Spectra
Certified
Media

→

Spectra Certified Media starts with,
# Using only the
best media

Spectra® Certified Media offers the industry's most reliable tape solution that keeps your data secure, using only the highest quality media available.

Our solution surpasses all other manufactured tapes giving you peace of mind.

Spectra Certified Media benefits:

- Highest and most consistent media performance and capacity
- Faster tape drive write times due to fewer rewrite errors
- Extends the life of tape drives and media
- Saves valuable staff time initializing LTO-9 media
- Investment protection with a **Spectra Lifetime Guarantee***

Spectra Certified Media provides worry-free data protection with the highest quality LTO and IBM® TS11XX media and cleaning media.
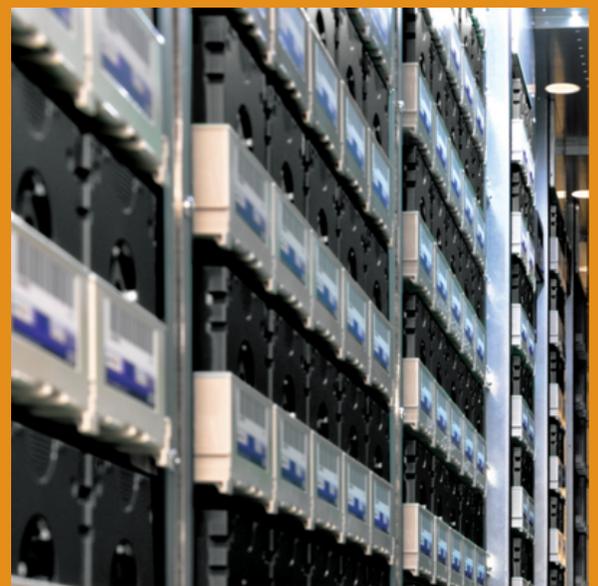
A Lifetime Guarantee

The Spectra Certified Media process transforms all tape media into the industry's most reliably functional and trouble-free tape media. No other media offers increased reliability, performance, time savings, and efficiency as Spectra Certified Media.

MLM + CARBIDECLEAN
CERTIFIED MEDIA
SPECTRA
LIFETIME GUARANTEE

Spectra not only stands behind our Certified Media, but we lead the industry with a Lifetime Guarantee. If you ever have a defective or failed Spectra Certified Media cartridge or cleaning cartridge, Spectra will replace it, no questions asked*.

7-Step Tape Media **Certification** Process

Spectra Logic has meticulously designed a seven-step process that all media must pass before it qualifies as **Spectra Certified Media.**

The rigorous certification process has been refined over multiple tape generations, millions of cartridges and several patents, ensuring superior media quality for efficient, pain-free backup and archive.

1 Environmental Acclimation
A 24-hour media acclimation period in an environmentally controlled lab.

2 Barcode Tagging
Install custom or certified media barcodes to save you time and avoid duplicates.

3 Initialize and Calibrate Media
LTO-9 media from the factory now requires pre-calibration before use. Spectra does it for you, saving up to 30 minutes per tape.

4 CarbideClean
Proprietary media cleaning process to remove harmful manufacturing process debris.

5 Read/Write Verification
Test each cartridge using an algorithm against pre-established metrics.

6 Write Metrics to Memory
Write all tested and verified metrics on each cartridge's Media Auxiliary Memory (MAM) RFID chip for superb media tracking, reporting and management.

7 Final Inspection
Verify that the media has passed all tests and qualifies as Spectra Certified Media.

Step 1:

Environmental Acclimation

LTO and IBM TS11XX media is acclimated in the Spectra media processing chamber for at least 24 hours.

During acclimation, temperature and absolute humidity are controlled to ensure that media will perform within all areas in the allowable environmental specification range. This is the ideal environment for all new media throughout the certification process.

Recommended Environment

Allowed Environment

Specific Humidity (g/kg)

