

LIGHTRAY™



LIGHTRAY LR3
SPOT REPAIRS

LIGHTRAY LRI
LATERAL INVERSION

LIGHTRAY LRM
MAINLINE SPOT REPAIRS

LIGHTRAY LRS
MAINLINE JUNCTION



DESIGNED, BUILT & SUPPORTED IN THE UNITED STATES OF AMERICA



LIGHTRAY LR3 SYSTEM

The **LightRay LR3** LED UV system is an advanced UV cast-in-place pipe technology, allowing complete operator control of the casting process. Our patent-pending, state-of-the-art technology can significantly reduce your costs and risks when compared to traditional thermo-setting or ambient-cast liners, creating new opportunities for plumbers and municipal contractors.

The LR3 is both a push and pull-in-place spot repair system, giving you the flexibility to perform both operations by only changing the proprietary cold LED repair packer. The LightRay non-VOC resin is pre-impregnated into the high-performance fiberglass liner and shipped ready to install for no-dig pipe infrastructure repairs. Once the install site is prepped, casting times in under 10 minutes can be achieved, eliminating the risk of premature or prolonged casting times due to temperature variations.


- Repairs pipe diameters of 3-inch to 12-inch, including transitions
- 8-, 10- and 12-inch diameter packers perform repairs up to 10-feet
- The 100-foot hose couples with 5-, 10-, or 20-foot packers to perform repairs
- Casting times of 10 minutes or less
- Liner materials arrive ready to install
- Easily navigates 45- and 90-degree bends
- Training included and 24/7 support



**PRO
TIP**

HAVING MULTIPLE PACKERS ALLOWS THE USER TO PRE-LOAD THEM BEFORE JOBS, ENSURING THE REPAIR PROCESS GOES QUICKLY AND SMOOTHLY ON EACH JOBSITE.



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LIGHTRAY 2-INCH SYSTEM

The LightRay LED UV system is an advanced UV cast-in-place pipe technology, allowing complete operator control of the casting process. Our patent-pending, state-of-the-art technology can significantly reduce your costs and risks when compared to traditional thermo-setting or ambient-cast liners, creating new opportunities for plumbers and municipal contractors.

The LightRay non-VOC resin is pre-impregnated into the high-performance fiberglass liner and shipped ready to install for no-dig pipe infrastructure repairs. Once the install site is prepped, casting times in under 10 minutes can be achieved, eliminating the risk of premature or prolonged casting times due to temperature variations.

THE KIT INCLUDES:

- LightRay 2" control box and power pack
- LightRay 2" pneumatic accessories pack
- LightRay 2" packer in a 5 foot or 20 foot length with reel and 100 foot hose



FEATURES:

- No complex parts or computer regulated movement
- Repairs all types of 2" pipes
- **New for 2024!** - 3" bladder kit for 3" repairs
- The packer is incredibly flexible easily navigating bends and p-traps
- Casting times of 10 minutes or less
- All liner materials arrive ready to install and can be stored for up to 6 months
- All systems sold come with a 1-year limited warranty and training included
- Designed, built, and supported in the USA


**PRO
TIP**

THIS SYSTEM IS A SIMPLE UPSSELL FOR PLUMBERS AND DRAIN CLEANERS MAKING A HOUSE CALL. THE REPAIR IS PERFORMED IN MINUTES DURING THE SAME SERVICE CALL.

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- No complex parts or computer regulated movement
- Casts lateral lengths of 150 ft. up to 6.3 ft./min. in all types of pipes
- The 50-foot cast length light train incorporates cold LED lights for industry-leading cast times and does not rely on heat to cast the liner
- Our proprietary design allows the light train to be incredibly flexible, navigating multiple bends up to 90 degrees
- Liner material is available in 3-, 4-, and 6-inch diameters, including transitional flex
- All liners arrive ready to install and can be stored for up to 6 months
- All systems sold come with a 1-year limited warranty and training included



 [Learn More](#)

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LIGHTRAY LRI SYSTEM

The **LightRay LRI** system is the most advanced entrant to the UV cast inversion liner market. Our simple design allows complete operator control over the process and closely resembles traditional ambient cast inversion methods. The difference is that we can accomplish throughput up to 6.3 feet per minute of casting with the proprietary light train, which incorporates cold LED lights that requires no heat to cast the liner. The light train comes in a standard casting length of 50 feet, operates on a low-voltage DC platform, and is internally protected to accommodate bends in pipes up to 90 degrees.

