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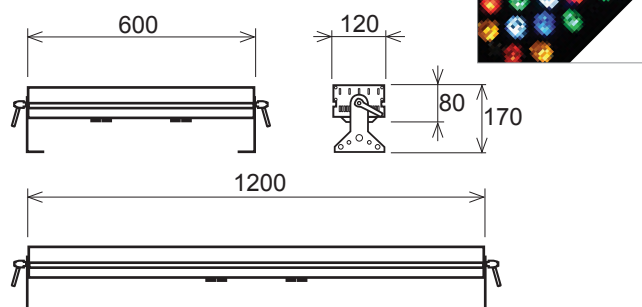
USER MANUAL

LL PRO WASH VARIO OPTIC

Without optic:	LL37 104	LL37 105	LL37 106	LL37 107
With optic:	LL37 109	LL37 110	LL37 114	LL37 115

COMPLIMENTS ON YOUR PURCHASE!

All dimensions are in millimeters

600   120   80   170   1200

Following items are included:

1. LL PRO WASH 600/1200 without optic
- LL PRO WASH 600/1200 without optic with adjustable bracket — 1 pc.
- PowerCon type "A" + "B" — 1 pc.
- User manual — 1 pc.

2. LL PRO WASH 600 with optic
- LL PRO WASH 600 without optic with adjustable bracket — 1 pc.
- LL VARIO OPTIC WASH 600 — 1 pc.
- PowerCon type "A" + "B" — 1 pc.
- User manual — 1 pc.

3. LL PRO WASH 1200 with optic
- LL PRO WASH 1200 without optic with adjustable bracket — 1 pc.
- LL VARIO OPTIC 400 WASH 1200 — 3 pcs.
- PowerCon type "A" + "B" — 1 pc.
- User manual — 1 pc.

Additional items needed:
- Data cables with XLR 5pin Female/Male — 1 pc.
- Controller compatible with DMX — 1 pc.
- Mounting accessories and Vario Optics as necessary

Surface mounting:
- Screws and washers 6xM12, 2xM8

Content:

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01   SAFETY INFORMATION

WARNING!!!
Carefully read before installing, powering or servicing.
Nothing to do if anything misunderstand! Installation can be done only by a qualified professional in accordance with relevant local codes.

01.1 Risk of eyes damage

- Do not look directly into LED lamps.
- Do not look into light beam from a distance of less than 40 cm (16 inches)!

01.2 Protection from electric shock

- Shut down power before installation or maintenance.
- Luminaries and recommended AC power supply must be installed by a qualified professional in accordance with relevant local codes. Only acceptable source of AC power and frequency that complies with local building and electrical codes to use.
- Do not use or do not connect the products if the power cable, power plug or fixtures are any way damaged, wet, or if they are overheating.
- Do not modify, alter, or attempt to service the LeaderLight appliance. Doing so will void the warranty.
- Before removing or installing any cover or part of appliance disconnect it from AC power.
- Appliance always connect to earth (eltech.).

01.3 Fire prevention

- Follow all safety consideration.
- Thermostatic switches or fuses never to bypass.
- Device never shield. Around the axis of the fitting (180°) must be maintained space for cooling. Minimum distance from the surrounding objects must be 100mm (4 in.) (figure 1.1).
- LEDs never direct cover with filters or other materials.
- Allowing max. ambient temperature is 40°C (104°F).
- Luminaries never use without mounting brackets. The housing never install directly to the surface.

02 PRODUCT SPECIFICATION

02.1 Technical Specification

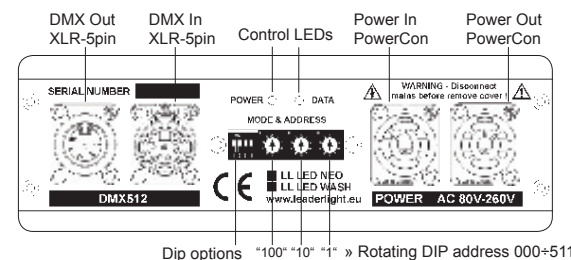|	
Lamp type:	66/132xRGBAW/AW P4 *
Lifetime:	Long 50 000 hrs 70% degradation
Vario Optic:	10°, 25°, 40°, EL (Eliptical 15°x90°) and AS(Asymetrical)
Control data Input:	DMX 512 In/Out with XLR 5PIN
Input power:	max. 102W/203W
Power connection:	100-260V AC 50-60Hz In/Out PowerCon
Net weight:	5,5kg/11kg
IP:	IP20
Ambient temp. (Ta):	Maximum 40°C
Cooling:	Conventional
Materials and finish:	Housing: powder-painted anodized aluminium in black (other colours on request) Cover: clear or frosted PMMA
Installation:	Surface mounting

