BlueTech

Safe Antimicrobial LED Lighting

Mission Statement:
Developing Safe and Affordable Bacteria Busting LED Technology Keeping EMS and Firefighters Safe One Day At A Time
Turn On The Blue….Be Safe

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MRSA Loves Firefighters, EMS Workers and Firehouses!

- This is a huge problem for EMS Workers and Firefighters.
- Today there are a total of 52,500 total stations. 29,700 Fire Departments. 70% do some form of EMS.
- 4,500 Departments employ 350,000 career firefighters / paramedics.
- Remainder 800,000 are volunteer or P/T
- Safe Bacteria Busting LED Blue Light. An Affordable Way To Keep Our EMS People SAFE

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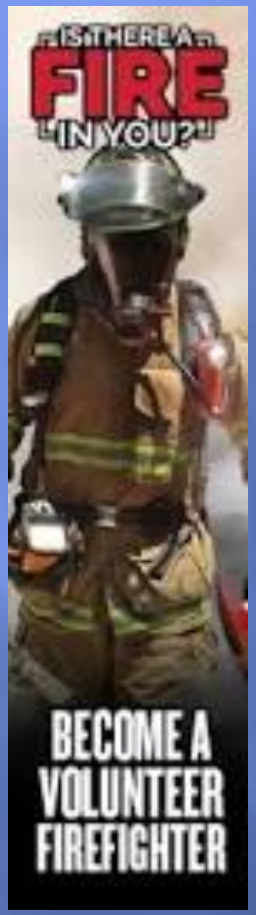
3 Advantages That Will Help Your Recruiting Efforts



Fire Chiefs have been telling us that recruiting is becoming tougher every year.

- 1. Turning on the Blue will add another disinfecting solution to the mix and help keep your workers safe.
- 2. More women in this field. Keeping the area clean and free of bacteria will help with fears from pregnant workers getting sick.
- 3. Workmen's Compensation Issues. Helps keeps personnel safe and on the job.

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SAFE Bacteria Busting LED Lighting Technology

Stops MRSA, Salmonella, E. coli,
C. diff. And MORE In Their Tracks

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MRSA
Is Everywhere….

Believe it or not MRSA was found on the brake pedal of a firetruck and ambulance. One test found it on the steering wheel, door handles, seat cushions and seat belts.

Two of our 4” Bacteria killing lights will help keep the cab clean and you safe while you are waiting for the next call. Easy to install and affordable. Turn On The BLUE Be Safe.

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MRSA Loves The Patient Compartment Turn On The Blue

MRSA hides every where in the patient compartment. Test have found it on the oxygen tanks, gurney, door handles, all surface areas, floor, IV straps and more.

Add 3-4 of our 7” 28W round bacterial killing lights to your cleaning arsenal. A full 112 watts of killing power.

Our Lights are safe and affordable and last 50,000 hours.

