# PRODUCT CATALOGUE

### light & medicine



UV-C flow germicidal lamps UV-C direct radiation germicidal lamps

LED NGP X-ray film viewers DiCO digital images viewing station FOTOVITA SAD phototherapy lamps









European Union European Regional Development Fund



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# **About ULTRAVIOL**

#### history, mission & vision

unders



-oun

Wiesław Pietras





Mateusz Purgał

Piotr Pietras

#### ULTRAVIOL is an experienced manufacturer and supplier of medical equipment. The company was founded in 1993. ULTRAVIOL's appliances work in every prestigious clinic and hospital both in Poland and worldwide.

ULTRAVIOL company meets the highest requirements set for manufacturers of medical equipment. The enterprise obtained the certificate of compliance for quality management system ISO 13485 issued by TÜV Nord Poland sp. z o.o.

Germicidal UV-C lamps manufactured by ULTRAVIOL have been used to fight the world COVID-19 pandemic by thousands of medical units, beauty salons, hospitals and healthcare facilities.



# Sales to over 70 countries





ARAB HEALTH 2019 - **DUBAI** 



SALMED 2018 - MTP POZNAŃ

#### About ULTRAVIOL



MEDICA 2019 - MESSE DÜSSELDORF



POLAGRA 2019 - MTP POZNAŃ

# **ASEPTOR Basic®**

99.9%

microorganisms

reduction

a new UV-C flow germicidal lamps for safe air disinfection

Our 25 years of experience in designing and manufacturing UV-C germicidal lamps and awareness of customers' needs enabled us to create the new quality in safe and effective air disinfection. ASEPTOR is the latest innovation by ULTRAVIOL company.

UV-C flow germicidal lamps provide one of the most efficient methods of safe air disinfection (reduction of viruses, bacteria, moulds and fungi). Bulbs built in ASEPTOR emit UV-C irradiation (wavelength - 253.7 nm) known for its germicidal effectiveness. UV-C radiation that can kill every microorganism does not come out from disinfection chamber. That is why UV-C germicidal flow lamps are commonly used in occupied rooms and areas where air purity determines the quality and safety of services and work.





# Germicidal effectiveness of UV-C radiation

Microorganisms exposed to UV-C radiation are quickly deactivated. This phenomenon is called germicidal effect. As a result of numerous scientific researches it is scientifically proven statement, that the strongest biocidal effect occurs in the range of 250-270 nm radiation wave. The germicidal mechanism is based on the absorption of UV-C radiation energy by nucleic acids and proteins. This process triggers chemical reactions in cell nucleus and results in microorganisms deactivation (all the viruses, including SARS-CoV-2, bacteria, molds, fungi and many others).

UV-C radiation is a shortwave one, therefore it is also high-energy radiation. The energy of the photons absorbed by the nucleic acids causes disruption of DNA molecular bonds and creates pyrimidine dimers. UV-C radiation inactivates DNA and RNA of microorganisms.

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150 m<sup>3</sup>

disinfected

cubature

9000 h

useful lifetime

of the bulbs

< 30 dB

fan noise

level

#### How does the single purpose UV-C flow germicidal lamp ASEPTOR Basic work?

**1.** Contaminated air is drawn by a fan – through a filter catching the dust and other contaminations into the disinfection chamber.

The UV-C radiation intensity and the time during which the air remains in the disinfection chamber are selected so that the air blown out from the lamp is practically free of microorganisms.

- The forced flow of the air results in its smooth circulation and causes disinfection of the air in the whole room. This is a safe way to get rid of viruses
- whole room. This is a safe way to get rid of viruses, bacteria, molds and fungi from the air.

