

# CANDEX®

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## 2-COLOR MODES SELECTABLE

Ambient  
Warm White  
(3000K)



Disinfecting  
Violet-blue  
(UV-FREE)



## UV-FREE Antibacterial LED DOWNLIGHT 4" 9W M630217

### Recommended Use:

After 3-5 hours, ROS are produced around bacterial cell walls after a chemical reaction between endogenous porphyrins and the violet-blue light.

Turn on violet-blue light minimum 4 hours per day to effectively inactivate microbes in the air or on the surface (decontamination) 4-feet away from the light source or 2 consecutive day of 3 hours of operations.

### HOW IT WORKS?

Research has proven 400nm-420nm wavelength of visible light destroy bacteria, mold, and fungi cells. This light is called violet-blue light (VBL). Candex LED Technology use VBL to target specific molecules found in microbes. These microorganisms will absorb VBL leading to the production of cytotoxic reactive oxygen species (ROS) and causing cell wall damage and death.

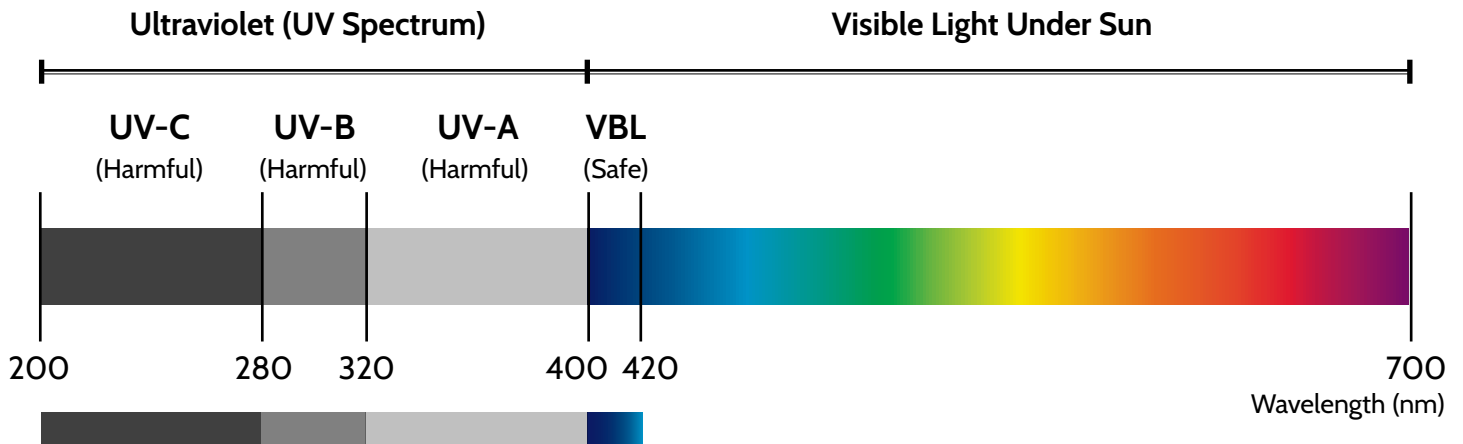
The endogenous photosensitizing chromospheres (photosensitizers), including porphyrins, flavins, and NADH, were identified in microbial cells. Studies also provided evidence

that VBL inactivation of microbes was attributed to ROS-induced cell membrane damage, inactivation of virulence factors, DNA-oxidation, genetic changes, etc. Endogenous porphyrins, present in bacterial cell walls, after absorbing VBL at 400 – 420nm wavelength, lead to highly cytotoxic ROS production that kills bacteria.

Testing has shown over 99% bacteria reduction in controlled laboratory for hard surfaces. Results may vary depending on amount of light reaching intended surfaces and the length of exposure time.

# WHAT IS VBL?

VBL (Violet-blue Light) is not UV-A, UV-B or UV-C  
UV-C is harmful, VBL is not  
VBL is a visible light, out of UV spectrum, ranges from 400nm ~ 420nm wavelength



## UV-C

Peak germicidal wavelength range; DNA damage; mutagenic

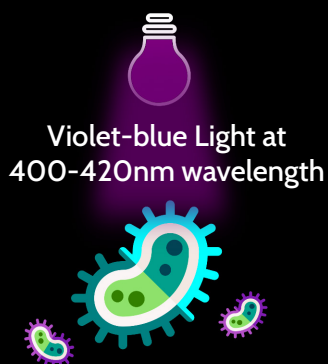
## UV-B & UV-A

Germicidal activity via protein damage; skin reddening; carcinogenic

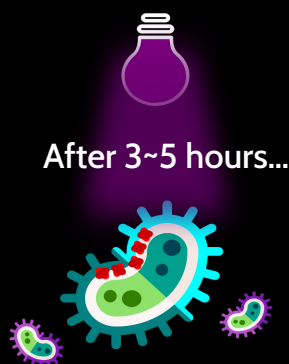
## VBL (Violet-blue Light)

Protect people from injuries and blindness caused by exposure to ultraviolet (UV), visible, and infrared/thermal electromagnetic radiation.