Dry Bulb Temperature (°C)
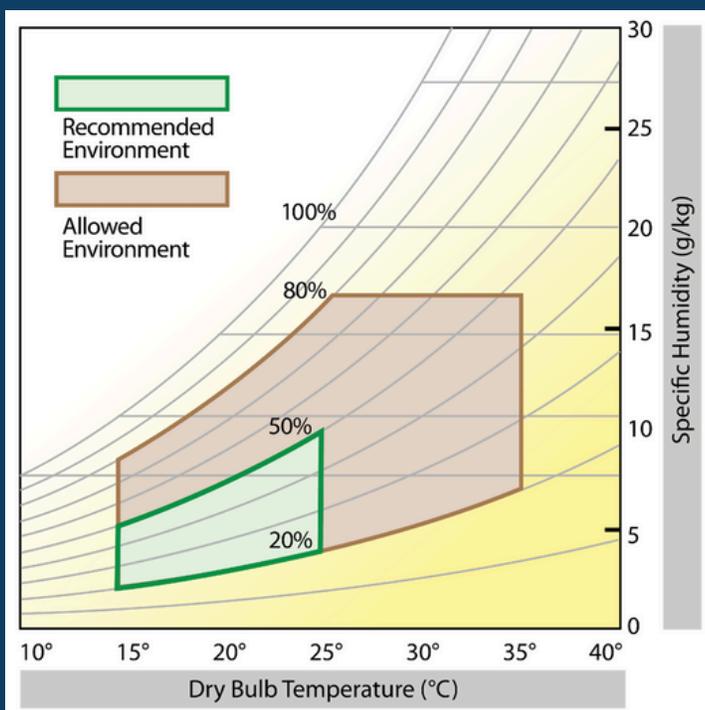
Step 2:
Barcode Tagging

Spectra installs custom barcodes or our certified media barcodes based on how you request the media. Pre-applied barcodes

- Ensures barcode labels are not duplicated
- Makes continuous media tracking very efficient when it arrives at your doorstep

Next, all media is loaded into TeraPack® magazines, a key component of our comprehensive solution for ease of handling and management. A TeraPack magazine holds 10 – LTO tapes or 9 – TS11XX tapes.

Smart Tracking, Proactive Replacements:

At Spectra Logic, media reliability is our priority. When a manufacturer recall affected over 18,000 LTO-9 tapes, our certified media process allowed us to track each tape's serial number and work directly with customers. We provided seamless replacements—matching barcodes for easy integration—saving customers time and money.

Step 3:
Initialize & Calibrate Media

With the introduction of LTO-9 media, a new calibration process is required to optimize each new cartridge before writing data to it. Calibration is necessary for greater precision due to the increased track numbers for higher capacity.

The benefits of Spectra initializing and calibrating media
- Saves your organization hundreds to thousands of hours, from 20 to 30 minutes per LTO-9 cartridge.
- Allows instant reading and writing when you receive your new media.
- Creates a referenced calibration, enabling intelligent tape drive alignment and data placement.

Spectra Logic patented calibration & initialization process saves you valuable time.

US Patent 11,830,528
Universal Tape
Cartridge
Characterization
Date: Nov 28, 2023

PATENTED
PATENTED
PATENTED
PATENTED

Step 4:

CarbideClean
Extends Tape & Drive Life

All new tape cartridges have manufacturing debris, which can slow performance and reduce capacity.

CarbideClean, the proprietary Spectra media cleaning process, removes debris from manufacturing to lengthen drive and media life, allowing your system to run at peak performance.

Tape Surface Before CarbideClean.

Microscopic Debris

Tape Surface After CarbideClean.
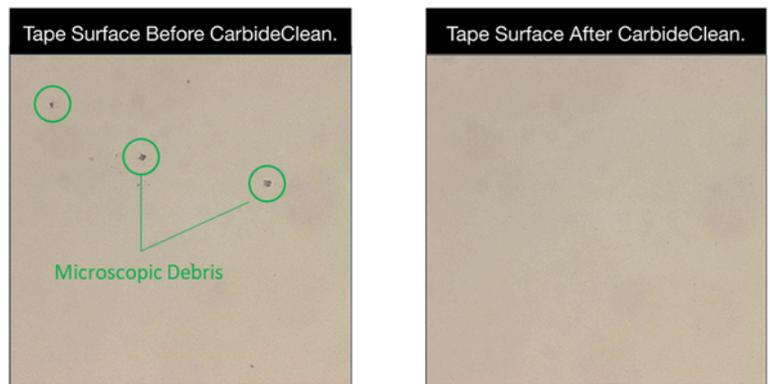
LTO tape magnified at 1:5000. CarbideClean removes debris, maximizing the potential that every bit is written and read.

The exclusive Spectra CarbideClean process removes manufacturing debris to:

- Maximize the potential that every data bit is written and read on the tape cartridge

- Prevent debris from contaminating the tape drive, which can reduce reliability, introduce read/write errors, reduce lifespan and increase storage workflow times

Step 5:
Read/Write Verification

Next, Spectra performs a full write pass followed by a full read verification pass the entire length of the tape. During the verification pass, multiple metrics (such as throughput, soft read and write errors, hard read and write errors, retries and capacity per wrap) are collected to ensure the tape meets Spectra Certified Media standards. If a tape fails, it is rejected and returned to the manufacturer along with the associated "lot" if multiple tapes are suspect. The verification pass also guarantees that no areas on the tape have higher retries or error rates.

The Spectra verification process is not just about ensuring standards, it's about enhancing performance.