### The original technical solutions applied in ASEPTOR are patented



ASEPTOR effectiveness research by Prof. Waclaw Dabrowski Institute of Agriculture and Food Biotechnology- State Research Institute

#### Mounting types





ASB 236 M C mobile version with working time counter

wall-mounted version / ceiling-mounted version with working time counter

ASB 236 W C

wall-mounted version / ceiling-mounted version with working time counter

ASB 255 W C

ASB 255 M C

#### mobile version with working time counter

#### **Applications:**





Healthcare



Offices



**Public Facilities** 

Finishing



#### Modern & convenient solutions



Stability and easy smooth movement in every direction



Fast & easy filter exchange



Wall-mounted version ensures aesthetic installation



RAL colours on special demand

Powder coating

white colour

**INOX** version

#### **Technical data**

Lamp type	ASB 236		ASB 255
Supply voltage	2	30 V, 50 Hz	
Power consumption	80 W		120 W
UV-C bulbs type (Philips / Osram)	2 x 36 W (PL-L TUV/HNS-L 2G2	11)	2  x  55  W (PL-L TUV/HNS-L 2G11)
Useful lifetime of the UV-C bulbs		9000 h	
Fan capacity	80 m <sup>3</sup> /h		130 m <sup>3</sup> /h
Air flow capability	35 m³/h		60 m³/h
Cubage of disinfected room	90 m <sup>3</sup>		150 m <sup>3</sup>
Effective area of the lamp	35 m <sup>2</sup>		60 m <sup>2</sup>
Fan noise level	<20 dB		<30 dB
Protection against electric shock		I	
Ingress Protection Code		IP 20	
Class for the medical environment		B - home	
Group according to PN-EN 55011 Clause 5		1	
Compliance with PN-EN 60601-1		YES	
Lamp body dimensions (L x W x H)	890 x 140 x 215 mm		1035 x 155 x 250 mm
Overall dimensions - wall-mounted version W	890 x 140 x 215 mm		1035 x 155 x 250 mm
Overall dimensions - mobile version M	600 x 600 x 1070 mm		600 x 600 x 1250 mm

#### **Optional variants of lamp equipment**



**C** - advanced working time LED counter in ASEPTOR Basic



RC - remote control for ASEPTOR Basic

- working time counter (counter accuracy to 1 hour)
- automatic brightness level display brightness depending on the light intensity level in the room
- quiet alert after 8800 h visual signalling of the last 200 h of bulbs work
- acoustic and visual signalization of the UV-C bulbs exchange time (after 9000 h)
- bulb error alarm audio and visual signaling (bulb/Err)

The remote control (RC) is used for remote switching on/off the ASEPTOR Basic UV-C flow germicidal lamps. Available for the newly ordered lamps. Installation possible only by the manufacturer.

# **GERMIPROTECT GP 4x55®**

UV-C flow germicidal lamps for large volume rooms

The UV-C flow germicidal lamp GERMIPROTECT is intended to be used in large - volume rooms such as: open space offices, hotels, cinemas, gyms, restaurants, kitchens, railway stations, waiting rooms and various crowded areas.

UV-C flow germicidal lamps enable air disinfection during personnel and customers presence. They are entirely safe for people. The UV-C irradiation emitted by UV-C bulbs built in GERMIPROTECT irreversibly destroys viruses, fungi, yeasts, moulds and other microorganisms present in the air. GERMIPROTECT creates a kind of barrier preventing from infections spreading and developing. The device has a low maintenance costs.











GP 4x55 N wall-mounted version GP 4x55 S ceiling-mounted version

#### **Technical data**

Lamp type	GERMIPROTECT GP 4x55
Supply voltage	230 V, 50 Hz
Power consumption	240 W
UV-C bulbs type (Philips / Osram)	4 x 55 W (pl-l tuv/hns-l 2g11)
Useful lifetime of the UV-C bulbs	9000 h
Fan capacity	260 m³/h
Device capacity	100 m³/h
Cubage of disinfected room	250 m <sup>3</sup>
Effective area of the lamp	100 m <sup>2</sup>
Protection against electric shock	I
Ingress Protection Code	IP 20
Lamp body dimensions (L $x$ W $x$ H)	940 x 350 x 250 mm
Overall dimensions GP 4x55 N - wall-mounted (L x W x H $\!$	l) 940 x 292 x 350 mm
Overall dimensions GP 4x55 S - ceiling-mounted (L x W x	H) 940 x 350 x 286 mm
Overall dimensions GP 4x55 P - on mobile stand (L x W x $\!$	H) 940 x 350 x 900 mm

#### How does the single purpose UV-C flow germicidal lamp GERMIPROTECT work?

Contaminated air is drawn by a fan into • the disinfection chamber.

