



## PASSPORT

# THE ULTRA VIOLET RADIATION LED SYSTEM



Novosibirsk 2007

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## 1. Introduction.

The present passport is the document certifying basic characteristics guaranteed by manufacturer of LED system of ultra-violet radiation.

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## 2. Destination.

The UV radiation LED system is using to cure the inks, varnishes and others composition cured by UV radiation. The system can be applied as in immovable as in moving modules of the equipment.

## 3. Description.

**3.1.** The system consist of two Led blocks of the UV radiation, power supply PSP 500-48 and cooling system.

**The LED blocks of the UV radiation** are used as source of the UV radiation. Each block has:

- \*connector for connection control cable and power cable;
- \*connection pipe for connection tubes of the cooling system;
- \*light indication of emergency operation of work;
- \*protective glass defending against soiling.

For switching on the UV blocks using control signal with the open collector.

**Power supply PSP 500-48** serves for transformation of a feeding voltage  $\sim 220V \pm 10\%$ , 2,3A, to working voltage of the Led blocks  $50V \pm 20\%$ , 10A.

**Cooling system** provides cooling and circulation of coolant fluid through UV radiation blocks.

Into the complete set of delivery enters special over flexible cable for feeding power and control voltage. And also the complete set of polyurethane tubes for mounting of the cooling system, Y figurative T-bend and angel fitting collet.

Parameter	Value	Notice
<b>UV radiation LED block</b>		
Illuminate area	31x75mm	
Working range of the radiation	365±5 nm	
Optical output power, no less than	10W	
DC voltage	40-50V	Depending on execution
Power circuit current, no more than	3A	
Supply voltage of control circuits	5V	1 block
Current of control circuits	0,1A	
On/off time, no more than	0.01s	
Quantity of cycles	-	No limit
Temperature of the abrasion of protection form overheating (max)	50°C	
Interface	RS232	
Dimension	216x148x80 mm	
Weight	1,4 kg	
<b>Power supply PSP 500-48</b>		
AC voltage	~90-264V, 50Hz	
Power consumption, no more than	450W	
Dimension	278x129x63.5 m	
Weight	2,6 kg	
<b>Cooling block</b>		
Type of refrigerating medium	Water	Distilled with using antioxidant additives
Water flow through the block	25 l/h	
AC voltage supply	~210-240V, 50Hz	
Power consumption, no les than	35W	
Weight	10 kg	

## 5. Security measures.

**Before using UV radiation system carefully read the instruction.**

- ⚠ Do not put into apertures of the UV radiation block some retraction! Do not spill into the UV radiation block some liquids!
- ⚠ Use power supply only with parameters recommended by producer of the UV radiation blocks!
- ⚠ Connect UV radiation block to the power supply directly under with electricity circuit!
- ⚠ Do not feed power on the UV radiation block when the cooling system is off!
- ⚠ Do not let on the case of the UV radiation block and on quartz glass any mechanical effects!
- ⚠ Do not open UV radiation block and don't try to repair it on one's own!

### Precautionary measures at work

- ⚠ Realize exploitation UV radiation Led system directly under with instructions of the exploitation!
- ⚠ Never look without protection of eyes at a source of radiation!
- ⚠ Use means of an individual defence at the work with UV radiation system!
- ⚠ Do not open upper cover of the printer when UV radiation blocks are working!
- ⚠ Control the temperature of the refrigerating medium in the cooling system!
- ⚠ Control the availability of the refrigerating medium in the cooling system!

## 6. Mounting.

- Installation of the UV radiation LED system can be carrying out only by specialist with observance of all rules of a labor safety and safe work.
- Take blocks and accessories from transport packing. Check up completeness of a product according to the passport of a product.
- Put the UV radiation LED blocks on the executive mechanism in that way to exclude possibility of the mechanical damages of the blocks. Use for this fastening screws on the sidewall of each blocks. The optimal distance from radiator to illuminate surface is 5-7 mm.
- Install power supply PSP 500-48 into electricity box of the equipment where there is an opportunity connecting to the protected network of the supplying AC voltage ~220V 2,3A.
- Connect over flexible cables from UV radiation Led blocks to the power supply PSP 500-48, to the PC and to the switching device under electricity circuit.
- The arrangement of the cooling system should provide an easy approach to it for the control of the coolant fluid level and also exclude the obstacle for the air moving through radiator of the cooling system.
- Put the tubes of cooling from LED blocks to cooling system under hydraulic circuit. Fill the capacity of the cooling system to the maximum level.
- Connect power supply and cooling system to the supply network AC voltage ~220V ±10%, 2,3A.
- Switch on cooling system and make sure that whole system is fill by coolant fluid. Make sure that there is no any flows at the connecting places of the element of the cooling system.
- Switch off cooling system.
- The product is ready to work.

