# Product Comparison

Quantum Northwest (qnw.com) makes temperature-controlled cuvette holders that can be adapted to fit into nearly any spectrometer. Purchase them from us or directly from the spectrometer manufacturer. Our products use the Peltier principle, providing precise temperatures over wide temperature ranges, and precise, measured rates of magnetic stirring.

## Primarily Absorption Spectroscopy

The **t2 Sport™** is our least expensive product. It has two optical ports on opposite sides of the cuvette and can be used for absorption spectroscopy or optical phenomena in which light can be passed through the cuvette from one side to the other. Use the t2 Sport for work from a little below 0 °C to 110 °C.

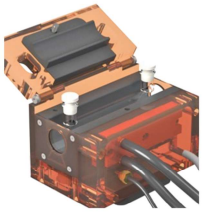
The **t2x2 Sport™** provides two t2 Sport units for a dual-beam UV/Vis spectrophotometer, one for the sample and one for the reference. Control the two units identically or independently.

The **qX2™** is our new cuvette holder with two optical ports for absorption measurements. For work in the normal range of a little below 0 °C to 110 °C no circulating water is required, since the qX2 uses air cooling of the Peltier unit. Purchase the low temperature option with a windowed "vest" to work down to -30 °C. An extended temperature options permits work up to 150 °C

The **qX2x2™** provides two t2 Sport units for a dual-beam UV/Vis spectrophotometer, one for the sample and one for the reference.

The **Brr 20**, designed for low temperature work, uses a water-cooled Peltier system. This product provides convenient temperature control for absorbance measurements throughout the range of 0 °C to 110 °C. When lower temperatures are needed, simply add windows, circulate ice water and take the temperature all the way down to -55 °C.

The **CD 250™** supports a sample carriage. Carriages are available for square, rectangular or cylindrical cuvettes of various pathlengths, as well as different kinds of small solid samples and films. Originally designed for circular dichroism, adaptations are now available for use in most UV/Vis spectrophotometers. Depending on the carriage design, temperatures from somewhat below zero to +105 °C may be used. An extended temperature version extends the range to +150 °C.



The **Cyl 100™** holds a 10 cm pathlength cylindrical cell for absorbance measurements of dilute samples. Two magnetic stir bars in the cell, one under each stopper, will maintain uniform temperature throughout the cell. The Cyl 100 has a temperature range from a little below 0 °C to 110 °C.

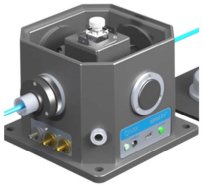
## Primarily Fluorescence Spectroscopy

The **Luma 40™** is our time-tested, workhorse cuvette holder for fluorescence. It has four optical ports, one on each side of the cuvette and can be used easily in either a T or L configuration fluorometer. Purchase a windowed "jacket" and operate down to about -35 °C. An extended temperature option permits work to 150 °C. Purchase this product from us, or directly from the best fluorometer manufacturers.

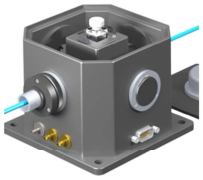
The **qX3™** is our new cuvette holder with three optical ports for fluorescence. For work in the normal range of a little below 0 °C to 110 °C no circulating water is required, since the qX2 uses air cooling of the Peltier unit. Purchase the low temperature option with a windowed "vest" to work down to -30 °C. An extended temperature option permits work to 150 °C

The **Brr 30**, designed for low temperature work, uses a water-cooled Peltier system. This product provides convenient temperature control for fluorescence measurements throughout the range of 0 °C to 110 °C. When lower temperatures are needed, simply add windows, circulate ice water and take the temperature all the way down to -55 °C.

## Either Absorption or Fluorescence Spectroscopy



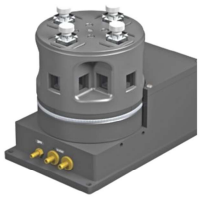
The qpod® 2e is a compact sample compartment with a built-in temperature controller. It is primarily used with fiber optic components. The temperature-controlled tower in the center has four optical ports. Optical components may be inserted into each side of the qpod to access these optical ports. Optics kits are available for absorbance, fluorescence, or both. Operate the qpod 2e via a USB connection using the Q-Blue program on your laptop. The qpod 3 has a range of -30 to +110 °C.



The original **qpod®** provides the same sample compartment and optics as the qpod 2e, but instead of an internal controller, it is controlled externally using our TC 1 Temperature Controller. The qpod has a temperature range of -30 to +110 °C. An extended temperature version extends the range up to +150 °C.

The venerable **Flash 300™** is designed for stand-alone use, often on an optical breadboard. It is typically used in laser-based measurements such as flash photolysis or photoacoustics. The Flash 300 has four optical ports. Optical access is ideal for laser beams or other sources, as well as detectors or transducers that might need to approach closely to the sample. The Flash 300 has built-in position adjustments. The Flash 300 may be used in the temperature range of about -40 °C to +105 °C. An extended temperature version enables work up to +150 °C.

## Multi-Cell Holders



The **Turret 4™** is a rotating sample changer with four cuvette positions. Each position has three optical ports. The Turret 4 offers precise cuvette positioning and uniform temperatures. Stepper motor magnetic stirring assures identical mixing in each cell. The Turret 4 is usually used for fluorescence. Several companies have fully integrated the temperature control, magnetic stirring and sample changing into their fluorometer software.

The **qCHANGER 6™** is a linear sample changer with six cuvette positions for use in UV/Vis spectrophotometers. The qCHANGER 6 offers precise cuvette positioning and uniform temperatures. Stepper motor magnetic stirring assures identical mixing in each cell.

The **Turret 6™** is a rotating sample changer with six cuvette positions, offering precise cuvette positioning, uniform temperatures and precise stepper motor magnetic stirring. A shroud surrounds the turret enabling nitrogen purging to remove moisture and oxygen. Three versions of the Turret 6 are available. One is a standard accessory for the Applied Photophysics Chirascan CD Spectrometer. Another may be provided with optical components for fiber optic measurements. A third is design for incorporation into a home-built spectrometer.

The **NeutroniQ 1x8™** supports banjo cuvette carriages for neutron scattering experiments. Eight cuvettes may be maintained at eight different temperatures.

The **NeutroniQ 3x3™** supports banjo cuvette carriages for neutron scattering experiments. This product maintains three sets of three cells at three different temperatures.

The **NeutroniQ 6™** supports banjo cuvette carriages for neutron scattering experiments. This product maintains all six cells at the same temperature.

QUANTUM
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