The UV-C radiation intensity and the time during which the air remains in the disinfection chamber are selected so that the air blown out from the lamp is practically free of microorganisms.

The forced flow of the air results in its smooth circulation and causes disinfection of the air in the whole room. This is a safe way to get rid of viruses, bacteria, molds and fungi from the air.



# **NBVE**<sup>®</sup> UV-C flow germicidal lamps in two variants

NBVE series of the UV-C germicidal lamps is the one of the most known product line by ULTRAVIOL. These devices are available in two types: NBVE single purpose UV-C flow germicidal lamps and NBVE dual purpose UV-C flow germicidal lamps.

#### NBVE single purpose UV-C flow germicidal lamps:

Single purpose UV-C flow germicidal lamps provide one of the most efficient methods of safe air disinfection (reduction of viruses, bacteria, molds and fungi). UV-C bulbs built in the device emit UV-C irradiation (wavelength - 253.7 nm). Its germicidal effectiveness means that UV-C can kill every microorganism.

#### NBVE dual purpose UV-C flow germicidal lamps:

Dual purpose UV-C flow germicidal lamps with external UV-C bulbs of direct action guarantee a full range of disinfection. They enable intensive disinfection of the air in the presence of people (UV-C flow chamber – function I) and direct disinfection of the whole room when the staff and patients stay outside (UV-C direct radiation tube – function II). Functions can be turned on/off separately or both at once.





**Top view** NBVE dual purpose germicidal lamp with 2 UV-C bulbs

L M

> 2. 3.

3

#### How does the single purpose UV-C flow germicidal lamp NBVE work?

- **1.** Contaminated air is drawn by a fan through a filter catching the dust and other contaminations into the disinfection chamber.
  - The UV-C radiation intensity and the time during which the air remains in the disinfection chamber are selected so that the air blown out from the lamp
  - is practically free of microorganisms.
  - The forced flow of the air results in its smooth circulation and causes disinfection of the air in the whole room. This is a safe way to get rid of viruses, bacteria, molds and fungi from the air.

#### How does the dual purpose UV-C flow germicidal lamp NBVE work?

- **1.** Contaminated air is drawn by a fan through a filter catching the dust and other contaminations into the disinfection chamber.
  - The UV-C radiation intensity and the time during which the air remains in the disinfection chamber are selected so that the air blown out from the lamp is practically free of microorganisms.
  - The forced flow of the air results in its smooth circulation and causes disinfection of the air in the whole room. This is a safe way to get rid of viruses, bacteria, molds and fungi from the air.
- **4.** Additional external bulbs enable direct irradiation of the surfaces. They can be used only during the absence of people.

