

# 1.06 $\mu\text{m}$ Ultrafast Optical Clock

## UOC-1M Series

### ULTRAFAST OPTICAL CLOCKS at 1.06 $\mu\text{m}$

In response to customer requests, PriTel announces the 1.06  $\mu\text{m}$  UOC. This high performance unit provides short pulses for telecom research and low jitter pulses for a variety of research applications.

PriTel's UOC Series of Ultrafast Optical Clocks are easy-to-use actively-mode-locked fiber lasers that provide high pulse-repetition frequencies and high average output powers for 1.06  $\mu\text{m}$  time-division-multiplexed communications R&D.

An internal micro-computer monitors the optical pulses and maintains mode-locking. After initial setup, the UOC requires no supervision.



## Specifications

### UOC-1M

Wavelength	1.040 $\mu\text{m}$ to 1.080 $\mu\text{m}$ , tunable
Pulsewidth	2 ps to 25 ps
Optical bandwidth	0.4 nm @ 8 ps
Pulse repetition freq.	0.5GHz, 1.0GHz, 1.3GHz, 2.5GHz, 5-14GHz, 5-20GHz
Average output power	Varies with repetition rate 20 mW @ 10 GHz
Sideband suppression	>65 dB

#### **Optical**

Gain medium	Yb-doped silica fiber
Pump source	Diode laser
Connectors	FC/PC (other connectors available on request)