Turn On The Blue and be safe

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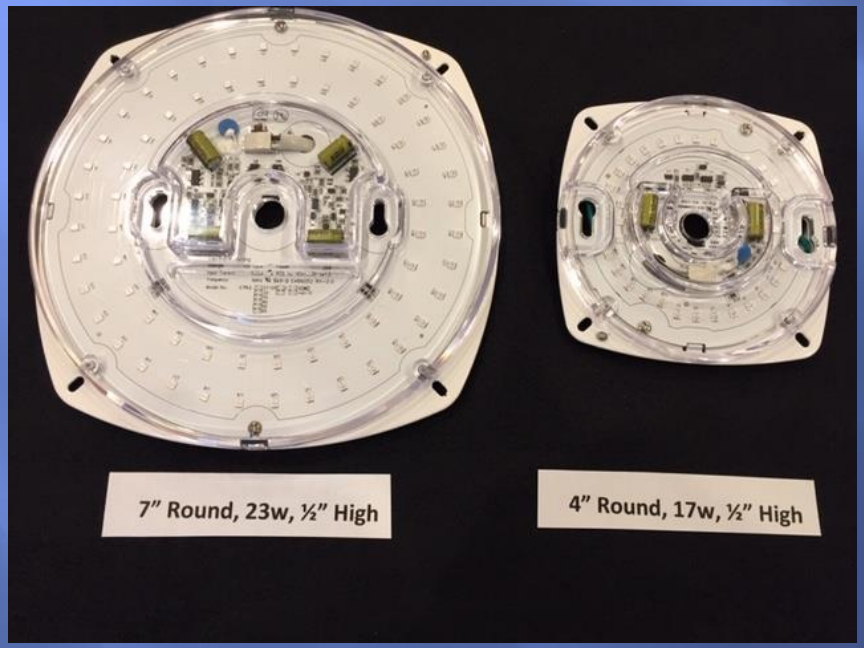
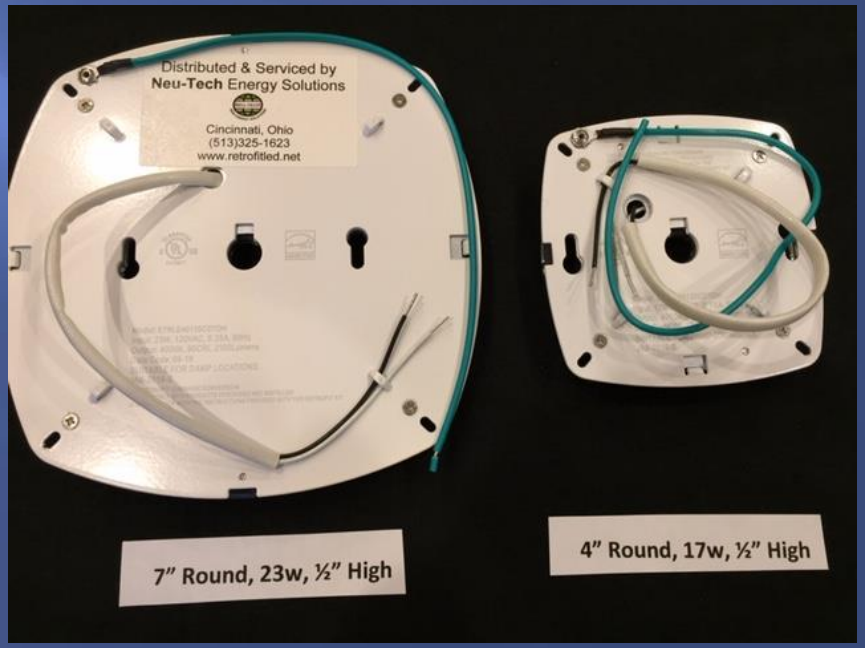
Easy To Install

120V AC LAND LINE OR INVERTER

WILL NOT INTERFERE WITH HAND RAILS ONLY 1/2” HIGH





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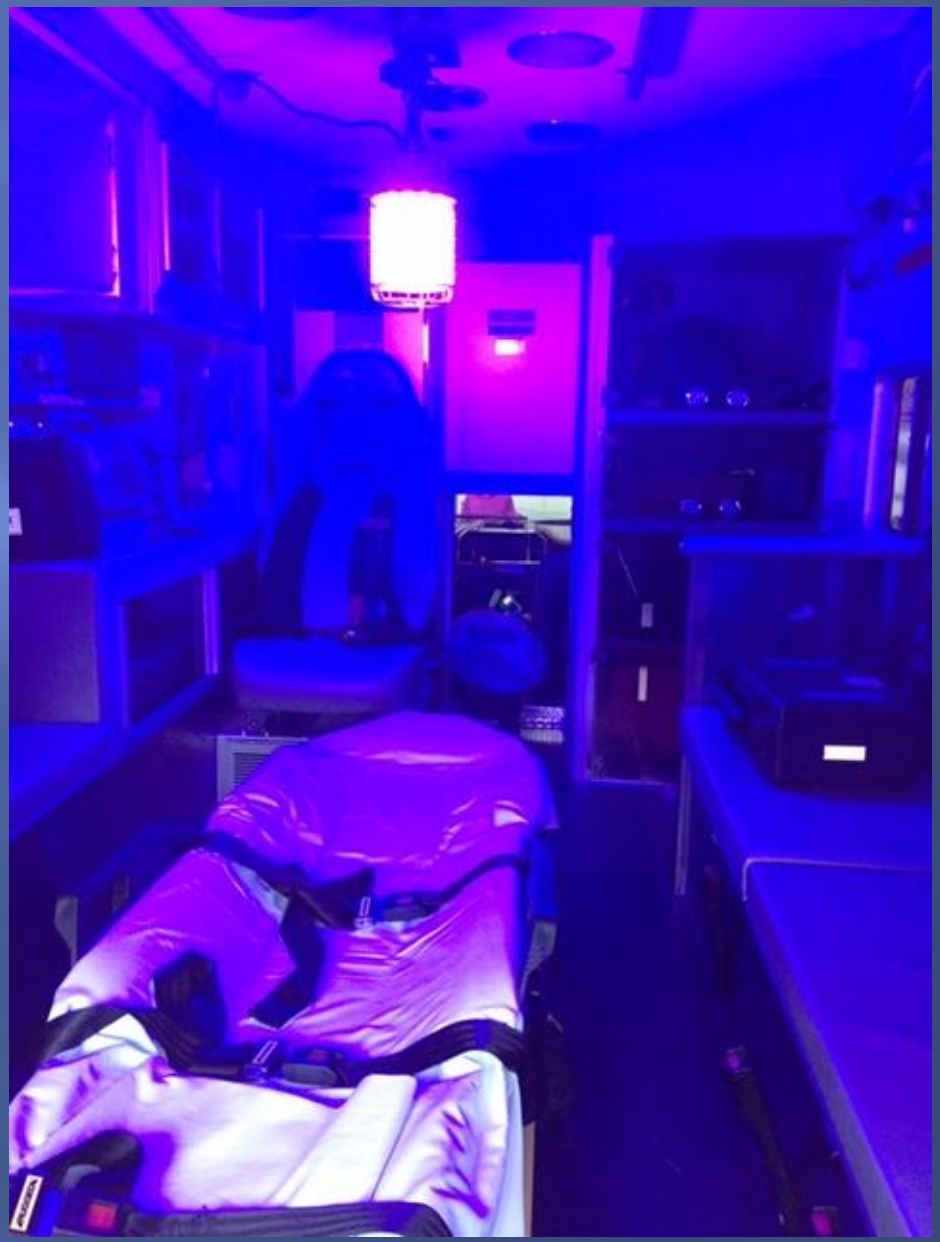
Portable Bacteria Busting Light 120W Turn On The Blue