No more carrying hazardous materials in your truck or trailer and no need to measure and mix on-site. LightRay liners arrive ready to install. This dramatically reduces the variability from mixing and preparing liners and eliminates the requirement for extra equipment in the field, allowing for rapid system deployment. The LRI system uses non-thermal UV casting resin that is temperature-stable and only activated by UV light coupled with high-strength flexible fiberglass coated liners. No matter the temperature in the working environment, the casting times are consistent every time.

**PRO
TIP**

ONCE THE CASTING PROCESS STARTS, THE Y-CONNECTOR CAN BE CAPPED OFF AND THE INVERSION DRUM DISCONNECTED TO RELOAD FOR THE NEXT JOB.



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LIGHTRAY LRS SYSTEM

The **LightRay LRS** is a revolutionary install system designed around the LMK Shorty T-Liner product. Instead of relying on ambient or heat assist methods, the Shorty UV liner is cast in place with the LRS using a proprietary UV activated resin paired with a fiberglass Shorty liner. The liner casts only when exposed to our proprietary cold LED light launcher and light train which are required to cast the liner. Our simple system bolts onto an existing LMK ambient system and allows the operator complete control over the casting process, very closely resembling the procedure for installing a standard Shorty. The system does not create excess heat and a Shorty UV liner can be cast in as quickly as 10 minutes.


Shorty UV liners arrive fully assembled and ready for field impregnation. This greatly reduces the variability from preparing liners and also eliminates the requirement for extra equipment in the field allowing for rapid deployment of the system. The LRS system uses non-thermal UV casting resin that is temperature stable and only activated by UV light reducing the risk of the liner cooking prematurely. The liners are customer configurable Shorty UV liners that arrive complete with Insignia™ O-rings and Hydro-hats. No matter the temperature in the working environment, the casting times are consistent every time.

- No complex parts or computer regulated movement
- The UV cast Shorty is available in mainline diameters of 8-, 10- and 12-inches with lateral diameters of 4- and 6-inches
- **Insignia™** hydrophilic O-rings included with every liner for leak free installations and the translucent liner verifies no leakage once cast in place
- The control box, reel and power supply are cross compatible with the LRM system
- Our proprietary UV launcher and light train casts the full mainline wrap and up to 10 feet up the lateral
- All liners arrive ready for field impregnation and installation
- All systems sold come with a 1-year limited warranty and training included



THE LAUNCHERS COME IN PAIRS TO KEEP THE TEAM MOVING DURING MULTIPLE INSTALLATIONS. LOAD THE SECOND LAUNCHER DURING THE CASTING PROCESS FOR THE FIRST LINER AND REPEAT THE PROCESS AS THE CREW MOVES FROM HOUSE TO HOUSE.




 Learn More

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LIGHTRAY LRM SYSTEM

The **LightRay LRM** system is your go to for mainline spot repair. The LRM works like a traditional spot repair system but with the added benefit of LightRay technology. The LRM uses the same large diameter LR3 packer, with a proprietary adapter, and is flexible enough to fit through a manhole into the mainline for repair lengths up to 9 feet. The LRM allows the operator complete control over the casting process with no stress over resin kicking off before positioning the packer is complete. The system does not create excess heat and can cast the liner in place in as little as 15 minutes depending on diameter.

