your solution is already on our roadmap.

But we also revolutionise the way we deliver the “apps” to make them available for you. Seamless through the internet. This keeps you always ahead of your time.

Our local partners, finally, are well educated to provide you with best advice and support from your first enquiry to the replacement of your instrument, throughout the whole lifecycle. Should you be in trouble, they will quickly help you out – and QuantoLux, too, is only a click away.

Why you should decide for QuantoLux ?

Comprehensive Analytical Solution – Our “apps” – the analytical programmes – come complete per base with all alloy calibrations and all relevant elements! We have quoted the instrument with the analytical apps as you need them today. As we continuously work on improving our calibrations, updates are made available from time to time offering extended calibration ranges or even new element additions. Even if your analytical scope completely changes, we can add complete matrices in a much simpler and faster way than ever before.

Confidence & Trust – at QuantoLux we consider our relationship as much more than just a supplier-customer case; we want to be your long-time partner and help you to perform your analytical tasks reliably and at high quality. We are aware that our instrument is an important part of your processes. Therefore, we want to ensure highest availability and performance at all times. Our qualified technical partners provide you with best local on-site service while our online services assist with preventive monitoring and supporting access.



Our relationship is built on confidence and trust!

Innovation – re-defining approved technologies like lasers, adding improved components like our detectors, digitally transforming existing processes – this is what QuantoLux is all about, this is what we call innovation! Lasers have been around in OES for almost 40 years now. But it is only today that they are smaller, simpler and affordable to be finally used in a standard analytical instrument. This is the step we've gone. But it would only be half as innovative if we would limit it to this. Digital transformation is all around us. We want to show you how you and your company can benefit from this development. Internet is already part of our daily lives, we bring it to your laboratory – to the extend that you define.

Innovation at zero risk – the new **QLX1** optical emission spectrometer!

Flexibility – standardised solutions have the advantage that they are an approved recipe for success. However, daily challenges require a certain amount of flexibility. QuantoLux is a small, extremely agile team. We are not overly regulated and want to respond to your needs. Our mission is to ensure that your business is successful and growing. Helping you to succeed in your daily job is key to our success.