#### **Environmental**

Operating temperature	+15 to 30°C
Storage temperature	-20 to 50°C

#### **Electrical/ Mechanical**

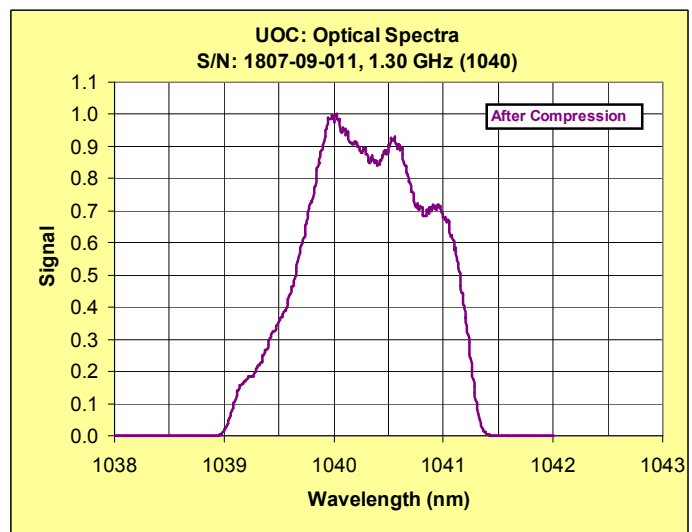
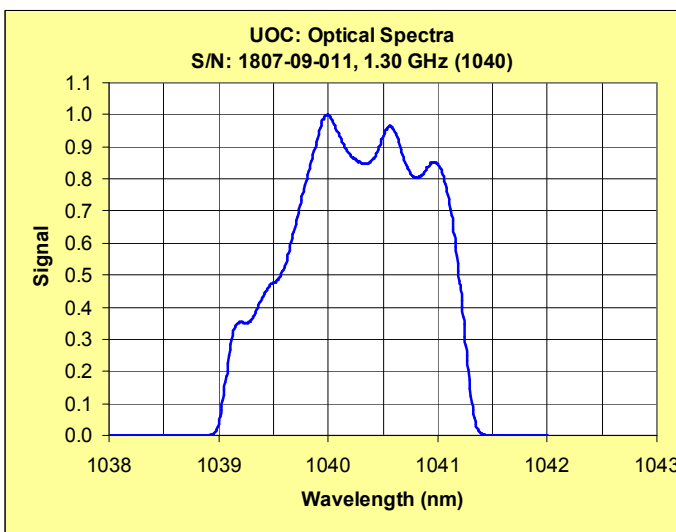
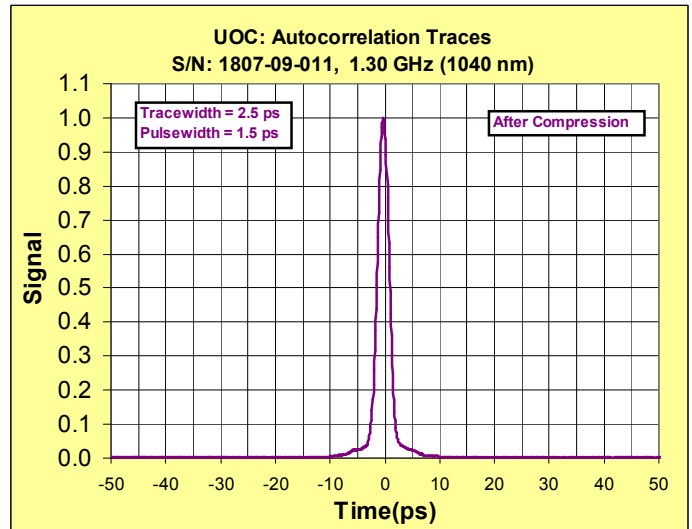
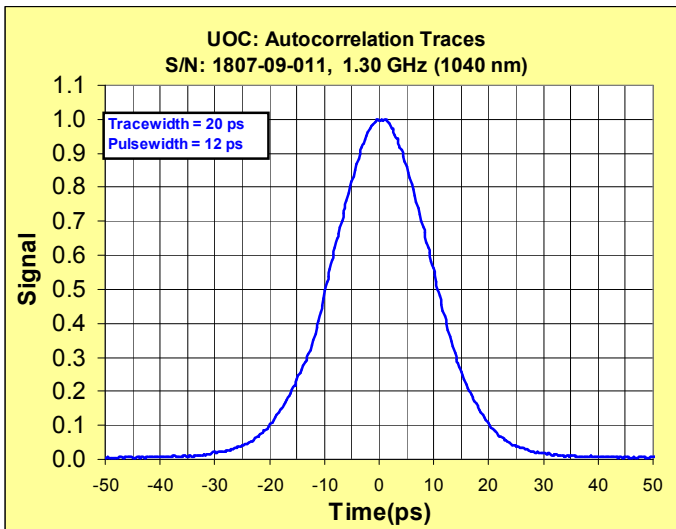
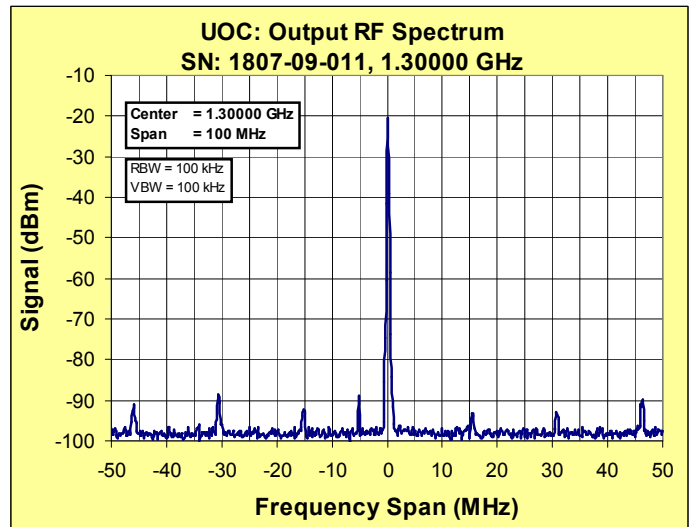
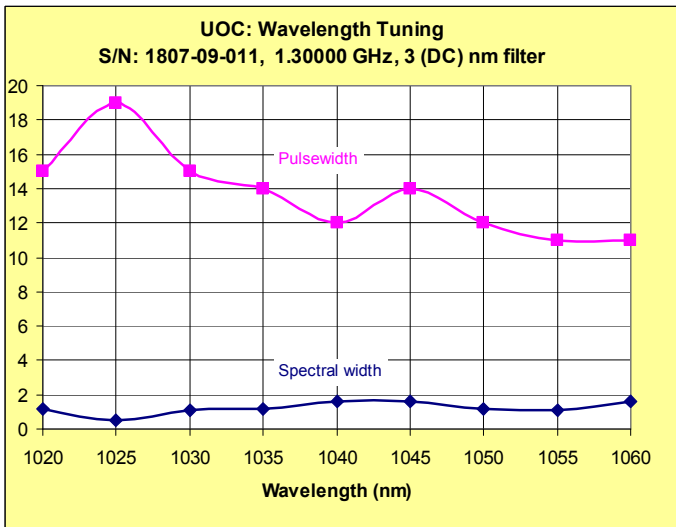
Operating Voltage	85-264 VAC at 47-63 Hz
Power consumption	<250 W
Dimensions (4U)	48 cm x 38 cm x 18 cm
Weight	20 kg

The UOC Series provides two or three secondary optical outputs for monitoring system performance by a photodiode, optical spectrum analyzer, or power meter. Normal operation of the UOC Series requires an external RF synthesizer or clock, supplied by the customer.



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# Typical Performance of PriTel's UOC -1M at 1300 MHz



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