## 7. Work.

- Before switching on make sure that all connector is fasten well. Check all parts of the cooling system that there is no any leakages. Make sure that the tubes of the cooling system don't have any breaks puted obstacles in the way of coolant fluid.
- Clear the surface of the protective glass of the UV radiation from soiling.
- Feed the working voltage on the cooling system.
- Feed the working voltage on the power supply.
- Close the control contacts for switching on the UV radiation blocks.
- After finishing work open control contacts.
- Switch off the power supply.
- Switch off the cooling system.
- Clear the surface of the protective glass of the UV radiation from soiling.

## 8. Storage conditions.

- 8.1. Packing of system is made in the retail container executed from the goffered cardboard.
- 8.2. The system in the packing transport at the temperature range from -25°C to +55°C with observance of measures of protection from impacts and vibrations. Relative air humidity must be no more than 95% at the temperature +35°C and lower temperatures without water condensation.
- 8.3. Transportation is admitted by all kind of closed transport.
- 8.4. Transportation by an air transport should be made in heated hermetically compartments.
- 8.5. Conditions of storage of system in transport container in a warehouse of the manufacturer and the consumer should correspond to conditions 1 in accordance with GOST 151150-69.
- 8.6. At air there should not be a dust, and also aggressive pairs and impurity.
- 8.7. At short idle times up to 1 month at a room temperature preservation is not required.
- 8.8. At transportation of the equipment preservation with removal of blocks from the equipment is necessary. Preservation is made by packing in transport container with application of the silica gel.

## 9. Warranty.

5.1. Warranty service this is a free-of-charge eliminating, at observance of conditions of a guarantee, by the manufacturer or the seller of malfunction the UV radiation blocks by diagnostics, adjustment and repair of its components or a product as a whole.

5.2. The manufacturer (seller) provides warranty service of the UV radiation blocks during all warranty period in the authorized service centers (further - "SC"). Warranty service extends on the UV radiation blocks made or legally sold without dependence from the real user.

5.3. The warranty service of the large UV radiation blocks is carry out:  
\*At using of the power supply and control network recommended by producer of the UV radiation blocks;  
\*At using of the cooling system recommended by producer of the UV radiation blocks;  
\* At observance the conditions of transportation, storage and exploitation;  
\* If the defects of the UV radiation blocks have arisen through producer, seller or organization carried out the functions of the producer (seller) fault;  
\* If the serial number and the model of the UV radiation blocks is coincide with number and model indicated in the Guarantee coupon;  
\* At the presence of the date of the sale, signature and the seal og the seller and also signature of the customer in the Guarantee coupon;  
\* At the presence of undamaged guarantee stickers, stamps and holograms;  
\* At preservation of completeness of the product;  
\* In the absence thereof mechanical damages of the cases of the UV radiation blocks and protective quartz glass.

SUN LLC does not bear the responsibility for systems exposed to some changes and working in an equipment in which is some not certificate parts or not qualified repair has been made, and in case of damaging of the product in process of the delivery or non-standard applications.

At not observance of the 5.3 item of the "Warranty service" the free of charge warranty service is not carry out.

Warranty period 12 months, from date of sale.

The warranty service is carry out by specialists of the "Service center INFINIII" LLC.

## 10. Bundling.

Item	Quantity
UV radiation LED block	2
Cooling system	1
Power supply PSP 500-48, 40-50 V	1
Interface cable (5m.)	1
Power cable (5m.)	1
Y figurative T-bend Camozzi 7560 8-6	2
Angel fitting collet Camozzi 6550-6	4
Polyurethane tube TPU 6/4 (4m.)	1
Polyurethane tube TPU 8/6 (5m.)	1
User manual	1
Passport	1

## 11. Certificate of the acceptance.

The UV radiation system produce in accordance with standard 4082- 00298397733-2007, corresponds to requirements of the engineering specifications and it is recognized serviceable.

Serial numbers:

Block №: \_\_\_\_\_

Block №2: \_\_\_\_\_

Cooling system: \_\_\_\_\_

Power supply: \_\_\_\_\_

Certificate of the acceptance №: \_\_\_\_\_

Director of the quality  
(control) department

SEAL \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Producer: "SUN" MADE IN RUSSIA

## 12. Contacts.

### Russia, Novosibirsk

Adress: 630039, Nikitina Street, 162, 4-th floor

Tel: +7 (383) 267-76-01, 279-60-83, 211-92-41

Tel/fax: (383) 211-92-41