Hang this 120W of Bacteria Busting Blue light on a IV strap or pole on the ceiling and let it clean the patient compartment. Easy to install. Removes in seconds for fast exit.

Affordable so it fits into the smallest fire departments budget.

It even comes with a Tri Pod stand so you can use it in your decontamination rooms, wash room, kitchen, equipment room and more. Turn on the Blue and be SAFE



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Study After Study Has Found That Traditional Cleaning Methods For EMS Vehicles Are Not Doing The Job

EMS passengers sometimes harbor blood borne and airborne pathogens that can be spread to equipment, crew members, and surfaces within the vehicle. EMS vehicles must maintain a superior cleaning program that ensures passengers and crew members are not infected from previous passengers

Researchers tested nine oxygen tanks carried by three ambulances based at an emergency medical services (EMS) station in Alabama. They found MRSA, or methicillin-resistant Staphylococcus aureus, on all nine tanks

- ***Boost Traditional EMS Cleaning Methods Add Affordable LED Bacteria Busting Blue Lights To Your Cleaning Arsenal***

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Research Has Proven Advanced LED Blue Lighting Kills A Wide Variety Of Bacteria and Viruses

- ***Medical Studies On Blue Bacteria Disinfecting Lights "It has been found that blue light can mediate a broad-spectrum antimicrobial effect…the wavelength range of 402–420 nm has been reported to be the most effective range of spectrum."***

- ***Bacteria Killing Blue light is affordable, easy to use, and achieves a high level of disinfection in a short period of time and can be used safely with or without passengers or crew in the area.***

- ***The articles in an issue of Photomedicine and Laser Surgery provide evidence that "blue light in the range of 405-470 nm wavelength is bactericidal and has the potential to help stem the ongoing pandemic of MRSA and other bacterial infections." In this study it has been found that an average of 90.4% of both US-300 and (community acquired_ and IS-853 (hospital acquired) strains of MRSA were killed within minutes of just simple blue light. This should be on national news.***

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Professor Enwemeka is currently a full professor in the College of Health and Human Services at San Diego State University

- BlueTech LED is proud to be working with one of the worlds most renowned researchers of Photobiomodulation. Dr. Chukuka Enwemeka. Professor Enwemeka was listed among *Who Is Who in Science and Engineering* in recognition of his pioneering work, which demonstrated for the first time that red and near-infrared light emitted by lasers and monochromatic LEDs promote collagen polymerization and alignment. In other groundbreaking research work, Professor Enwemeka and his team pioneered the use of certain wavelengths of blue LED to kill the deadly Methicillin resistant staphylococcus aureus (MRSA). He has authored more than 100 original research papers, monographs, a book as well as book chapters, and has secured millions of dollars in grant funding.

