

Tunable KiloArc™

Tunable Broadband Light Source

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING

The power of a 100 mW CW laser with the continuous tunability of a monochromator!



Are you looking for:

- ✓ CW laser that is tunable from 250 to 1,100 nm?
- ✓ A laser that is so simple anyone can use?

If this sounds like the light source you need, then OBB has the answer. The Tunable KiloArc™ Illuminator provides all of these benefits, it just isn't a laser.

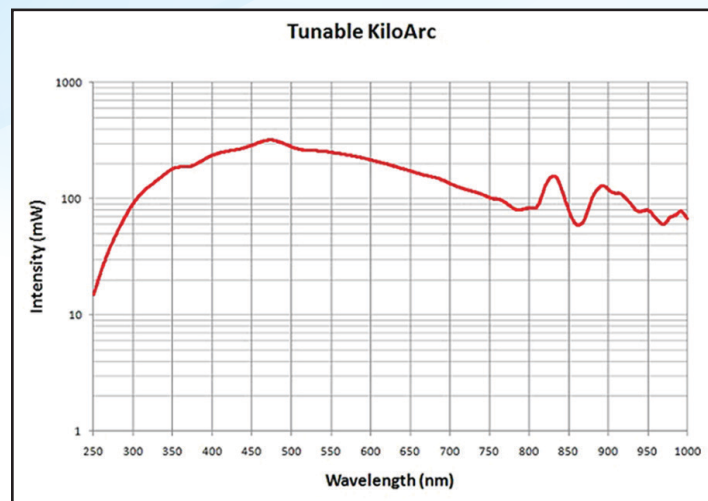
Features and Benefits

- Continuously tunable from 180 nm to 2.4 microns
- Hundreds of milliwatts of energy
- Push button start and manual wavelength tunability
- No special cooling or ozone venting required
- Easy to use

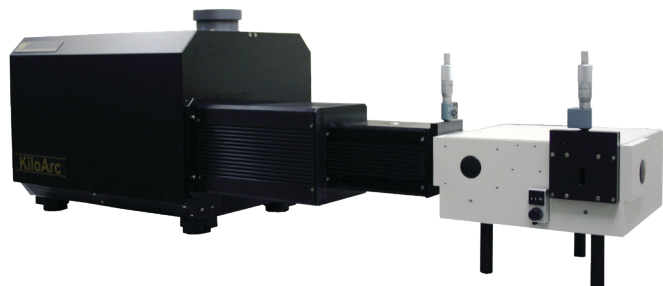
Applications

Applications for the Tunable KiloArc™ Illuminator cover a broad range of scientific, OEM and research applications. Tunable illuminators are used for a broad range of applications almost as diverse as the wavelength range across which they emit.

- Detector calibration
- Solar simulators
- Photovoltaics
- Photochemistry
- Photo-activation
- Photobiology
- Spectroscopy
- Optical teaching labs
- Dermatology



Tunable KiloArc™ Illuminator equipped with 1000 watt Xenon lamp and 1,200 l/mm x 500 nm blazed grating. Here the adjustable bandpass was set to 20 nm.



These illuminators are the light sources of choice for a variety of spectroscopy systems, such as:

- Fluorometers
- UV-Vis spectrometers
- CD spectrometers
- Stopped-flow spectrometers
- Tunable illuminators

Specifications

Optical Performance Specifications	
Optical power	> 300 m W (grating, bandpass & wavelength dependent)
Spot size at slit exit	10 mm (slit dependent)
Diverging beam angle (full)	14.4 degrees
Numerical aperture (N.A.)	0.12
Optical noise	From 0.15% to 0.2% RMS
Optical stability	2%
Other Specifications	
Input	210–240 V AC 50/60 Hz
Starting	45 kV starting pulse
Power rating	800–1200 watts (adjustable) — recommended 800–1000 watts
Lamp module type	1000 W Xenon, 1000 W Mercury/Xenon (proprietary to OBB)
Lamp life	Typically 1,500 hrs
Focusing optics	High efficiency f/4 ellipsoid reflector
Power precision	0.04% (0.4 watts)
Output volts compliance	17–23 VDC
Output current limit	70 A rms
Dimensions	489 x 375 x 329 mm (19.3 x 14.8 x 12.9 inches)
Weight	31 kg (68 pounds)
Window diameter (D)	127 mm (5.0 inches)
Center beam line height (without feet)	128 mm (5.0 inches)
Optical Motor Controller Specifications	
Power supply	Universal Power Supply included
TTL output	Synchronization TTL output each time motor stops
Stepper motor	Two phase motor 1 A per phase, 200 steps per revolution, 1.8 degrees per step
Maximum motor speed	1200 RPM with zero torque
Maximum speed with mono	15,000 nm per minute
Stepping motor voltage	5–12 V
Stepping modes	Full, Half and Micro steps: 1/8, 1/16, 1/32, 1/64 computer selectable
Slew rate	1 to 62,500 micro steps per second
Calibration	Auto calibration of wavelength
Ramping	Linear ramping rate for heavy duty, fast, precision operation