LightRay takes away the anxiety of lining with its rapid deployment capabilities. No more carrying hazardous materials in your truck or trailer and no need to measure and mix on-site. LightRay liners arrive ready to install without any need for refrigeration. This dramatically reduces the variability from mixing resin and preparing liners in the field also eliminating the requirement for extra equipment. All LightRay technology uses flexible fiberglass liner coupled with a non-thermal UV casting resin that only activates when exposed to the specific light wavelength of the LightRay packer. LightRay doesn't care about the temperature in the working environment or the presence of water, only providing you with a quick and consistent repair, every time.

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- No complex parts or computer regulated movement
 - The control box, reel and power supply are cross compatible with the LRS system
 - The LRM can perform spot repairs up to 9 feet long in mainline pipes of 8, 10 and 12 inches
 - Our proprietary packer is designed to also work with the LR3 system
 - All liners arrive ready to install and can be stored for up to 6 months
 - All systems sold come with a 1-year limited warranty and training included

DESIGNED, BUILT, AND SUPPORTED IN THE USA

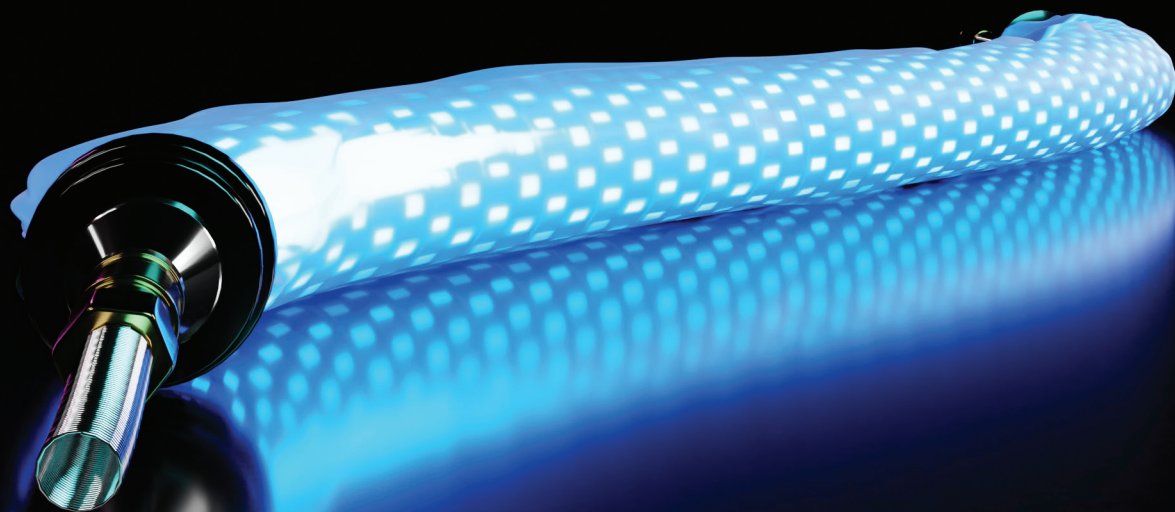
STANDARD LR3 PACKERS WITH SILICONE EXPANSION BLADDERS

The LightRay LR3 packer is the most advanced cold LED casting packer on the market today. Available in 5', 10', and 20' repair lengths, the packer is designed to use minimal, low-voltage DC power for delivering maximum lengths of casting productivity. The specialized silicone bladder material is reinforced for multiple uses and durability, allowing maximum light exposure to our UV resin liners. In addition, we supply a disposable outer foil, which helps prolong the life of the bladder and reduces the time needed to clean the packer.

The leading-edge navigation spring assists in going around bends and can house a radiofrequency device for easy location and tracking below ground or behind walls and floors. In addition, the spring is removable, allowing the hook to be exposed for all pull-in-place applications. The rear connector comes equipped with a securing harness to allow safe retrieval without damaging the air/power hose connection when the packer is being pulled back from an installation.