#### **NBVE** series

#### Mounting types





NBVE N wall-mounted version



NBVE P	NBVE S
mobile version	ceiling-mounted version

#### Finishing of the lamp



Powder coating white colour

INOX version RA

RAL colours on special demand

Lamp type	NBVE 60	<b>NBVE 110</b>	NBVE 60/30	NBVE 110/55	NBVE 60/60	NBVE 110/110
Supply voltage			2	230 V, 50 Hz		
Power consumption	85 W	115 W	115 W	145 W	145 W	185 W
UV-C bulbs type	2 x 30 W	2 x 55 W	$2 \ x \ 30 \ W$ internal	2 x 55 W internal	2 x 30 W internal	2 x 55 W internal
	2 × 30 ₩	2 x 30 VV 2 x 33 VV		$1x55W_{\text{external}}$	$2 \times 30 W$ external	2 x 55 W external
Useful lifetime of the UV-C bulbs				8000 h		
Radiation intensity of the external	_	_	100 μW/cm <sup>2</sup>	150 μW/cm <sup>2</sup>	100 µW/cm <sup>2</sup>	150 μW/cm²
UV-C tube at the distance of 1 m			min,	,	p, e	200 p , o
Fan capacity	132 m³/h	199 m³/h	132 m³/h	199 m³/h	132 m³/h	199 m³/h
Cubage of disinfected room	25-50 m <sup>3</sup>	45-90 m <sup>3</sup>	25-50 m <sup>3</sup>	45-90 m <sup>3</sup>	25-50 m <sup>3</sup>	45-90 m <sup>3</sup>
Effective area of the lamp	10-20 m <sup>2</sup>	18-36 m <sup>2</sup>	10-20 m <sup>2</sup>	18-36 m <sup>2</sup>	10-20 m <sup>2</sup>	18-36 m <sup>2</sup>
Fan noise level	~32 dB	~36 dB	~32 dB	~36 dB	~32 dB	~36 dB
Protection against electric shock				I		
Ingress Protection Code				IP 20		
Lamp body dimensions	1105 × 120	0 x 215 mm	1125 x 130 >	( 295 mm	1125 x 130	v 255 mm
$(L \times W \times H)$	1125 X 150	0 X 213 IIIII	1125 X 150 >	(20311111	1125 X 150	x 333 IIIII
Overall dimensions	1100 × 145	5 x 215 mm	1190 x 145 x	295 mm	1190 x 145	v 255 mm
wall-mounted version N	1170 X 143	0 X 213 IIIII	1170 X 143 X	203 11111	1170 X 143	
Overall dimensions	1100 v 120	0 x 330 mm	1190 x 130 x	(100 mm	1190 x 130	v 400 mm
ceiling-mounted version S	1170 x 150	7 x 330 mm	1170 X 130 X	400 11111	1170 X 130	x 400 mm
Overall dimensions	600 x 600	x 1300 mm	600 x 600 x 5	1300 mm	600 x 600 x	(1300 mm
mobile version P	000 x 000	X 1300 IIIII	000 x 000 x		000 x 000 x	1300 11111
				1		

#### **Optional variants of lamp equipment**



**LW** - digital counter with 4-field LED display and acoustic signalling



RC for NBVE - remote control

working time counter (counter accuracy to 1 hour)

**Technical data** 

**LED display** shows the current status of the hour counter. During the first hour of work minutes and seconds are displayed separated by a flashing point

alert after 7950 h, intermittent acoustic signal informing about the approaching end of bulb(s) effective lifetime (50 hours of effective work left)

acoustic and visual signalization of the UV-C bulbs exchange time (after 8000 h)

The remote control RC NBVE is used for remote switching on/off the single purpose UV-C flow germicidal lamps. Available for newly ordered lamps. Installation possible only by the manufacturer.



**WT** - weekly timer for NBV direct radiation and NBVE dual purpose UV-C flow germicidal lamps



RC for NBVE 2 - purpose - remote control

weekly timer (counter accuracy to 1 second)

**programmer** - enables programming 17 different configurations for ON and OFF time of the germicidal lamp

 $\ensuremath{\text{display}}$  - shows the day of the week and the hour with accuracy to 1 second

The remote control RC NBVE 2-purpose is used for remote switching on/off the dual purpose UV-C flow germicidal lamps. Available for the newly ordered lamps.Installation possible only by the manufacturer.

### NBV® **Direct radiation UV-C germicidal lamps**

Direct radiation germicidal lamps NBV provides one of the most efficient methods of supporting disinfection process (reducing the population of microorganisms). These devices equipped with UV-C bulbs emit radiation of wavelength 253.7 nm. This spectrum reveals the strongest biocidal characteristics and irreversibly deactivates bacteria, viruses, moulds, fungi and all other microorganisms. Due to their high efficiency germicidal lamps are used wherever high level of microbiological purity of surface and air is required. The devices can be used only during the absence of people in the room.







