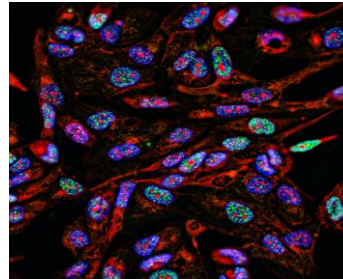


Nonlinear Optics



Life Sciences



COMPACT HIGH-POWER PICOSECOND LASER

< 10 ps / High power / High repetition rate / Narrow linewidth

ANTARES is an advanced picosecond laser producing high average power at high repetition rates up to 80 MHz with narrow linewidth in a very compact and robust format.

ANTARES series offers average power from 5 W up to 40 W at 1030 nm or 1064 nm. Other wavelengths are also available in the green or UV through frequency conversion.

TECHNICAL SPECIFICATIONS*

General	ANTARES 1035-10	ANTARES 1035-20	ANTARES 1035-30
Wavelength	1035 +/- 5 nm (other wavelengths available)		
Average power	> 10 W	> 20 W	> 30 W
Pulse duration (1)	< 10 ps		
Repetition rate (3)	80 +/- 2 MHz		
Energy per pulse (4)	> 125 nJ	> 250 nJ	> 375 nJ
Beam parameters			
M ² (5)	< 1.2		
Beam diameter (6)	1.5 +/- 0.2 mm		
Divergence (7)	< 1 mrad		
Ellipticity (8)	> 0.9		
Output beam	Collimated		
Polarization	Vertical, > 100:1		
Stability			
Power stability RMS (9)	< 1%		
Pulse to pulse stability RMS (10)	< 1%		
Electrical			
External interfaces	RS-232, USB, TCP/IP		
Synchronization output	TTL		
Software interfaces	GUI, RS-232 serial communication protocol		
Power consumption	< 150 W		
Cooling	Air		
Mechanical			
Laser head dimensions	397 x 339 x 131 mm		
Laser head weight	13 kg		
Control unit	19"/ 3U rack		
Control unit weight	12 kg		
Umbilic length	3 m		
Environmental			
Operational temp range	19-30°C		
Storage temp range	0-40°C		
Operational max altitude	2000 m		
Operational humidity	Non condensing		
Storage humidity	80% RH		
Options			
Wavelengths	1064 nm or other		
Repetition rate (11)	Any fixed frequency from 20 MHz to 80 MHz		
Pulse picker	To change repetition rate from 1 MHz to 40 MHz		
Power modulation	To access repetition rates below 1 MHz and power modulation		
Frequency conversion	517 nm or computer selectable 517/1035 nm		

- (1) Sech² fit, autocorrelator measurement
- (2) User adjustable group delay dispersion compensation
- (3) Other value upon request
- (4) Energy defined as the ratio between average power and repetition rate
- (5) M² measurement according 4Sigma method
- (6) Beam diameter at output port at 1/e²
- (7) Half divergence, far field measurement, ISO method
- (8) Minor over major diameter ratio, far field measurement
- (9) Over 12 hours or more, at room temperature +/-1°C
- (10) Pulse to pulse stability measurement performed with oscilloscope and photodiode
- (11) Change in repetition rate may affect average output power. Energy will be unchanged

* This information is subject to modifications without prior notice.