FEATURES:

- 2-inch to 12-inch diameter LightRay LED cast-in-place packer
- Cold cast LED UV lights
- UV light energy requirement
- Reinforced, multiple-sized silicone bladders
- Leading-edge removable spring guide
- Cutting-edge hook for pull-in-place
- Retrieval harness for pulling back on the packer without straining the air/power hose connector assembly
- Specialized air/power connector for easier reconnection on other sized packers



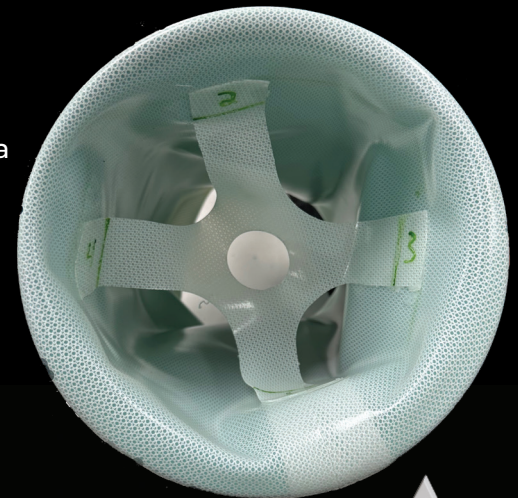
LIGHTRAY LARGE DIAMETER PACKERS FOR SPECIAL APPLICATIONS

The versatility of the LightRay product line has now expanded to 8, 9, 10, and 12-inch repairs with our new specialty packers. These packers for specialty applications are designed for use with the LR3 system in addition to the LRS and LRM systems with a special adapter. These packers are designed for straight applications but can easily be maneuvered through a manhole or other access point for the repair. What makes these special is the proprietary centering device that holds the light train in the middle of the packer while the repair is being performed for uniform UV light coverage.

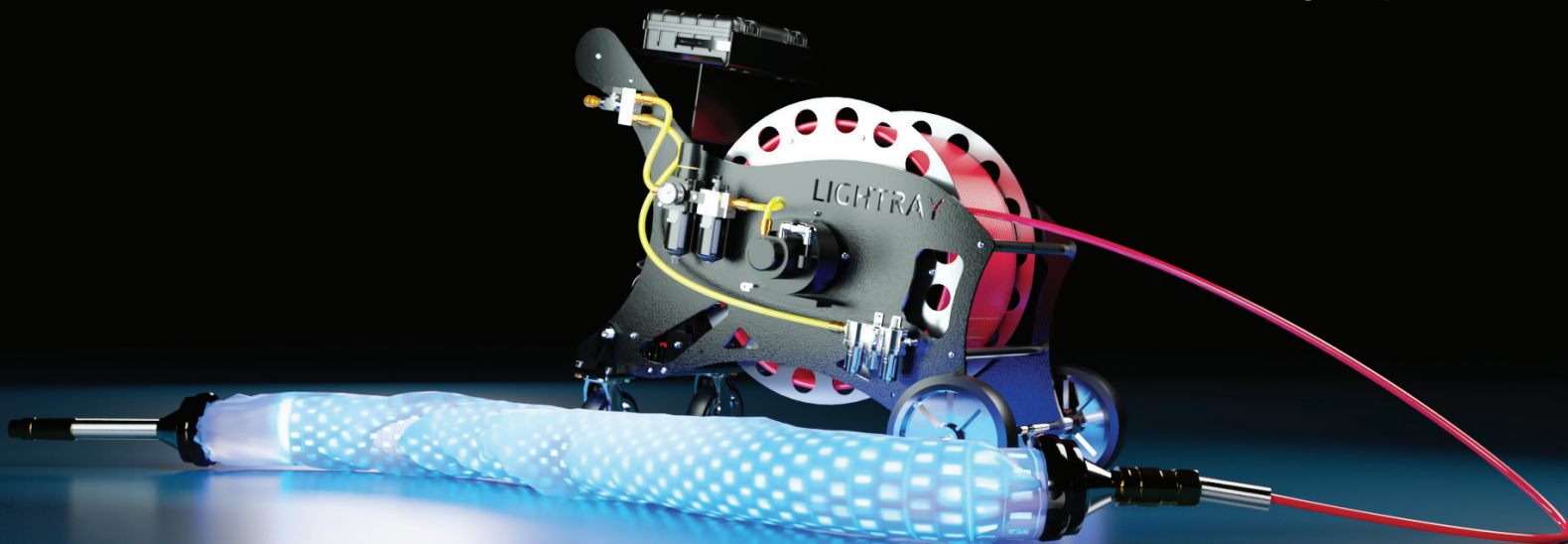
The LightRay special application packers are designed to be pulled into place in all applications from mainline to specialty commercial repairs. Once the installation site is prepped, casting times in under 20 minutes can be achieved, eliminating the risk of premature or prolonged casting times due to temperature variations.