Places Where Bacteria Resides In Your Firehouse

FIREHOUSE KITCHENS

DECONTAMINATION ROOMS

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Affordable Blue Bacteria Killing Lights Work While Waiting For The Next Call

ELECTRONICS, GURNEY, FLOOR, DOOR HANDLES AND MORE

ALL OVER THE OXYGEN TANKS

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MRSA You Name It They Found It There…

SHOWERS AND WASH ROOMS

EQUIPMENT ROOMS

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SAFE LED Lighting NOT UV

LAUNDRY ROOMS

WORKOUT ROOMS

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Testing

- **Ohio Testing:**
  50.6% of all agencies tested across Ohio had an ambulance contaminated with MRSA3
  4.6% of EMS workers tested in Ohio were colonized with MRSA, which is higher than the rate of the colonization of the general public but on par with what was reported for other healthcare settings.3

Alabama Testing

- *Researchers tested nine oxygen tanks carried by three ambulances based at an emergency medical services (EMS) station in Alabama. They found MRSA, or methicillin-resistant Staphylococcus aureus, on all nine tanks. They also swabbed oxygen tanks in a storage area, finding MRSA on 96 percent of the stored cylinders.*
- ***TURN ON THE BLUE AND BE SAFE.***

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Research

- **Study On In Vitro Bactericidal effects of 405nm and 470nm blue light**

- The 405-nm light produced a dose dependent bactericidal effect on Pseudomonas aeruginosa and Staphylococcus aureus ($p < .05$), achieving as much as 95.1% and nearly 90% kill rate for each, respectively. The 470-nm light effectively killed Pseudomonas aeruginosa at all dose levels

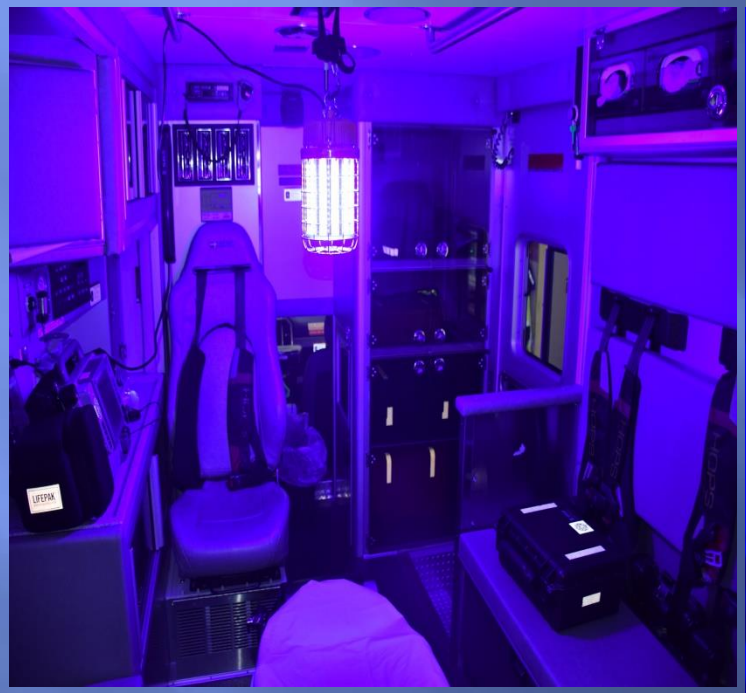
Research

- **<u>Study Regarding MRSA and 405NM Blue Light</u>**
- ***Objective:*** The purpose of this study was to investigate the effect of wavelength and methicillin-resistant *Staphylococcus aureus* (MRSA) density on the bactericidal effect of 405 and 470 nm light. ***Background data:*** It is recognized that 405 and 470 nm light-emitting diode (LED) light kill MRSA in standard 5×10^6 colony-forming units (CFU)/mL cultures

Where MRSA Thrives

- Did You Know?
- A recent study from Children's Hospital Los Angeles suggests MRSA can survive on some nonporous surfaces up to eight weeks following contamination — and skin transmission takes only three seconds. In addition, the presence of organic matter generally increases the survival of pathogenic bacteria fomites.
- Keep the lights on kills when your sleeping.
- The International Association of Fire Fighters has stated that it considers MRSA to be a serious threat to emergency healthcare responders

