



## ZILOS-tk™

The ZILOS-tk™ includes laser - objective combination, 3 turret adapters, video camera, c-mount adapter, proprietary laser drilling software, desktop or laptop computer and accessories. Microscope is not included.

Dimensions	H	W	D	lb. (kg)
	in. (mm)	in. (mm)	in. (mm)	
ZILOS-tk Module:	1.65 (42)	1.1 (28)	2.1 (54)	0.5 (0.22)
Controller:	3.8 (95)	2.5 (63.5)	1.8 (46)	1.0 (0.45)
Desktop Computer:	14.2 (361)	7.1 (180)	17.4 (442)	38 (17.3)
Monitor:	16.9 (429)	16.7 (424)	7.9 (200)	17.0 (7.7)
Laptop Computer:	1.3 (3.3)	13.3 (34)	10.7 (27)	6.2 (2.8)

Electrical	Desktop	Monitor	Laptop
Input Voltage:	100/240 VAC	110-240 VAC	100-240 VAC
Power:	300 W	30 W	90W
Line Frequency:	50/60 Hz	50/60 Hz	50/60 Hz

### Laser

Type:	1480 nm, Infrared Solid State Diode
Maximum Power:	@ Focus = 300 mW (Class I)
Laser Modes:	Clinical and Validation
Pulse:	1 µs to 3000 µs <i>Clinical Mode:</i> 3 user definable pulse lengths <i>Validation Mode:</i> Adjustable 1 - 3000 µs Slider resolution: adjustable increments of 1, 10, or 100 µs
Power:	<i>Validation Mode:</i> Adjustable 1% - 100%
Firing:	By mouse ( <i>Optional: Foot switch firing</i> ) (15 second firing limit in Clinical Mode)
Target Marker:	<i>Circle</i> or <i>arrow</i> , adjustable "Blink Time" after firing. <i>Isotherm Rings</i> , showing peak temps and hole size. Select which rings to display.
Crosshairs:	Activation, size and color set by user (used for positioning embryo)
Laser Alignment:	Aligned and locked at factory. No on-site physical laser alignment required
Target:	Adjust target alignment on-screen

### Objective

Standard:	40x, 0.60 N.A., I.R. (High transmission in both the visible and near-infrared, long working distance)
Scale Calibration:	Performed interactively on-screen Calibrate and save multiple objectives

### Video

Camera:	High resolution analog or digital color
Image Area:	NTSC: 640 x 480 pixels Digital: 1280 x 1024 pixels
Zoom:	2x, 4x, and 8x with user defined image panning
Illumination:	Microscope, image on screen

### Laser Safety

Class I Laser: Laser pulse and energy cannot exceed Class I limits.  
Timer: Laser must be discharged within 15 seconds of activation while in Clinical mode.  
Energy: Once energy level is selected in Clinical mode, other energy levels are deactivated.

### Image Capture and Storage Utility

Capture and store unlimited images. Images stored in user-selected JPG, BMP, or TIF format. Capture unlimited thumbnail images and select which to save. Automatic image capture on laser fire. Manual or automatic file naming. Images may be saved with graphic overlay.

### Image Annotation Tools

Unlimited automatic image labels may be stored and enabled. Freehand text, circles, rectangles, lines, and image measures may be added to captured images.

### Video Capture

Capture and store real time and time lapse video in .avi format. Ability to set maximum recording length. Manual and automatic naming options. Open and play saved videos within program.

### Measurement Toolbox

Tools allow measurement of various embryo parameters on captured images. Each measure visible as graphic overlay, including length in micron  
*Zona:* 5 zona thickness measurements; Mean & Standard Deviation  
*Embryo:* 2 diameter measurements; Mean & Standard Deviation;  
Blastomere count  
*Pronuclei:* 2 diameter measurements for two separate pronuclei;  
Mean for each pronuclei  
*Drill:* 5 hole size measurements; Mean & Standard Deviation  
*Ruler:* 5 user-defined measurements; Mean & Standard Deviation

### Reports and Output

Data Input:	Data from keyboard Data from measurements ASCII Import critical fields
Report:	Ova/embryo information, procedure/protocol information, choice of 2 images plus evaluation data or 4 images
Output:	Printout of report Report stored in JPG format ASCII output of all numerical and alphanumeric fields in TXT & MER formats

### ZILOS-tk Computer (subject to change)

Type:	Tower/desktop Model	Laptop Model
OS:	Windows XP Pro	Windows XP Pro
CPU:	Pentium Dual Core 2 GHz	Intel Pentium M or Dual Core
Memory:	1 GB DDR	1 GB RAM
Drives:	160 GB HD CD/DVD-RW Dual Layer	80 GB CD/DVD-RW Dual Layer
Display:	20" flat panel, UXGA	15" Typical, XGA+
Ports:	Serial, Parallel, USB 2.0 PS/2	Serial, Parallel, USB 2.0 VGA
Network:	10/100/1000 Ethernet	10/100 Mps Ethernet
Modem:	N/A	56 bps