No other media provider follows these processes, which is just one of the many reasons Spectra Certified Media stands out as the most reliable choice.
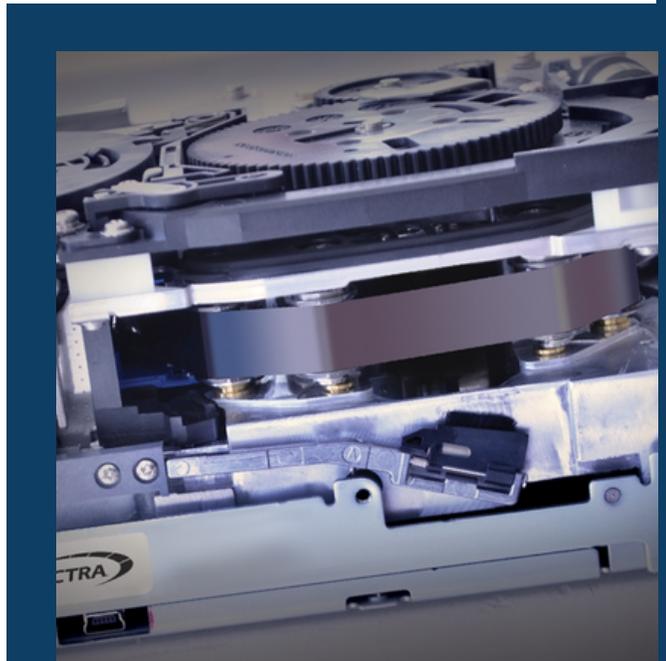
Step 6:

Write Metrics to Memory
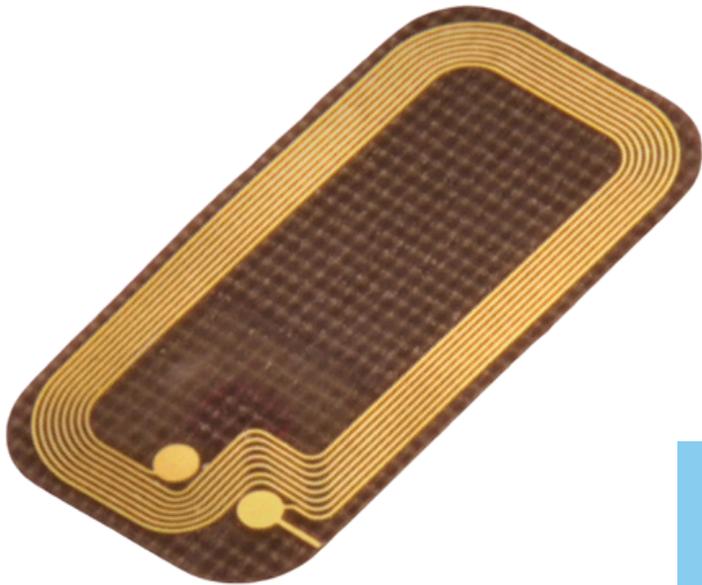
Each piece of tape media is equipped with a Media Auxiliary Memory (MAM) chip, which is embedded by the manufacturer. The MAM chip serves as a storage unit for small amounts of data and can transmit this information over RFID, making it a key component in data management.

Media Auxiliary Memory (MAM) chip

Spectra Logic rewrites this chip with a comprehensive set of 40+ data points about the tape cartridge. The Spectra library management software then uses this wealth of information for Media Lifecycle Management and proactive reporting.

Step 7:

Final
Inspection

Spectra performs a final inspection to ensure the media has successfully passed all tests and meets all Spectra Certified Media qualifications. Once this comprehensive process is complete, the media is promptly packaged, shipped to your site, and ready for immediate use, providing you with the necessary convenience.

Thanks to the Spectra Certified Media process, all LTO and TS11xx tape media are transformed into the industry's most trouble-free tape media. Spectra Certified Media stands out with its increased reliability, performance, time savings, and efficiency, offering you a product you can trust and rely on.

