**General Characteristics**

- **Test Menu Selection:** 122
- **On-board Parameters:** 99
- **Maximum Tests/Hour:** 400 photometric + 400 ISE
- **Analytical System:** Fully selective discrete analytical
- **Methods:**
  - Endpoint
  - Endpoint with self blanking
  - Endpoint with sample blanking
  - Kinetic rate
  - Fixed rate
  - ISE
- **Sample Processing Selection:** Single, multiple or profile
- **Sample Volume:** 2 - 50 µL [0.5 µL increments]
- **Sample Type:** Serum, plasma, urine, CSF
- **Sample Tray Capacity:** 80 samples by rack or 22 samples by carousel
- **Sample Container:** 12 x 75 - 16 x 100 mm tubes and pediatric cups
- **Sample Transport:** 10 position bar-coded rack
- **STAT Sample Transport:** 22 user-definable for STAT, QC, cal, routines, enclosed and refrigerated module
- **Sample Quality Analysis:** Lipemia, Hemolysis, Icterus, Clot detection, Probe crash prevention
- **Sample Identification:** Bar code reader [Maximum 20 digits; 95 mm]
- **Sample Bar Code Formats:** As mixed bar codes:
  - NW7
  - Code 39
  - Code 128
  - 2 of 5 interleaved
  - 2 of 5 standard
  - Alone: ISBT code 128
- **Reagent Identification:** Bar code reader
- **Reagent Configuration:** Concentrated and full strength
- **Reagent Volume:** R1 and R2: 25 - 300 µL [1 µL increments]
- **Reagent Delivery:** One reagent pipetter dispensing
- **Reagent Storage:** 4 - 12° C
- **Reagent Bottle Capacity:** 15, 30, 60 mL
- **Reagent Storage Capacity:** R1 + R2 = 76 user defined
- **Reaction Mixture:**
  - Minimum = 150 µL
  - Maximum = 550 µL
- **Reaction Temperature:** 37° C
- **Reaction Incubation Method:** Dry bath
- **Reaction Cell:** 6 x 8 x 30 mm nondisposable glass cuvette
- **Reaction Time:** 8 min. + 37 sec. (maximum)
- **Repeat Run:** Automatic repeat run
  - Increase or decrease sample volume
- **Reflex Testing:** User defined
- **Sample Predilution:** Dilution ratio 5 - 100 by one-fold increments

**ISE Module**

- **Analytical System:** Vertical block flow cell with ISE
- **Analytical Tests:** Sodium (Na⁺), Potassium (K⁺), Chloride (Cl⁻)
- **Sample Throughput:** 200 samples/hour
- **Maximum Tests/Hour:** 600, if ISE mode only
- **Sample Type:** Serum, plasma, urine (undiluted)
- **Sample Volume:** 20 µL [serum], 25 µL [urine]
- **Final Dilution Ratio:** 1:34.1
- **Measuring Range:**
  - Sodium: 50 - 200 mEq/L
  - Potassium: 1 - 10 mEq/L
  - Chloride: 50 - 200 mEq/L
- **Electrode Composition:**
  - Sodium: Crown-ether membrane
  - Potassium: Crown-ether membrane
  - Chloride: Molecular oriented PVC membrane
- **Reference:** Liquid on liquid membrane

**Optical Characteristics**

- **Photometer:** Multi-wavelength diffraction grating spectrophotometer
- **Light Source:** Tungsten-halogen lamp
- **Photometric Modes:** Monochromatic or bichromatic
- **Wavelengths:** 340, 380, 410, 450, 480, 520, 540, 570, 600, 660, 700, 750 and 800 nm
- **Light Path:** 6 mm
- **Photodetector:** Silicon photo cell
- **Photometric Range:** 0 to 2.5
- **Photometric Sensitivity:** 0.0001 OD

**Data Processor**

- **Interface:** Standard RS232C; bidirectional
- **Program Storage:** ≥ 10 GB hard drive
- **Patient Storage:** 30,000 files
- **Data Input:** Alphanumeric keyboard, mouse or interface
- **Display:** 17 in. flat screen monitor
- **Printer:** Dot matrix
- **Software:** Windows NT®
  - Graphic user interface
  - Graphical linked technical support
  - Online HELP program
  - User defined parameter window
  - Real time QC
  - Reaction curve monitor
  - User defined repeat run criteria
  - Reflex testing
  - Daily test statistics
  - User defined calculated tests
  - Sample and test oriented data editing
  - CLIA software package
  - System status screens
  - Advanced calibration
  - Auto-QC
**Electrical Requirements**

- Electrical Consumption: 3.5 KVA
- Current (Circuit Breaker Required): 20 Amp [standard] 30 Amp with UPS
- Circuit: Dedicated and noise free
- Voltage: 208/220 VAC [±10%] single phase
- Frequency: 60 [±1 Hz]
- Ground Requirements: Resistance < 100 ohms
- Location: Power cable length 10 m

**Environmental Requirements**

- Average Heat Output: 5,000 BTU
- Ambient Temperature: 18 - 32 ± 2° C during measurement
- Ambient Humidity: 40 - 80% relative humidity
- Water Consumption: 20 L/hour
- Water Type: Deionized CAP Type II, bacteria free
- Supply: Continuous flow
- Resistivity: > 1 Megohm
- Pressure: 7 - 57 PSI
- Control: Shut off valve within 30 ft.

**Drain Requirements**

- Non-hazardous Waste: Floor drain required
  - Maximum height - 4 in. gravity
  - Optional waste pump unit
  - Maximum height - 4 ft.

**Dimensions**

- Width: 57.1 in.
- Depth: 29.9 in.
- Height: 47.6 in.
- Weight: 924 lbs.

**Olympus AU400e Components**

- Reagent Probe
- Mixer
- Cuvettes
- Sample Probe
- Reagent Compartment
- ISE Module
- STAT/QC/Cal/Routines
- Cuvette Washer/Dryer
- Rack Loader