

6 **Safety arrangements:**

To avoid accidents, it is strictly prohibited:

- Pick the LED to pieces;
- Turn on the unassembled LED;
- Carry out the LED assembling and dismantling, when the power is switched on.

Special care should be taken when handling the LED glass.

It is strictly prohibited to repair the LED by yourself. Broken LEDs can be repaired only in specialized shops or at the factory.

Do not operate the LED with removed or damaged parts of the case glass. It is forbidden to machining, opening and dismantling the LED by yourself in order to avoid violation of tightness.

7 **Temporary shutdown**

Before shutting the LEDs down, dry it thoroughly, clean out the glass from dirt using a soft cloth moistened with alcohol or detergent solution to restore transparency and eliminate traces of contamination. Storage conditions must correspond to the conditions of 1.1 GOST15150-69 standard.

8 **Warranty liability**

The warranty period lasts for 3 years since the date of sale. In case of failure detection, which is not the fault of the buyer, before the expiration of the warranty period, you should contact the organization that has sold you the LED. Improper storage, inappropriate use of the LED, not following the rules of operation and maintenance, mechanical damage and the LED opening deprive the buyer of warranty.

Serial number:	
Operating supply voltage:	
Working capacity:	
Angle of dispersion:	
Assembly date:	
Assembler:	
Test date:	
Seller:	
Date of sale:	
Consumer:	

The LED meets technical specifications and recognized serviceable.

Stamp

The item for Warranty Repair is received at: 3A Kasatkina str., Moscow. The buyer pays all transport or other costs, which are associated with the goods delivery to the given address (unless otherwise provided in the Contract). The supplier is not responsible for the installation and dismantling. Any questions about bad quality, exchange, return or claims processing, call +7 (800) 2345405 (ext. 1112.) or write an e-mail at: l.a@gorodled.ru

For warranty service, call +7 (495) 6693666.

9 **Supply package**

The LED with permanently attached RNF power cable (according to 1.5 m standard) - 1 pc.

Technical certificate - 1 pc.

Packing - 1 pc.

Manufacturer: «LEDPROM», Russia



Underwater LED LP GZ 180/12/15 N AISI 304

Technical certificate



1 Technical details

Application area

- Underwater decorative lighting of pools and fountains,
- Internal illumination of ice sculptures and installations,
- Creation of dynamically lit shows.

Do not operate the lamp in salty water or in water with a high content of salt impurities and heavy metals. The use of some groups of chemicals have to be agreed with the manufacturer.

Outside temperature, °C	-40+50
Atmospheric pressure	1000 kPa (7500, 64 mm Hg.)
Atmosphere relative humidity, %	100
Waterproofing as per GOST14254-80 standard	IP68
Conditions of use group as per GOST17516.1-90 st-rd	M5
LEDs manufacturer	NICHIA
Nature of supply	Direct Current (DC)
Source voltage, V	12 - 24
Range of feed voltage, V	9 - 28
Watt consumption, W	15
Light flux	130 lm/W, at a color temperature of 6000 K (Kelvin)
Angle of light dispersion, °	10,16,24,36,45,60.
Control mode:	* PWM - analogous, (DMX as an additional option)
Electric shock protection class	III
Operating Life	More than 10 years
LED colors	***R/G/B/W/WW/RGB
Weight, g.	No more than 1900
Case material	Stainless steel of AISI 304 mark
Case type	Hot-drawn
Case color	«metallic»
The number of LEDs, pcs.	12
Overall dimensions, mm	A=190, C=0, **D=36

* - ШИМ – Pulse-Width Modulation, DMX - Digital Multiplex.

** - excluding the size of the cable gland

*** - R – red, G – green, B – blue, W – white, WW– warm white, RGB–multicolor.

LED light conforms to safety requirements as per GOST R MEK 60598-1-203 и GOST R MEK 60598-2-18-98 standards.

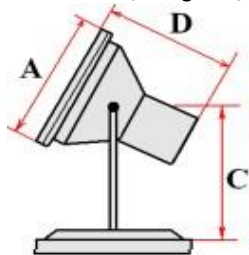
Power supply

· From 12-24V, DC feed source (available separately), according to the terms of reference.

Control

· Through the controller of 12 - 24V, DC feed source (available separately) to control the brightness and turn-on order of LED lights.

2 Preparation and operation procedure



Unpack the LED and make sure that there is no mechanical damage. Do not use a damaged LED.

Before turning on the LED, it is necessary to tighten the cable entry and the screw joints, which hold the cover to the case.

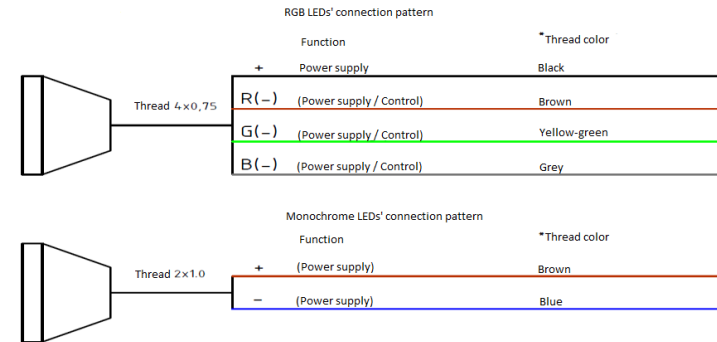
A dirty LED should be wiped with a dry or slightly damp soft cloth. Do not use solvents, detergents and other harsh abrasives.

Installation, dismantling and maintenance of the LED should be carried out in the daytime with disconnected power supply.

The LED is connected to the feed source or controller.

Great attention should be paid to the voltage drop in the power cable, especially when the LEDs are situated at a considerable distance from the power supply, and when a large number of LEDs are connected through a single cable.

3 LEDs' connection pattern



*The thread color may not correspond to the specified.

In his case, the thread has special markings, which allow determining its function.

4 Maintenance operations

Only specialists should perform all work, which is associated with the connection and installation. Disconnect the LED from the power supply before starting work.

According to the operating conditions, the LED refers to light devices working without supervision and maintenance. At the same time, in order to improve the reliability and extend the operating life, it is recommended to inspect the in-use LEDs from time to time to detect possible contamination, mechanical damage, moisture and performance evaluation. **It is also necessary to tight the threaded connection elements 1 time in 6 months to prevent moisture from entering the case.**

Dirty glass should be wiped with a soft cloth moistened with alcohol or detergent solution to restore transparency and eliminate traces of contamination. The LED with visible mechanical damage (cracks, chips) should be replaced.

5 Transportation and storage

The LEDs should be stored and transported in standard packing, which protects them from mechanical damage. Conditions of LEDs' transportation in terms of exposure to mechanical loads - by group of L GOST 23216-78, in terms of the impact of climatic factors - by group of 5 (OZH4) GOST15150-69. LEDs' storage period is 5 years from the date of manufacture. Storage conditions must correspond to the conditions of 1.1 GOST 15150-69 standard.