Proven Safe Technology



Inside Ambulance

Work Out Room

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Medical Facilities

OPERATING ROOM

PATIENT ROOM

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UV vs LED

UV LIGHT PACKAGE

Unit needs to be locked down. No one can look inside, danger to your eyes, UV light degraded materials. 9000 lifespan

SAFE LED LIGHT PACKAGE

LED Light is safe for humans and animals. Compartment can be open, can work inside with blue and white light on. Will not harm eyes. 50,000 hours lifespan

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LED vs UV Degradation Issues

- Research
- Storage of flexible endoscopes under germicidal ultraviolet (UVC) light has been associated with degradation of device material leading to failure and increased risk to patients. Our Blue non UV LED germicidal light presents a possible alternative, potentially providing effective bacterial inactivation without material damage. UV life is 9000 hours. Our LED is 50,000 hours and carry a 5 year warranty.

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Bacteria Killing Blue LED Lights For All Areas

PORTABLE 120W BACTERIA BUSTER FOR LARGE AREAS

ROUND 4” AND 7” LIGHTS FOR PATIENT COMPARTMENT AND CAB

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Lifespan and Warranty

UV LAMPS

- 9000 Hour Lifespan
- One Year Warranty
- Not recommend for personnel to be in vehicle
- Degrades Materials
- 120V AC Shore Lihe

LED BLUE LIGHT

- 50,000 Hour Lifespan
- 5 Year Warranty
- Safe for personnel to go in and out of vehicle when lights are on.
- Does not degrade materials
- 120V AC shore line

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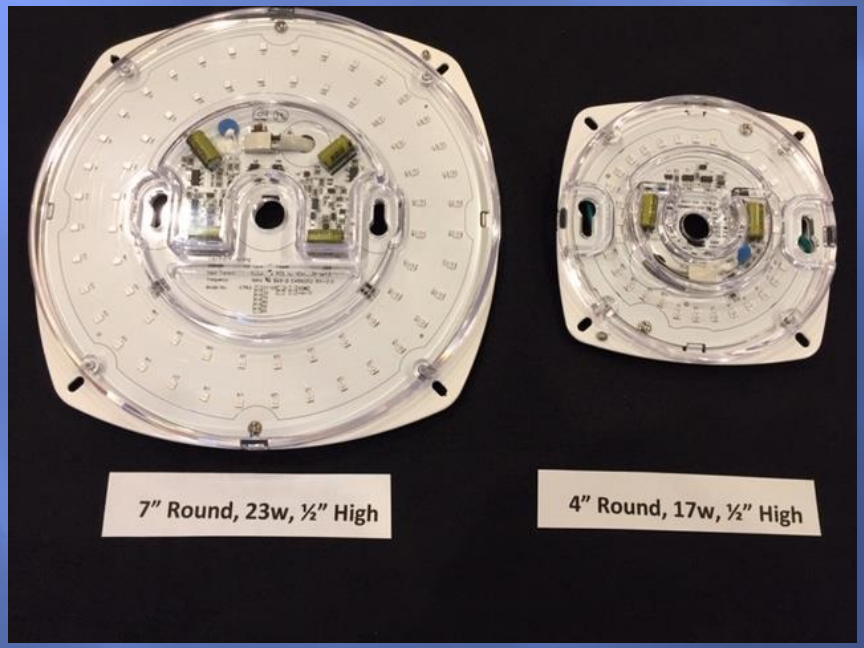
Blue Tech Bacteria Killing Light Packages

AMBULANCE PACKAGE BT-4-7-2-4-120V



- This package contains (4) of our 7” Round Bacteria Busters at 28W each for the patient compartment and (2) of our 4” Round Bacteria Busters at 17W for the Cab.

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Fire Truck Package

FRONT CAB ONLY 3 SEATS

- BT-2-4-120V
- This package contains (2) of our 4” Round Bacteria Busting LED Lights. 17W each.

DOUBLE CAB 6 SEATS

- BT-4-4-120
- This package contains (4) of our 4” Round Bacteria Busting LED Lights 17W each.