Lifetime Guarantee:
No Questions Asked

The Spectra media return policy is not just a policy – it's a promise. If you find a Spectra Certified Media cartridge defective, Spectra will replace it, no questions asked.
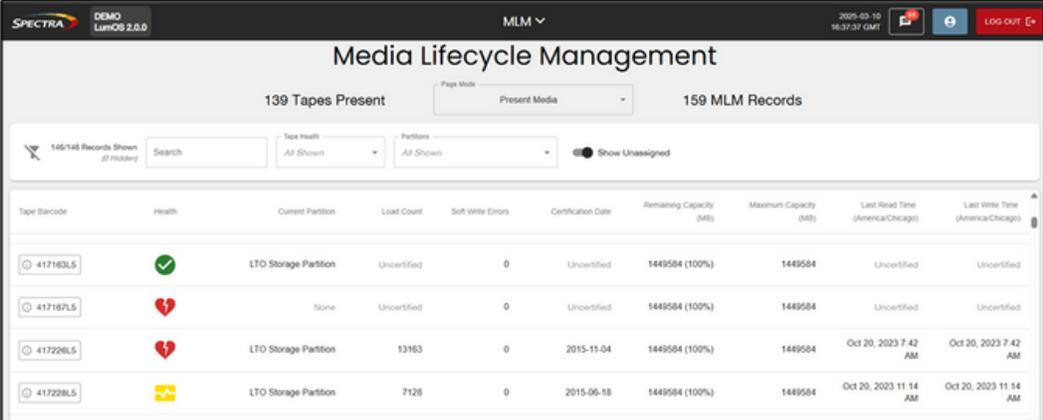
This lifetime guarantee is our commitment to your data protection.

Continuous
Proactive Tape Management

With Spectra CertifiedMedia and Spectra tape libraries, you will have access to our exclusive Media Lifecycle Management (MLM) feature.

- Monitors, tracks and reports on all aspects of tape media usage and health status
- Significantly reduces tape-related errors and unscheduled downtime
- Enhances the reliability of your backup and archive operations.

Greater **Reporting** with Media Lifecycle Management

When using Spectra Certified Media, the health of each tape cartridge is tracked for the duration of its life. If you buy tape media elsewhere, you risk receiving tapes that do not perform optimally, causing tape drives and media to fail.

Medial Lifecycle Management (MLM) helps you proactively manage tapes efficiently from start to end with continuous assessments on more than 40 metrics every time a tape is loaded, protecting your tapes and data.

MLM is included in all Spectra libraries at no additional cost.

MLM Tracking Statistics

- Tape Barcode
- Media Health
- Current Partition
- Load Count
- Soft Write Errors
- Certification Date
- Remaining Capacity
- Maximum Capacity
- Last Read Time
- Last Write Time
- Media Serial Number
- Media Type
- Load Count
- Cartridge Generation Type
- Cartridge Manufacturer
- Cartridge Manufacture Date
- Clean Count
- First Clean
- First Clean Drive SN
- First Clean Temperature
- First Clean Humidity
- Latest Clean
- Latest Clean Drive SN
- Physical Write Protection
- Encryption Type

- Encryption Moniker
- Write Compression Ratio
- Read Compression Ratio
- Remaining MAM Capacity
- Write Errors
- Read Errors
- Initial Write
- Most Recent Write
- Initial Read
- Most Recent Read
- Recently Assigned Barcodes
- Last PostScan
- Minimum Lifetime Temperature
- Maximum Lifetime Temperature
- Minimum Lifetime Humidity
- Maximum Lifetime Humidity
- Exported
- Mount Periods
- Last 10 Mount Device History
- Cleans remaining
- Export user
- Export time

Tape Library Media **Features**

Spectra takes a comprehensive approach to ensure tape media operates at peak performance. While it starts with Spectra Certified Media, Spectra provides additional tools and resources to maximize your media investment, optimize performance and streamline operations. These features and benefits include:

TS11xx TeraPack Magazine

Features	Benefits
Auto Drive Clean: Spectra libraries automatically clean your drives based on their needs and usage.	• Protect your data from media errors.
Data Integrity Verification: Tools scan tape to ensure that new media is ready to accept data and verify data integrity periodically or on demand.[1]	• Improve tape reliability • Deliver faster performance • Verify data integrity
TeraPack Magazine: Holds 10 - LTO or 9 - IBM TS11XX cartridges in a single magazine	• Improve media handling efficiency by 90% over handling individual tape cartridges • Increase data density, store more data in a smaller space

1. TFinity®, T950 and Spectra Cube libraries only. Requires use of Spectra Certified Media.

Spectra Certified Media for Peace of Mind

Spectra Certified Tape Media provides more than just the most reliable tape media on the market. You're getting peace of mind. The ROI benefits of using certified tape media go beyond data protection. You'll also enjoy a prolonged tape drive life, faster performance, reduced need for manual handling, and the convenience of pre-calibrated LTO-9 media.

Learn more about the benefits of Spectra Certified Media.

About Spectra Logic Corporation

Spectra Logic modernizes IT infrastructures to preserve, protect and defend data, whether on-premises, in a single cloud, across multiple clouds or in all locations at once. Our cost-effective solutions help organizations efficiently manage, migrate and store long-term data, from terabytes to exabytes, with features that make it ransomware resilient.

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* Spectra Certified Media coverage does not extend to tape media or cleaning media that has naturally worn out due to deterioration resulting from routine operations, standard wear and tear, or reaching the end of its functional life. Customers should follow recommended usage guidelines and replacement schedules to maintain optimal performance.

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