



2.5 HDD DATA SHEET

Amazing Versatility.  
Unmatched Dependability.



Seagate brings over 20 years of trusted performance and reliability to the Seagate® BarraCuda® 2.5-inch HDDs—now available in capacities up to 5TB.



### Best-Fit Applications

- Laptops
- Mobile storage
- External storage systems
- All-in-one PCs
- Ultra-slim desktop PCs

## Key Advantages

**Broadest 2.5-inch hard drive portfolio** with up to 5TB capacity and both 7mm and 15mm form factors suitable for a variety of compute applications.

**Thinnest and lightest 2.5-inch hard drive** with up to 2TB storage in a 7mm z-height, providing seamless upgrades of thin and light laptops and smaller form factor systems.

**Fast data rates of up to 140MB/s** enables superior PC end-user experience and snappier file transfers.

2.5-inch, 15mm z-height hard drives provide 3TB to 5TB in capacity, offering **the highest-capacity 2.5-inch hard drives** available for external or all-in-one storage.

**15mm z-height enables slimmer all-in-one desktop PC drives** while helping reduce system heat generation and vibration.

**Low startup current** configurations for 3TB to 5TB drives enable **use in legacy low-current systems** like USB-2 external boxes, while simultaneously lowering power consumption.

5TB drives can store more than **1.25 million songs and 600 hours of HD video.**<sup>1</sup>

<sup>1</sup> Quantitative usage examples for 5TB capacity drive



| Specifications                                | 5TB                  | 4TB                 | 3TB                 | 2TB                 | 1TB                 |
|---|----------------------|---------------------|---------------------|---------------------|---------------------|
| Capacity                                      | 5TB                  | 4TB                 | 3TB                 | 2TB                 | 1TB                 |
| Model Numbers                                 | ST5000LM000          | ST4000LM024         | ST3000LM024         | ST2000LM015         | ST1000LM049         |
| Bytes per Sector (logical/physical)           | 512/4096             | 512/4096            | 512/4096            | 512/4096            | 512/4096            |
| <b>Performance</b>                            |                      |                     |                     |                     |                     |
| Interface                                     | SATA 6Gb/s           | SATA 6Gb/s          | SATA 6Gb/s          | SATA 6Gb/s          | SATA 6Gb/s          |
| Data Transfer Rate (MB/s)                     | Up to 140            | Up to 140           | Up to 140           | Up to 140           | Up to 160           |
| Cache (MB)                                    | 128                  | 128                 | 128                 | 128                 | 128                 |
| Spindle Speed (RPM)                           | 5400                 | 5400                | 5400                | 5400                | 7200                |
| Recording Technology                          | SMR                  | SMR                 | SMR                 | SMR                 | SMR                 |
| <b>Reliability/Data Integrity</b>             |                      |                     |                     |                     |                     |
| Load/Unload Cycles                            | 600,000              | 600,000             | 600,000             | 600,000             | 600,000             |
| Head-Rest Method                              | QuietStep™ Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load |
| Nonrecoverable Read Errors per Bits Read, Max | 1 per 10E14          | 1 per 10E14         | 1 per 10E14         | 1 per 10E14         | 1 per 10E14         |
| Limited Warranty (years) <sup>1</sup>         | 2                    | 2                   | 2                   | 2                   | 5                   |
| <b>Power Management</b>                       |                      |                     |                     |                     |                     |
| Startup Current (+5V, A)                      | 1.2                  | 1.2                 | 1.2                 | 1.0                 | 1.0                 |
| Read/Write Power, Average (W)                 | 1.9/2.1              | 1.9/2.1             | 1.9/2.1             | 1.7/1.8             | 1.9/1.7             |
| Idle Power, Average (W)                       | 1.1                  | 1.1                 | 1.1                 | 0.5                 | 0.7                 |
| <b>Environmental</b>                          |                      |                     |                     |                     |                     |
| Temperature, Operating (°C)                   | 0°C – 60°C           | 0°C – 60°C          | 0°C – 60°C          | 0°C – 60°C          | 0°C – 60°C          |
| Temperature, Nonoperating (°C)                | -40°C – 70°C         | -40°C – 70°C        | -40°C – 70°C        | -40°C – 70°C        | -40°C – 70°C        |
| Shock, Operating: 2ms (Gs)                    | 300                  | 300                 | 300                 | 400                 | 400                 |
| Shock, Nonoperating: 1ms (Gs)                 | 650                  | 650                 | 650                 | 1000                | 1000                |
| Acoustics, Idle, Typical (bels—sound power)   | 2.6                  | 2.6                 | 2.6                 | 2.2                 | 2.2                 |
| Acoustics, Seek, Typical (bels—sound power)   | 2.7                  | 2.7                 | 2.7                 | 2.4                 | 2.4                 |
| <b>Physical</b>                               |                      |                     |                     |                     |                     |
| Height (mm/in)                                | 15.0/0.59            | 15.0/0.59           | 15.0/0.59           | 7.0/0.276           | 7.0/0.276           |
| Width (mm/in)                                 | 69.85mm/2.750in      | 69.85mm/2.750in     | 69.85mm/2.750in     | 69.85mm/2.750in     | 69.85mm/2.750in     |
| Depth (mm/in)                                 | 100.35mm/3.951in     | 100.35mm/3.951in    | 100.35mm/3.951in    | 100.35mm/3.951in    | 100.35mm/3.951in    |
| Weight (g/lb, max)                            | 190g/0.42lb          | 190g/0.42lb         | 190g/0.42lb         | 90g/0.198lb         | 85g/0.187lb         |
| Carton Unit Quantity                          | 40                   | 40                  | 40                  | 50                  | 50                  |
| Cartons Per Pallet/Layer                      | 60/10                | 60/10               | 60/10               | 60/10               | 60/10               |
| <b>Special Features</b>                       |                      |                     |                     |                     |                     |
| Multi-Tier Caching Technology™                | Yes                  | Yes                 | Yes                 | Yes                 | Yes                 |
| Halogen Free                                  | Yes                  | Yes                 | Yes                 | Yes                 | Yes                 |
| RoHS Compliance                               | Yes                  | Yes                 | Yes                 | Yes                 | Yes                 |

