



RADIANTIS OPIUM QUTO

DATASHEET

FEATURES

*Automated Broadly
Tunable Femtosecond
Optical Parametric
Oscillator with
Selectable Pulse
Duration*

- **Gap-free tuning** across the UV, visible and IR (340–2500 nm)* without any change of optics.
- **Simultaneous pulses** available in the visible (490–750 nm) and near-IR (930–2500 nm).
- **Ultimate pulse duration flexibility** with selectable pulse width and near-transform-limited pulses (80–350 fs).
- **Automated** wavelength tracking. USB interface for PC control.
- **Dedicated alignment cavity** with visible radiation for simple, rapid and safe alignment.
- **Compatibility** with various Ti:Sapphire pump lasers.
- **High stability** and insensitivity to ambient temperature with room-temperature operation.

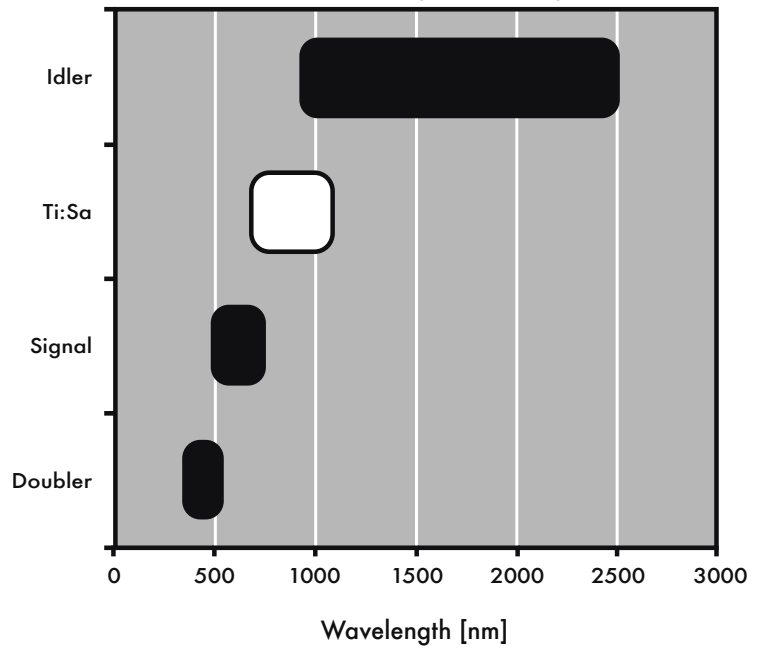
* Combined with a tunable Ti:sapphire oscillator

WAVELENGTH COVERAGE

OPIUM AUTO provides unmatched tuning across the UV, Visible and IR (340–2500 nm) with a single system and a single optics set.

Using 4 dedicated output ports, emitting the Doubled Fundamental (Blue and Visible), Signal (Visible), Depleted Fundamental (near-IR), Idler (near-IR), the complete range is delivered.

OPIUM AUTO Wavelength Coverage

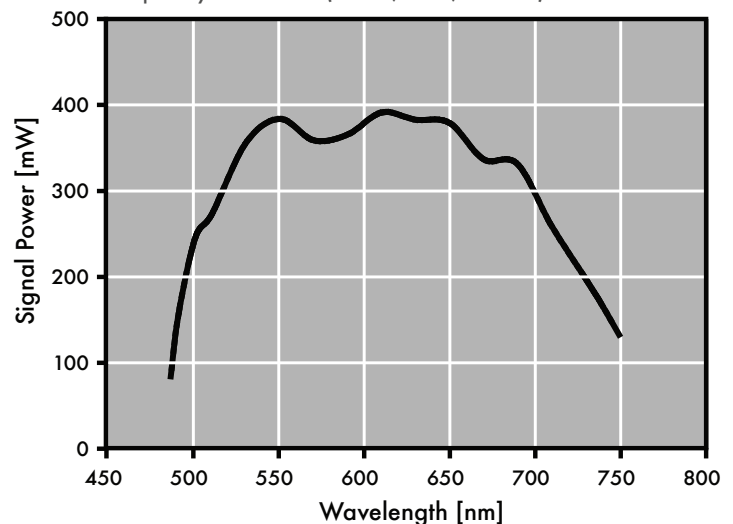


SIGNAL TUNING CURVE

OPIUM AUTO Signal covers the broad spectral range between 490 and 750 nm, with a single set of optics and high output power levels across the range. Simultaneously, on a separate output port, the idler in the IR (930–2500 nm) is provided.

OPIUM AUTO Signal Tuning Curve

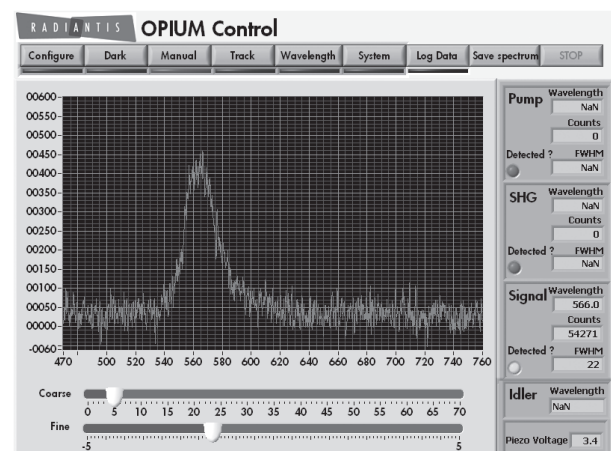
Pumped by Mai Tai HP (2.8 W, 95 fs, 820 nm)



GRAPHIC USER INTERFACE (GUI)

All OPIUM devices have built-in wavelength stabilization. In this mode, fine adjustments are made to the cavity to keep the wavelength within the range selected by the user. If the user needs ultra-stable output from the device for an experiment, cavity stabilization can be suspended.

OPIUM AUTO includes a wavelength tracking feature which makes tuning a simple process across the range.



	<i>Pumped by*</i> Mai Tai HP 2.8 W, 95 fs @820nm	<i>Pumped by*</i> Mira+Verdi10 1.8 W, 140 fs @810nm
Tuning range [nm]		
SHG	345–520	350–450
Signal (Simultaneous with Idler)	490–750	490–750
Depleted Fundamental	690–1040	700–900
Idler (Simultaneous with Signal)	930–2500	930–2500
Average Output Power [mW]		
SHG @400 nm	1100	850
Signal @550 nm	350	180
Depleted Fundamental @800nm	1100	850
Idler	170 @1300nm	120 @1056nm
Typical Pulse Duration [fs]		
SHG	<140	<180
Signal	100–250 (adjustable)	100–300 (adjustable)
Depleted Fundamental	<140	<180
Idler	80–250 (adjustable)	80–300 (adjustable)
Additional Specifications		
Repetition Rate	80 MHz	76 MHz
Noise	<1% RMS	
Wavelength Stability @555nm	< 0.5 nm	
Spatial Mode	TEM ₀₀	
M ²	<1.2 (Signal)	
Polarization	Horizontal for Signal and Idler Vertical for SHG	
Spectrometer for the UV&Visible range (for the IR spectral region, contact Radiantis)	350–900 nm (integrated into optics unit)	
Dimensions Optical Unit (W × L × H) (PC controllable. No control electronics unit required)	360 x 954 x 230 mm	

*OPIUM AUTO can be pumped by other industrial Ti:sapphire oscillators.

Specifications are subject to change without notice. For further information about technical specifications, please contact us on:

sales@radiantis.com

or give us a call on:

+34 934 13 41 67