#### **Mounting types**





**NBV 30 N** wall-mounted version

ceiling-mounted version

#### **Technical data**

Lamp type	NBV 15	NBV 30	NBV 55	NBV 2x30	NBV 2x55
Supply voltage		23	30 V, 50 Hz		
Power consumption	18 W	33 W	60 W	66 W	115 W
UV-C bulbs type	15 W	30 W	55 W	2 x 30 W	2 x 55 W
Useful lifetime			8000 h		
of the UV-C bulbs			800011		
Radiation intensity					
of the external UV-C tube	0.9 W/m <sup>2</sup>	2.3 W/m <sup>2</sup>	2.9 W/m <sup>2</sup>	3.6 W/m <sup>2</sup>	3.6 W/m <sup>2</sup>
at the distance of 1 m					
Effective area of the lamp	6-8 m <sup>2</sup>	12-15 m <sup>2</sup>	15-18 m <sup>2</sup>	18-22 m <sup>2</sup>	22-27 m <sup>2</sup>
Protection against			1		
electric shock			I		
Ingress Protection Code			IP 20		
Lamp body dimensions (L x W x H)	500 x 85 x 135 mm	960 x 85	5 x 135 mm	960 x	85 x 145 mm

#### How does the direct radiation UV-C germicidal lamp work?

Contaminated air and surface should be irradiated **1.** by UV-C direct radiation lamps - only during the absence of people.

Effective time required to sterilise the room depends on the power of the lamp, time of irradiation, microorganisms existing in the space and dimensions of the room.

The usage of the lamp results in reduction of viruses, bacteria, molds and fungi from the air and irradiated surface.



NBV 2x30 P mobile version

## NBV IP65<sup>®</sup> Direct radiation UV-C germicidal lamps for industrial use

Direct radiation germicidal lamps NBV IP65 are designed to prevent primary and secondary infections in the food, pharmaceutical and cosmetic industries, warehouses and everywhere the production process takes place. Direct radiation germicidal lamps applied in the rooms where airborne pathogenic microorganisms (pathogens) live, significantly reduce the probability of spreading the infection by the air. Raising the level of microbiological purity of the air and surface helps to destroy and reduce impact of existing outbreaks of pathogens.

In germicidal industrial lamps we apply antibacterial fluorescent UV-C bulbs cover - laminated with the special protective foil. It prevents glass from splashing in case of UV-C bulb breaks or damages. Shrink-wrapped fluorescent bulbs meet the EU and HACCP requirements. Adapted foil does not affect the efficiency of antibacterial fluorescent lamps and simultaneously protects UV-C bulbs against bruises. The ultraviolet radiation does not penetrate through the usual glass, plexiglass and similar materials, therefore anti-splashing foil is the only material that can be used to secure the UV-C bulb.





wall-mounted version / ceiling mounted version both hangers in standard

#### **Technical data**

Lamp typeISupply voltageIPower consumptionIUV-C bulbs typeIUseful lifetimeIof the UV-C bulbsIRadiation intensityIof the external UV-C tubeIat the distance of 1 mI	NBV 2x15 IP65 40 W 2 x 15 W	NBV 2x30 IP65 2 65 W 2 x 30 W	NBV 2x36 IP65 230 V, 50 Hz 75 W 2 x 36 W 8000 h	NBV 2x55 IP65 115 W 2 x 55 W	NBV 2x75 IP65 160 W 2 x 75 W
Power consumption4UV-C bulbs type2Useful lifetime2of the UV-C bulbs3Radiation intensity3of the external UV-C tube3at the distance of 1 m	2 x 15 W	65 W	75 W 2 x 36 W		
UV-C bulbs type 2 Useful lifetime of the UV-C bulbs Radiation intensity of the external UV-C tube 2 at the distance of 1 m	2 x 15 W		2 x 36 W		
Useful lifetime of the UV-C bulbs Radiation intensity of the external UV-C tube at the distance of 1 m		2 x 30 W		2 x 55 W	2 x 75 W
of the UV-C bulbs Radiation intensity of the external UV-C tube at the distance of 1 m			8000 h		
of the external UV-C tube at the distance of 1 m					
at the distance of 1 m					
Effective area of the lamp	1.0 W/m <sup>2</sup>	2.1 W/m <sup>2</sup>	2.8 W/m <sup>2</sup>	3.6 W/m <sup>2</sup>	6.8 W/m <sup>2</sup>
	spot	10-20 m <sup>2</sup>	20-25 m <sup>2</sup>	25-30 m <sup>2</sup>	30-40 m <sup>2</sup>
Protection against electric shock			I		
Ingress Protection Code			IP 65		
Lamp body dimensions	520 x 220	980 x 220	1280 x 220	980 x 220	1280 x 220
(L x W x H))		x 160 mm	x 160 mm	x 160 mm	x 170 mm