FEATURES:

- Repairs pipe diameters of 8, 9, 10 and 12 inches
- The 9" packer is specially designed for the Pittsburgh 9
- Cross-compatible with the LRS and LRM systems with a special adapter
- Specially designed light train centering device integrated into the bladder
- Performs repairs up to 9 feet in specialty applications
- Casting times of 20 minutes or less
- Liner materials arrive ready to install
- Easily navigates manholes or other access points for pull-in-place repairs



**CENTERING
DEVICE**



UNDERGROUND SOLUTIONS
YOU CAN RELY ON,
BRANDS YOU CAN TRUST



THE NEXT EVOLUTION OF THE INDUSTRY-STANDARD

LIGHTRAY TURN-KEY UV TRAILER

The **LightRay Turn-Key UV Trailer** will help simplify your business by giving you a portable work space and the capability to transport all the equipment needed to perform LightRay repairs. The trailer comes complete with a LightRay tool and safety package in addition to the workstation, ample storage and tie downs for a LR3, LRI and Inverter. Not to mention, you can also transport your Picote cleaning system and RIDGID camera.


If LightRay takes away the anxiety of lining, then the new LightRay trailer takes away the anxiety of finding a workspace on the job site. Our specialized LightRay trailers are equipped with a workstation and ample storage space for working with LightRay products before installation. The trailers are air conditioned for crew comfort and the rear features UV blocking curtains to ensure the environment is perfect for loading LR3 packers or an inverter with LRI materials.


STANDARD FEATURES


- Air conditioned trailer with work station, cabinets and shelving
- 8,000W gasoline generator
- LightRay trailer tools package
- LightRay trailer safety package
- UV blocking rear curtains

OPTIONAL FEATURES

- LightRay 2" system
- LightRay LR3 system and packers
- LightRay LRI system
- 30" inverter
- 60 CFM diesel compressor
- Picote pipe cleaning tools
- RIDGID camera system

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UNDERGROUND SOLUTIONS
YOU CAN RELY ON,
BRANDS YOU CAN TRUST



DRAIN CLEANING FOR REAL PROFITS *WHILE YOUR TECH IS ONSITE*

WHAT'S THE OPPORTUNITY? 45% OF NORTH AMERICAN PIPES ARE AT OR PAST STRUCTURAL INTEGRITY

SMALL MOM & POP

20
DRAIN CLEANING
CALLS PER MONTH
X 20% CLOSE RATE
X \$2,500 PER SPOT REPAIR
=
\$10,000
IN ONE MONTH
\$30,000
IN THREE MONTHS
\$60,000
IN SIX MONTHS

