



RADIANTIS OPIUM HF

DATASHEET

The Absolutely Hands-Free Femtosecond Optical Parametric Oscillator

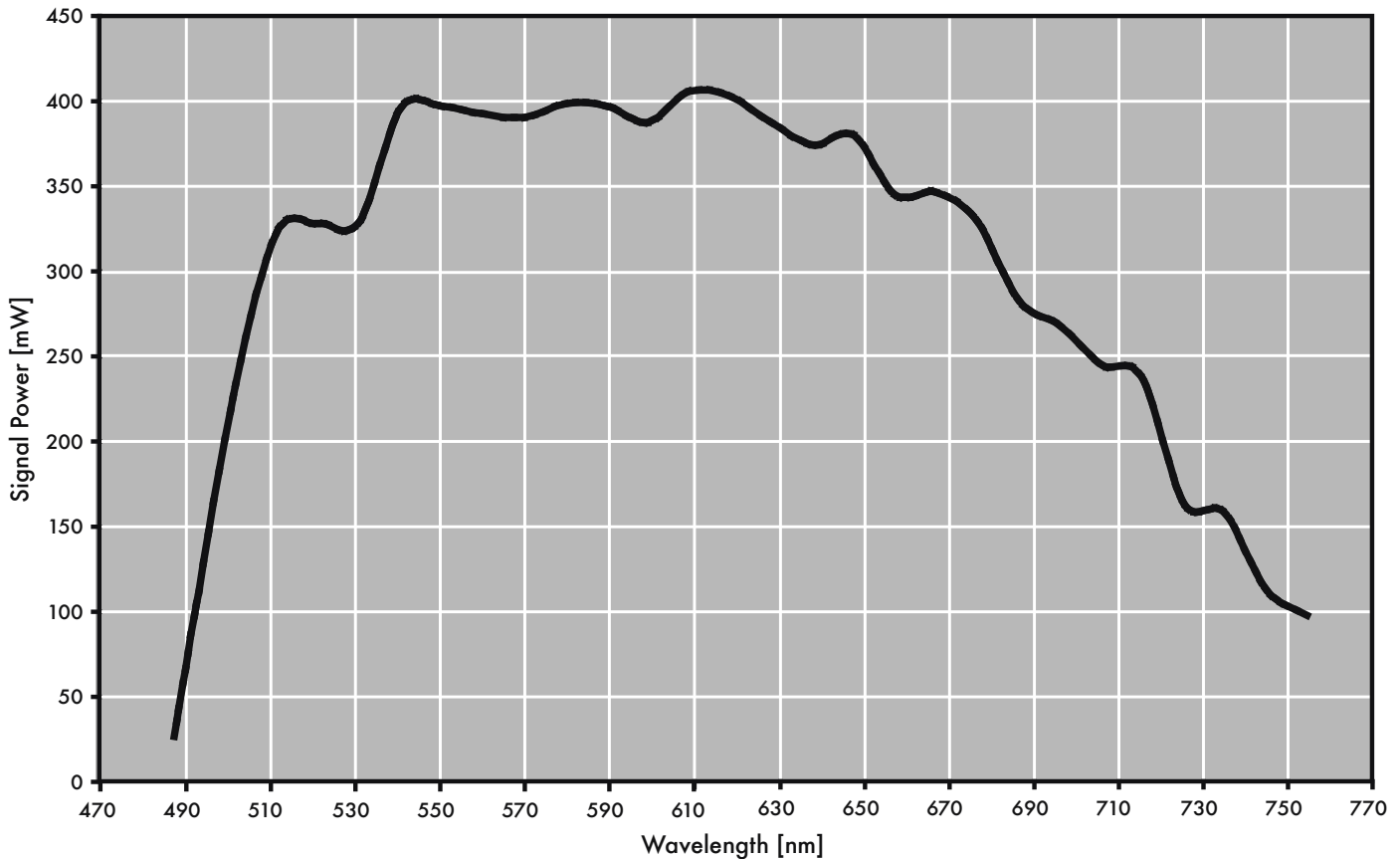
FEATURES

- **Hands-Free** operation: **fully-automated wavelength tuning**, with optimized power and pulse duration, and **automated cavity alignment**.
- **Gap-free tuning** across the Visible and IR (490–2500 nm)* without any change of optics.
- **Simultaneous pulses** available in the Visible (490–750 nm) and near-IR (930–2500 nm).
- **High stability** and insensitivity to ambient temperature, with room-temperature operation.

* Combined with a tunable Ti:sapphire oscillator

OPIUM HF Signal Tuning Curve

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



SIGNAL TUNING CURVE

OPIUM HF automated tuning provides high power levels across a broad range with practical pulse duration and excellent stability.

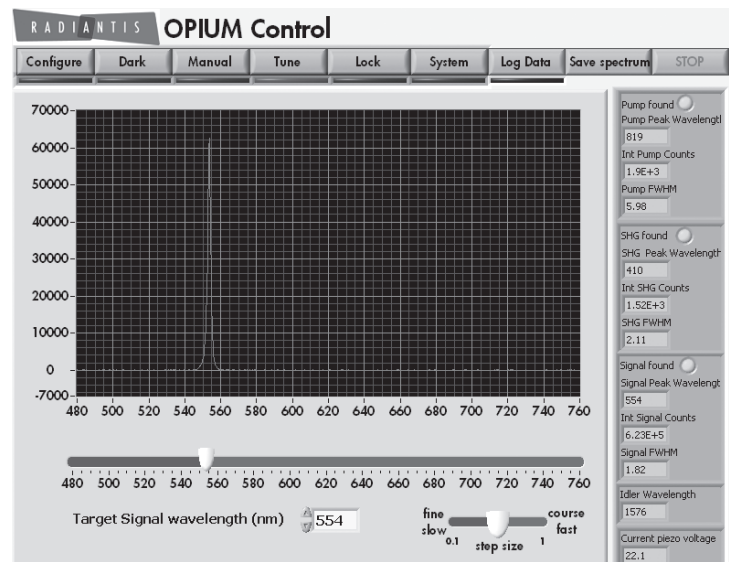
The Signal, in the Visible, covers the spectral range between 490 and 750 nm. Simultaneously, from a separate output, the Idler, between 930 and 2500

OPIUM HF can be tuned to any wavelength within the range in around 5 seconds, simply by dragging the wavelength selector to the new wavelength. The output spectrum and useful parameters, including the pump laser status, are shown in real time.

Specific features, such as continuous wavelength tuning and software connectivity, can be added on request.

GRAPHIC USER INTERFACE (GUI)

The Graphic User Interface (GUI) to the FreeScan™ tuning system.



Pumped by
Ti:sapphire oscillator
Spectra Physics Mai Tai HP
2.8 W, 95 fs, 820 nm*

Tuning range [nm]	
Signal (Simultaneous with Idler)	490–750
Depleted Fundamental	690–1040
Idler (Simultaneous with Signal)	930–2500
Average Output Power [mW]	
Signal @550 nm	350
Depleted Fundamental @800nm	1100
Idler	170
Typical Pulse Duration [fs]	
Signal	200
Depleted Fundamental	<140
Idler	200
Additional Specifications	
Repetition Rate	80 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 re- quired)	360 x 954 x 230 mm

*OPIUM HF 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