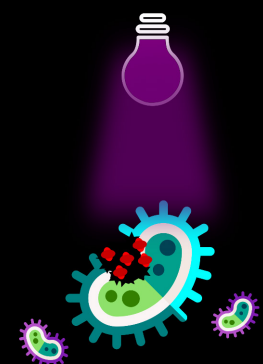
# HOW IT WORKS?



Endogenous porphyrins ordinarily present in bacterial cell walls.



Reactive oxygen species are produced around the cell wall after chemical reaction between endogenous porphyrins and the violet-blue light.



ROS (Reactive oxygen species) starts to tear the bacteria cell wall apart leading to the damages of bacterial DNA.



# ANTIBACTERIAL LED DOWNLIGHT 4" 9W

Disinfect & Illuminate

Introducing a new form of antibacterial technology with the ability to eliminate bacteria in your home, as well as providing general purpose light – Candex Antibacterial LED Series.

This multi-purpose lighting technology is available with Candex LED Downlights. Innovative and simple functionality – change light modes by turning **on-off-on**. With a longer pause, the downlight will reset and turn back on to general-purpose ambient light. Candex Antibacterial LED will destroy 99% of harmful bacteria in air and on surfaces. Plus, it is safe for you, your family, and your pets.

Candex Antibacterial LED Downlights are designed for retrofit applications. Included springs and standard base adapter makes it easy to install into recessed cans. Rated for wet locations and suitable for high ceilings up to 9FT tall.



Kitchen



Bathroom



Safe for Humans



Safe for Babies



Safe for Pets

MODEL	LIGHTING TYPE	DOWNLIGHT TYPE	WATTAGE	EQUIVALENCE	VOLTAGE	BRIGHTNESS	BASE
M630217	LED	Recessed Retrofit	9W	65W	120V, 60Hz	650 Lm	E26 Medium (Pigtail)
CRI	CCT	BEAM	DIMMABLE	DIMENSION	LOCATION	CERTIFICATION	LIFESPAN
≥80	3000K, Violet-blue	110°	No	5.50" x 2.50"	Wet - Rated	UL Listed	50,000 Hours

UPC: 818564025625

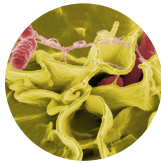


## HELP PREVENT



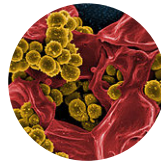
**E. coli**

Causes 265,000 illnesses per year in the US.



**Salmonella**

Causes 26,500 hospitalizations/420 deaths in the US every year.



**MRSA**

Causes 120,000 cases/20,000 deaths in the US in 2017.



**Staphylococcus Aureus**

Causes more than 119,000 people to suffer in the US in 2017.

### Antibacterial LED Downlight SAFETY FEATURES:

- UV-Free
- High quality antimicrobial LEDs
- 
- Continuous use at home without worry

Unlike UV lights, VBL is out of ultraviolet (UV) spectrum and therefore harmless continuous antimicrobial action. It has scientifically been proven to be safe from both humans and pets.

Candex Antibacterial Lights have passed the IEC 62471 tests performed by UL/ETL labs.

The IEC 62471 Standard is intended to address potential photobiological safety concerns from LEDs by providing a method for categorizing the potential risk to the eyes and skin.

Protect people from injuries and blindness caused by exposure to UV, visible, and infrared/thermal electromagnetic radiation.

**Antibacterial LED A19**



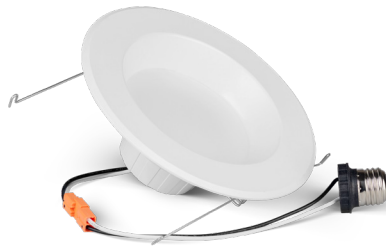
**Antibacterial LED BR30**



**Antibacterial LED 4”  
Downlight 9W**



**Antibacterial LED 6”  
Downlight 9W**



**Antibacterial LED 6”  
Downlight 12W**



**Antibacterial LED 8”  
Under Cabinet Light**



**Antibacterial LED 16”  
Under Cabinet Light**



**Antibacterial LED 24”  
Under Cabinet Light**