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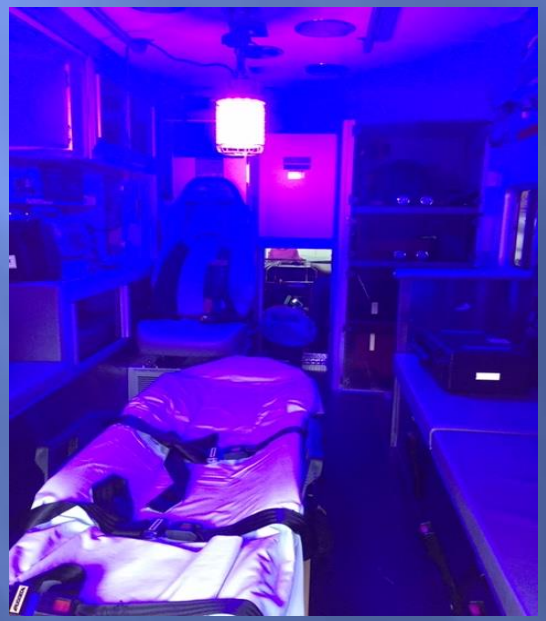
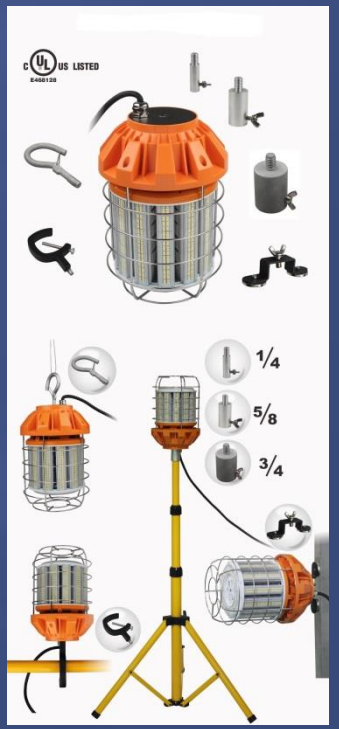
Powerful Portable Bacteria Busting Package

PORTABLE AMBULANCE, KITCHEN, LAUNDRY, DECON, SHOWER, GYM, KITCHEN, EQUIPMENT ROOM,



POWERFUL 120W

- BT-P-120W-120V
- Includes our most powerful bacteria busting unit 120W of bacteria killing light.



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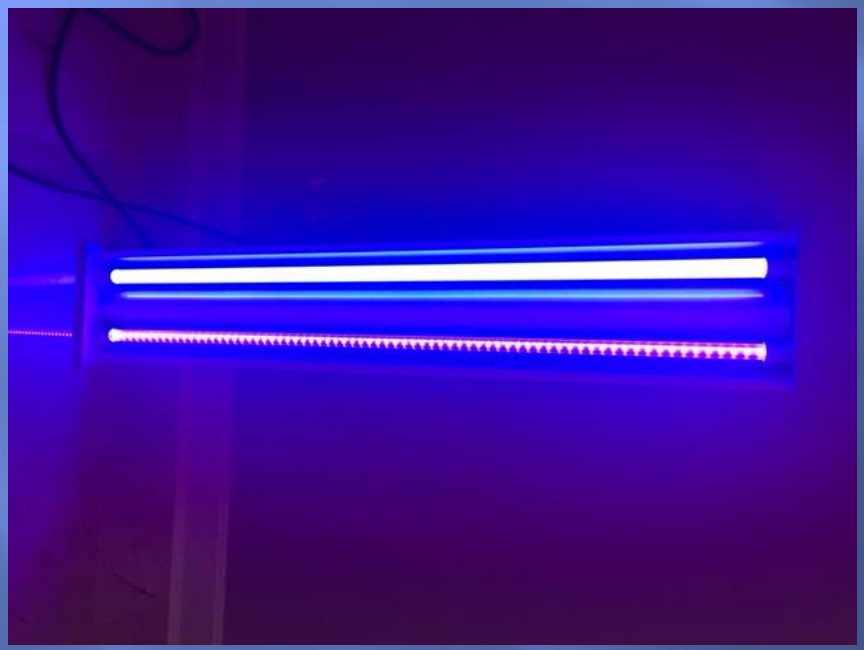
LED Bacteria Busting T8 Tubes

RETROFIT YOUR OLD
FLUORESCENT TUBES TO LED

BT-T8-48-120V



- Replace your old fluorescent tubes with our Bacteria Killing T8 LED tubes. Go all blue or mix in some white for area light and leave them on all the time.

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New LED Bacteria Killing Fixtures

BLUE BACTERIA BUSTING LED T8 TUBES

BT-2-48-120V

- New LED Fixture with (2) blue LED Bacteria Killing Tubes. Replaces or adds to existing area lighting.
- Wire so the go on when area lights are off or wire direct to go on with area lights. Safe for both applications.

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