<sup>1</sup> Extended warranty products available. Consult your distributor for details.



| Specifications                                | 1TB                 | 500GB               | 500GB               |
|---|---------------------|---------------------|---------------------|
| Capacity                                      | 1TB                 | 500GB               | 500GB               |
| Model Numbers                                 | ST1000LM048         | ST500LM034          | ST500LM030          |
| Bytes per Sector (logical/physical)           | 512/4096            | 512/4096            | 512/1/4096          |
| <b>Performance</b>                            |                     |                     |                     |
| Interface                                     | SATA 6Gb/s          | SATA 6Gb/s          | SATA 6Gb/s          |
| Data Transfer Rate (MB/s)                     | Up to 140           | Up to 160           | Up to 140           |
| Cache (MB)                                    | 128                 | 128                 | 128                 |
| Spindle Speed (RPM)                           | 5400                | 7200                | 5400                |
| Recording Technology                          | SMR                 | SMR                 | SMR                 |
| <b>Reliability/Data Integrity</b>             |                     |                     |                     |
| Load/Unload Cycles                            | 600,000             | 600,000             | 600,000             |
| Head-Rest Method                              | QuietStep Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load |
| Nonrecoverable Read Errors per Bits Read, Max | 1 per 10E14         | 1 per 10E14         | 1 per 10E14         |
| Limited Warranty (years) <sup>1</sup>         | 2                   | 5                   | 2                   |
| <b>Power Management</b>                       |                     |                     |                     |
| Startup Current (+5V, A)                      | 1.0                 | 1.0                 | 1.0                 |
| Read/Write Power, Average (W)                 | 1.6/1.7             | 1.9/1.7             | 1.6/1.7             |
| Idle Power, Average (W)                       | 0.45                | 0.7                 | 0.45                |
| <b>Environmental</b>                          |                     |                     |                     |
| Temperature, Operating (°C)                   | 0°C – 60°C          | 0°C – 60°C          | 0°C – 60°C          |
| Temperature, Nonoperating (°C)                | -40°C – 70°C        | -40°C – 70°C        | -40°C – 70°C        |
| Shock, Operating: 2ms (Gs)                    | 400                 | 400                 | 400                 |
| Shock, Nonoperating: 1ms (Gs)                 | 1000                | 1000                | 1000                |
| Acoustics, Idle, Typical (bels—sound power)   | 2.0                 | 2.2                 | 2.0                 |
| Acoustics, Seek, Typical (bels—sound power)   | 2.2                 | 2.4                 | 2.2                 |
| <b>Physical</b>                               |                     |                     |                     |
| Height (mm/in)                                | 7.0/0.276           | 7.0/0.276           | 7.0/0.276           |
| Width (mm/in)                                 | 69.85mm/2.75in      | 69.85mm/2.75in      | 69.85mm/2.75in      |
| Depth (mm/in)                                 | 100.35mm/3.951in    | 100.35mm/3.951in    | 100.35mm/3.951in    |
| Weight (g/lb, max)                            | 90g/0.198lb         | 85g/0.187lb         | 90g/0.198lb         |
| Carton Unit Quantity                          | 50                  | 50                  | 50                  |
| Cartons Per Pallet/Layer                      | 60/10               | 60/10               | 60/10               |
| <b>Special Features</b>                       |                     |                     |                     |
| Multi-Tier Caching Technology™                | Yes                 | Yes                 | Yes                 |
| Halogen Free                                  | Yes                 | Yes                 | Yes                 |
| RoHS Compliance                               | Yes                 | Yes                 | Yes                 |

<sup>1</sup> Extended warranty products available. Consult your distributor for details.