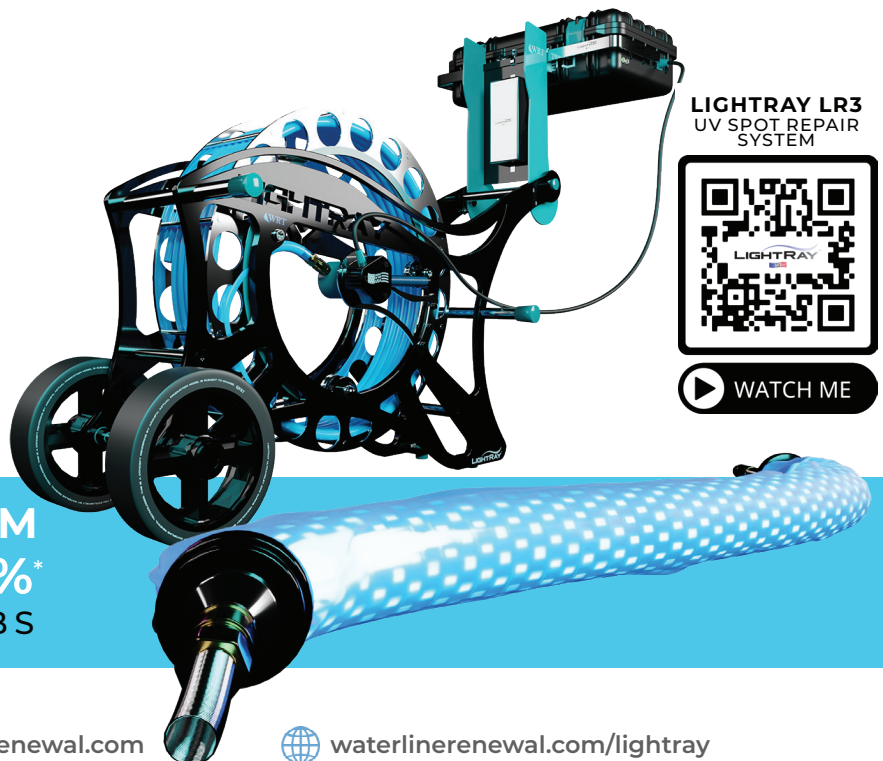
MEDIUM BUSINESS

50
DRAIN CLEANING
CALLS PER MONTH
X 20% CLOSE RATE
X \$2,500 PER SPOT REPAIR
=
\$25,000
IN ONE MONTH
\$75,000
IN THREE MONTHS
\$150,000
IN SIX MONTHS

LARGE CORPORATION

100
DRAIN CLEANING
CALLS PER MONTH
X 20% CLOSE RATE
X \$2,500 PER SPOT REPAIR
=
\$50,000
IN ONE MONTH
\$150,000
IN THREE MONTHS
\$300,000
IN SIX MONTHS

MONTHLY PAYMENTS ARE LESS
THAN THE PROFIT
FROM ONE INSTALL PER MONTH



LIGHTRAY LR3
UV SPOT REPAIR
SYSTEM



WATCH ME

LIGHTRAY LR3 SYSTEM
GROSS PROFIT OF 78%*
PAYS ITSELF OFF IN 15 JOBS

* Average Gross Profits from LightRay LR3 Contractors across the USA



CORPORATE OVERVIEW

Waterline Renewal Technologies is a leading provider of engineered technologies used in the trenchless rehabilitation of wastewater/stormwater infrastructure for municipal, commercial/industrial, and residential applications, offering a unique product and service portfolio through its brands APM, LMK Technologies, Perma-Liner Industries, LightRay and Pipe Lining Supply.

We provide trenchless rehabilitation of degraded infrastructure through differentiated products, technologies, and services to prevent inflow and infiltration of sewer systems. The brands' experience in designing, patenting, and manufacturing trenchless technology continues to rise, while offering cost-effective product solutions for rehabilitating existing sewer systems without excavation.

With a combined eighty-five years of global industry experience through its core brands, we continue to transform the water industry through intentional platform development, design, and execution, while being one of the most comprehensive sources of education and information in the industry.

Our pioneering approach to trenchless rehabilitation is changing how municipal, commercial/industrial, and residential sectors repair their water and wastewater infrastructure. Our goal is nothing short of completely revolutionizing the water industry to get water to where it is needed, when it is required, and to get the right quality of water to satisfy the specific demand.



MARKETS SERVED



MUNICIPALITY



COMMERCIAL/INDUSTRIAL



RESIDENTIAL



Waterline Renewal Technologies™