#### How does the direct radiation UV-C germicidal lamp for industrial use work?

Contaminated air and surface should be irradiated by UV-C direct radiation lamps - only during the absence of people.

Effective time required to sterilise the room depends on the power of the lamp, time of irradiation, microorganisms existing in the space and dimensions of the room.

The usage of the lamp results in reduction of viruses, bacteria, molds and fungi from the air and irradiated surface.



NBV 2x30 IP65 S

NBV 2x30 IP65 P mobile version

# **NBV Multi - directional**<sup>®</sup>

**Direct radiation UV-C germicidal lamps** 

Direct radiation germicidal lamps NBV provides one of the most efficient methods of supporting disinfection process (reducing the population of microorganisms). UV-C bulbs emit radiation of wavelength 253.7 nm. This radiation reveals the strongest biocidal characteristics and irreversibly deactivates bacteria, viruses, moulds, fungi and all other microorganisms. Due to their high efficiency germicidal lamps are used wherever high level of microbiological purity of surface and air is required.

The devices can be used only during the absence of people in the room. NBV Multi - directional lamp enables efficient disinfection of the air and surface in the whole room. The most important device feature is guarantee of 360° disinfection of the air and surface. NBV Multi - directional UV-C lamp is equipped with Bluetooth switch app and motion detector that provide complete safety of the device and protect against accidental undesirable switch on.







LW - digital counter / optional more information at page 14

#### **Complete safety with BT - Bluetooth Switch** & MD - Motion Detector

The device is equipped with a programmable switch setting the delay until the device is switched on (time module controlled by the **NBV App** via a smartphone to leave the room - minimum 1 minute) with Android (Bluetooth).



#### How does the direct radiation UV-C germicidal lamp work?

Contaminated air and surface should be irradiated 1. by UV-C direct radiation lamps - only during the absence of people.

Effective time required to sterilise the room 2. depends on the power of the lamp, time of irradiation, microorganisms existing in the space and dimensions of the room.

The usage of the lamp results in reduction 3. of viruses, bacteria, molds and fungi from the air and irradiated surface.

### **Technical data**

Lamp type	NBV 8x36	NBV 8x75
Supply voltage	230 V,	50 Hz
Power consumption	300 W	630 W
UV-C bulbs type	8 x 36 W	8 x 75 W
Useful lifetime of the UV-C bulbs	800	0 h
Radiation intensity		
of the external UV-C tube	4.5 W/m <sup>2</sup>	9.2 W/m <sup>2</sup>
at the distance of 1 m		
Effective area of the lamp	100 m <sup>2</sup>	160 m <sup>2</sup>
Protection against electric shock	I	
Ingress Protection Code	IP 2	20
Lamp body dimensions (L x W x H)	500 x 500 x	1620 mm

setting the operating time of the device

acoustic signal informs about the approaching moment of switching on

working-time counter displays UV-C bulbs useful lifetime with notification of the need of replacing them (visualization on the NBV App and an acoustic signal)

