Spectral Characteristics

- 10,000 hours of lamp life
- Superior CRI of Ra=94
- High Brightness >650,000lx *1
- Perfect White Light Spectrum
- Cool Illumination, less IR radiation

*1 Actual values observed 100mm from the end of the collimating lens via hybrid light guide.(active core φ10mm)
ELS-250, electrodeless light source, is the perfect white light source with high lumen maintenance, a useful lifetime of 10,000 hours and a high CRI of Ra=94.

The ELS-250 offers a higher level of performance for machine vision, surface inspection, fluorescence microscopy, general microscopy and other technical lighting applications. The continuous spectrum and stability of intensity enable high resolution imaging systems to pick up details more accurately.

**High-Intensity Electrodeless Lamp**

The ELS-250 is based on the electrodeless technology driven by a solid state RF (radio frequency) amplifier to eliminate the primary degradation mechanism associated with HID lamps. Without electrodes in its design, the ELS-250 can offer extremely long life and unprecedented reliability in technical lighting applications.

Electrodeless lamp design is resulting in more stable performance and longer lifespan. It’s excess over 10,000 hours of lamp life while a typical metal halide system only last up to 2,000 hours of lamp life.

The absence of electrodes eliminates the primary failure and degradation mechanisms of standard HID lamps.

*Actual values observed 100mm from the end of the collimating lens via hybrid light guide (active core φ10mm)*

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**Long Lamp Life**

- **ELS-250**: High lumen maintenance over 10,000 hours of operation.
- **Typical Metal Halide**: Lower lumen maintenance over a shorter period.

**High Brightness**

- **Over 650,000lx**

**High Color Rendering**

- **Ra=94**

**High Stability**

- **Low Flicker**

Ideal for lighting applications where high CRI is required for accurate color of illuminated objects. Low flicker in intensity over long hours of operation results in better signal to noise ration in imaging applications.
**Functions**

**Lamp**

The ELS-250 produces a perfect continual spectrum in VIS region, 400nm to 750nm. Heat transfer is eliminated by its nature of spectrum from the electrodeless lamp that does not emits IR radiation.

**Shutter and Light Control**

The ELS-250 is equipped with an integral shutter and a motorized light attenuator activated by push button or via RS-232 command. The attenuator allows precise control of lamp intensity by 1% within the ranges from 100% down to 30%.

**Filter Holder (Option)**

Additional filter can be mounted with filter holder.
Filter size: φ50mm or 50x50mm
Filter thickness: 1 to 7mm

**Optical Filters (Option)**

Asahi Spectra produces many varieties of precise optical filters to tailor the spectral throughput of the system.

**Panel Controls**

User friendly menu and comprehensive display for easy unit operation and maintenance.

1. LAMP ON / OFF
2. Shutter Activation OPEN / CLOSE
3. Light Control UP / Down

*All of those functions can be controled remotely by using RS232C.
**Options and Specifications**

**General Applications**

**Light Guide**

![Spectral Performance - Light Guides](image)

- **Hybrid Light Guide**
  - Active Core: φ10mm
  - Length: 1,500mm
  - NA: 0.57
  - Bending Radius: R=50mm

- **Liquid Light Guide**
  - Active Core: φ8mm
  - Length: 1,500mm
  - NA: 0.59
  - Bending Radius: R=100mm

**Collimating Lens**

Collimating lens reduces the divergence of light from the light guide and provide uniform light output.

**Microscopy Applications**

**Light Guide**

- **Liquid Light Guide**
  - Active Core: φ3mm
  - Length: 1,500mm
  - NA: 0.59
  - Bending Radius: R=40mm

**Microscope Adapter**

ELS-250 is compatible with most major microscopes; - Nikon - Olympus - Carl Zeiss - Leica

*Please contact us to find out an appropriate adapter for your microscope prior to purchasing.

**Includes**

- Lamp x 1
- AC cable x 1
- Instruction manual x 1
- 1 year waranty (excluding lamp and accessories)

**General Specifications**

- **Model:** ELS-250
- **Circuit Method:** Forward converter switching
- **Input voltage:** AC100 - 240V 50/60Hz
- **Power consumption:** less than 360VA
- **Consumption current:** 2.8A(100V 50Hz)
- **Lamp type:** Electrodeless lamp
- **Lamp voltage:** 28V(DC)
- **Lamp current:** 7.8A(DC)
- **Average Lamp life:** 10,000h
  (*Defined as time to 50% of original brightness)
- **Lamp maintenance:** Free alignment (Cartridge type)
- **Cooling method:** Forced cooling
- **Shutter:** Pulse motor driving
- **Intensity adjustment:** 100 - 30% (Transmittance) Continuously variable
- **Filter Holder (Option):** 50mm dia or 50x50mm; R=1-7mm filter is usable
- **Emitting method:** With use of light guide
- **Controller:** Built-in
- **Remote control:** RS232C
- **Recommended environment:** Temperature 10 - 35 deg C, Humidity 20-80%
- **Dimensions:** 175(W) x 295(D) x 202(H) mm
- **Weight:** 6.5kg

**Dimensions**

- **295**
- **175**

*Asahi Spectra has made every effort to ensure that the information contained in this specification sheet is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation.*