

# WD Caviar® Green™

## Power Saving Hard Drives

Cool, quiet, eco-friendly



### Interface

SATA

### Width/Height

3.5-inch/1-inch

### Rotational Speed

IntelliPower

### Capacities

500 GB to 1 TB

### Model Numbers

WD10EADS  
WD10EACS  
WD7500AACS  
WD6400AACS  
WD5000AACS

*Note:* Not all products may be available in all regions of the world.



As hard drive capacities increase, the power required to run those drives increases as well. WD Caviar Green drives make it possible for energy-conscious customers to build systems with higher capacities and the right balance of system performance, ensured reliability, and energy conservation.

### Product Features

**Reduced power consumption** — WD has reduced power consumption by up to 40 percent compared to competitors' drives with the combination of WD's IntelliSeek™, NoTouch™, and IntelliPower™ technologies.

**Helps enable eco-friendly PCs** — By using environmentally-conscious PCs with our WD Caviar Green drives on board, large organizations with many desktop computers can minimize their carbon footprint and save real money on electricity costs.

**Cool and quiet** — GreenPower™ technology yields lower operating temperatures for increased reliability and low acoustics for ultra-quiet PCs and external drives.

**Perfect for external drives** — External drive manufacturers can eliminate the need for a fan in a high-capacity product with a WD Caviar Green drive, the coolest and quietest in its class. External drives with WD Caviar Green drives on board can save up to \$14.00 per year in electricity costs.

**IntelliPower™** — A fine-tuned balance of spin speed, transfer rate, and caching algorithms designed to deliver both significant power savings and solid performance. Additionally, WD Caviar Green drives consume less current during startup allowing lower peak loads on systems as they are booted.

**IntelliSeek™** — Calculates optimum seek speeds to lower power consumption, noise, and vibration.

**NoTouch™ ramp load technology** — The recording head never touches the disk media ensuring significantly less wear to the recording head and media as well as better drive protection in transit.

**Perpendicular Magnetic Recording (PMR)** — Employs PMR technology to achieve even greater areal density.

WD Caviar Green is part of WD's complete lineup of desktop hard drives.



**WD Caviar® Black™**  
Maximum performance  
for power computing.



**WD Caviar® Blue™**  
Performance and reliability  
for everyday computing.



**WD Caviar® Green™**  
Cool, quiet, eco-friendly.

# WD Caviar Green

## Power Saving Hard Drives

Specifications <sup>1</sup>	1 TB	750 GB	640 GB	500 GB
Model number	WD10EADS WD10EACS	WD7500AACS	WD6400AACS	WD5000AACS
Interface	SAITA 3 Gb/s	SAITA 3 Gb/s	SAITA 3 Gb/s	SAITA 3 Gb/s
Formatted capacity	1,000,204 MB	750,156 MB	640,135 MB	500,107 MB
User sectors per drive	1,953,525,169	1,465,149,168	1,250,263,728	976,773,168
LBA support	Yes	Yes	Yes	Yes
SATA latching connector	Yes	Yes	Yes	Yes
Actuator latch/auto park	Yes	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch
RoHS compliant <sup>2</sup>	Yes	Yes	Yes	Yes
<b>Performance</b>				
Data transfer rate (max)				
Buffer to host	3 Gb/s	3 Gb/s	3 Gb/s	3 Gb/s
Host to/from drive (sustained)	111 MB/s	111 MB/s	108 MB/s	108 MB/s
Cache (MB)	32 (WD10EADS) 16 (WD10EACS)	16	16	16
Rotational speed (RPM)	IntelliPower	IntelliPower	IntelliPower	IntelliPower
Average drive ready time (sec)	14.3	14.3	14.3	14.3
<b>Configuration/Organization</b>				
Heads/disks	6/3	6/3	4/2	3/2
Bytes per sector (STD)	512	512	512	512
<b>Reliability/Data Integrity</b>				
Load/unload cycles <sup>3</sup>	300,000	300,000	300,000	300,000
Non-recoverable read errors per bits read	<1 in 10 <sup>15</sup>	<1 in 10 <sup>15</sup>	<1 in 10 <sup>15</sup>	<1 in 10 <sup>15</sup>
Limited warranty (years) <sup>4</sup>	3	3	3	3
<b>Power Management</b>				
12VDC ±10% (A, peak)	1.671	1.671	1.392	1.392
Average power requirements (W)				
Read/Write	5.4	5.4	5.4	5.4
Idle	2.8	2.8	2.5	2.5
Standby	0.4	0.4	0.46	0.46
Sleep	0.4	0.4	0.46	0.46
<b>Environmental Specifications<sup>5</sup></b>				
Temperature (°C)				
Operating	5 to 55	5 to 55	5 to 55	5 to 55
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)				
Operating (2 ms, read)	30	30	30	30
Operating (2 ms, read/write)	65	65	65	65
Non-operating (1 ms)	250	250	300	300
Average acoustics (dBA) <sup>6</sup>				
Idle mode	24	24	24	24
Performance seek mode	29	29	29	29
Quiet seek mode	25	25	25	25
<b>Physical Dimensions</b>				
Height (in./mm, max)	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	1.39/0.63	1.39/0.63	1.32/0.60	1.32/0.60

<sup>1</sup> As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit [www.sata-io.org](http://www.sata-io.org) for details.

<sup>2</sup> WD hard drive products manufactured and sold worldwide after June 1, 2006, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the European Union for electrical and electronic products. The RoHS Directive 2002/95/EC of the European Parliament, which is effective in the EU beginning July 1, 2006, aims to protect human health and the environment by restricting the use of certain hazardous substances in new equipment, and consists of restrictions on lead, mercury, cadmium, and other substances.

<sup>3</sup> Effective maximum SATA 3 Gb/s transfer rate.

<sup>4</sup> Controlled unload at ambient condition.

<sup>5</sup> No non-recoverable errors during operating tests or after non-operating tests.

<sup>6</sup> Sound power level.



### For service and literature:

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