**motion detector** turns off UV-C radiation regardless of the operation of the programmable BT switch module.

## **LED-NGP®** X-ray film viewers

LED-NGP X-ray film viewers are medical devices designed for the analysis of medical images on X-ray films. This is one of the basic methods of diagnosing. X-ray film viewers manufactured in LED technology have extremely efficient parameters such as: value of luminance intensity, uniformity of screen luminance, low operating cost - long lifetime, low energy consumption. The devices support the process of analyzing X-ray films by doctors. The products are made in the 1st class of protection against electric shock. They can be used in operating theaters, doctor's offices, X-ray laboratories, etc. LED-NGP X-ray film viewers are aesthetic devices with very slim casing. They can fit every modern space.













#### Types of LED-NGP X-ray film viewers







LED-NGP-41

#### **Technical data**

X-ray film viewer type	LED-NGP-11	LED-NGP-21	LED-NGP-31	LED-NGP-41	
Supply voltage		90 - 260 V, 50	- 60 Hz		
Power consumption	65 W	125 W	180 W	250 W	
Luminance	600 - 6000 cd/m <sup>2</sup>				
Uniformity			≥ 95 %		
Screen dimensions	36 x 43 cm	72 x 43 cm	108 x 43 cm	144 x 43 cm	
Step-less luminance					
adjustment (each	10 - 100 %				
frame separately)					
Colour temperature		> 6500	ĸ		
of the lamps light		> 0500	K		
Protection against					
electric shock		1			
IP Code		IP 20			
Total mass	4.5 kg	8.0 kg	12.0 kg	16.0 kg	
Overall dimensions (L x W x H) mm	430 x 35 x 520	795 x 35 x 520	1160 x 35 x 520	1520 x 35 x 520	

#### **LED-NGP** series

# Specific features of LED-NGP



### **LED-NGP WS<sup>®</sup>** Recessed X-ray film viewers

LED-NGP WS X-ray film viewers are medical devices designed for the analysis of medical images on X-ray films. This is one of the basic methods of diagnosing. X-ray film viewers manufactured in LED technology have extremely efficient parameters such as: value of luminance intensity, uniformity of screen luminance, low operating cost - long lifetime, low energy consumption. The devices support the process of analyzing X-ray films by doctors. The products are made in the 1st class of protection against electric shock. They are integral part of operating theaters, doctor's offices, X-ray laboratories, etc. WS marking means built - in version. The devices can be fit into the wall panels in reference to previously sent plans and drawings.











#### Types of LED-NGP WS X-ray film viewers



LED-NGP-41 WS

#### **Technical data**

X-ray film viewer type	LED-NGP-11 WS	LED-NGP-21 WS	LED-NGP-31 WS	LED-NGP-41 WS
Supply voltage		90 - 260 V, 5	0 - 60 Hz	
Power consumption	65 W	125 W	180 W	250 W
Luminance		600 - 6000	) cd/m <sup>2</sup>	
Uniformity		≥ 95 9	%	
Screen dimensions	36 x 43 cm	72 x 43 cm	108 x 43 cm	144 x 43 cm
Step-less luminance				
adjustment (each		10 - 100	D %	
frame separately)				
Colour temperature		> 6500	) K	
of the lamps light		> 0500		
Protection against				
electric shock		I		
IP Code		IP 20	)	
Total mass	6.0 kg	10.0 kg	14.0 kg	18.0 kg
Recess size (mm)	435 x 50 x 545	795 x 50 x 545	1155 x 50 x 545	1515 x 50 x 545
Overall dimensions	470 x 74 x 580	830 x 74 x 580	1190 x 74 x 580	1550 x 74 x 580
(L x W x H) mm	4/0 / / 4 / 300	000 x 74 x 500	11/0 / / 4 / 500	1330 / 74 / 300
		05		

#### **LED-NGP WS series**

# Installations examples



# **DiCO**<sup>®</sup> Digital images viewing station (PACS, RIS, HIS)

DiCO viewing station is a complete medical computer for operating theatre, also known as a digital X-ray films viewer. It is compatible with the PACS, RIS and HIS. DiCO viewing station works via LAN and can be part of the integrated operating room. The hermetic and washable housing distinguish DiCO as a perfect viewing device to be used in the hospital.

The highest quality of the DiCO station is assured by the fact that ULTRAVIOL complies with the ISO 13485 norm for medical devices. The entire process of designing, manufacturing and assembling is strictly controlled and supervised. ULTRAVIOL offers various configurations, types of finish and provides complex technical consulting services. The combination of our knowhow and experience resulted in sales to hundreds of medical facilities in Poland and worldwide.











# Examples of DiCO station configuration

DICO 1M	1 monitor 21" 24" 27"	
DICO 2M	2 monitors 21" 24" 27"	
DICO 1M/1B	1 monitor 21" 24" 27" single LED X-ray film viewer	
DICO 1M	1 large monitor 43" - 70"	
DICO 2M	1 monitor 43" or 49" 1 monitor 21" or 24"	
DICO 2M/1B	1 monitor 43" or 49" 1 monitor 21" or 24" single LED X-ray film viewer	
<b>R</b> - additional monitor on the straight-line arm	1 monitor 19" - 24"	
<b>DICO 2M</b> (60"/17")	1 monitor 60" 1 touch screen control monitor 17"	



**DiCO** series





**DiCO** series



# CE

**DiCO®** station meets the requirements of Medical **Device Regulation** UE 2017/745 (MDR) and is registered in the URPLWMiPB Polish competent authority for medical devices in Warsaw and in the European database **EUDAMED. DiCO®** station complies with the requirements of the standards: PN-EN 60601-1 (basic safety and essential performance) and EN 60601-1-2 (electromagnetic compatibility).

#### Antireflex

Protection of the monitor is made of special glass SCHOTT CONTURAN<sup>®</sup> with **anti-reflective** coating 8-times reducing undesirable glare.



# **FOTOVITA®** SAD phototherapy lamps

FOTOVITA is a medical device for treatment of Seasonal Affective Disorder symptoms. It was designed and tested in cooperation with the scientists from Ludwik Rydygier Collegium Medicum in Bydgoszcz Nicolaus Copernicus University in Toruń Poland.

FOTOVITA lamps have been helping and bringing relief to their users for over 15 years.

The illuminance of white light emitted by FOTOVITA SAD lamps can be characterized as similar to the sunlight. It has a particular effect on the human brain, specifically on pineal gland, which is responsible for production of melatonin. People suffer from its overproduction during autumnwinter season, due to the lack of sunlight. The FOTOVITA light reaches the brain through the eyes. Its physical properties help stimulate the pineal gland what results in restoring the harmony of sleep-wake cycle (Circadian rhythm). The process is entirely safe and has been the subject of numerous scientific researches and dissertations all over the world.



#### **Technical data**



02	<b>2 FOTOVITA FV-10 M</b> medium
Supply voltage	230 V, 50 Hz
Power consumption	120 W
Luminous flux density	5 000 lx at 50 cm 2 500 lx at 75 cm
Fluorescent lamp useful lifetime	10 000 h
Protection against electric shock	1
Dimensions	285 x 195 x 635 mm
Mass	3.1 kg

#### **FOTOVITA series**



• 03	FOTOVITA FV-10 L
and the second s	large
Supply voltage	230 V, 50 Hz
Power consumption	230 W
Luminous flux density	9 500 lx at 50 cm 5 000 lx at 75 cm
Fluorescent lamp useful lifetime	10 000 h
Protection against electric shock	I
Dimensions	345 x 280 x 570 mm
Mass	5.0 kg

# Polish manufacturer of the UV-C lamps and medical devices for **over 25 years**

**Q** 

Stępowizna 34 Str. 95-100 Zgierz, Poland www.ultraviol.pl/en office@ultraviol.pl +48 42 717 77 45 +48 725 779 277











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