* P4: ■ R-Red, ■ G-Green, ■ B-Blue, ■ A-Amber, □ W-White (6300°K)
- One module RGBAW (4pcs White, 4pcs Green, 4pcs Blue, 5pcs Red, 5pcs Amber) => total 3/6 modules
- One module AW (12pcs White, 10pcs Amber) => total 3/6 modules

ENVIRONMENT

Do not throw away the appliance with the normal household waste at the end of its life, but hand it in at an official collection point for recycling. By doing this, you help to preserve the environment.

02.2 Back panel

DMX Out XLR-5pin   DMX In XLR-5pin   Control LEDs   Power In PowerCon   Power Out PowerCon

SERIAL NUMBER   POWER   DATA   WARNING - Disconnect mains before remove cover
MODE & ADDRESS
LL LED NEO
LL LED WASH
www.leaderlight.eu   DMX512   POWER   AC 80V-260V

Dip options   "100" "10" "1" » Rotating DIP address 000÷511

Control LEDs Indication

POWER ●   DATA ●

LED	INDICATION	STATUS
POWER (Green)	blinking – 2Hz	OK - inside fixture is everything correct
DATA (Yellow)	light off	NO DMX512 signal
DATA (Yellow)	blinking – 4Hz	OK- income correct DMX512 signal
DATA (Yellow)	fast blinking	NON correct digital signal
POWER (Green) DATA (Yellow)	alternate blinking	Autotest function

03 INSTALLATION

03.1 Unpacking

- Unpack carefully.
- This is electronic equipment and should be handled carefully.
- Damaged delivered package or if are any mechanical parts broken – it must be claim immediately by the transport company. Photo pictures as evidence are valuable for future claim.

03.2 Physical installation

- Loading capacity of bearing area has to be at least 10 times the weight of all device clusters (luminaries, clamps, cables, ...).
- Hairbreadth from combustible materials is 0,5m.
- Before physical installation insert the optic modul on top of luminary. The optic installation is easy and fast by 2 screws (Figure Nr. 1.2).

03.3 Connecting to AC power

- **To tackle all Safety Information- 01!**
- For protection from electric shock, the device must be grounded (earthed)!
- It is not necessary to open the fixture before power supply.
- Power supply is solved simple with Neutrik PowerCon connectors.
- The fixture is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-260V.

- Cord plug connections:

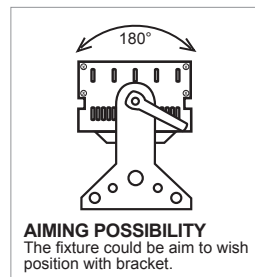| Symbol	Pin	Wire Colour	Screw (US)
L	live	brown	yellow or brass
N	neutral	blue	silver
⏚	ground (earth)	yellow/green	green

03.4 Control data connecting

- Control data cable length is specified by Norm IEC929 Annex E4.
- It is not necessary to open the fixture before connecting of DMX512 control signal. Interconnections are realized by Neutrik XLR 5pin IN/Out connectors.
- Pin connections:
    Pin 1 – ground
    Pin 2 – signal negative
    Pin 3 – signal positive

03.5 DMX channels - subject to change

- The latest version of DMX channels appendix are on the websites - www. leaderlight.eu

Ch.	WASH 600 RGBAW	Ch.	WASH 600 AW	Ch.	WASH 1200 RGBAW		Ch.	WASH 1200 AW
				Mode1: Dip2=Off				
1	Red 1,2,3	1	Amber 1,2,3	1	Red 1,2,3,4,5,6		1	Amber 1,2,3,4,5,6
2	Green 1,2,3	2	White 1,2,3	2	Green 1,2,3,4,5,6		2	White 1,2,3,4,5,6
3	Blue 1,2,3	3	Master (Dip1=On, Dip4=Off)	3	Blue 1,2,3,4,5,6		3	Master (Dip1=On, Dip4=Off)
4	Amber 1,2,3	4	Strobo (Dip1=On, Dip4=Off)	4	Amber 1,2,3,4,5,6		4	Strobo (Dip1=On, Dip4=Off)
5	White 1,2,3	5		5	White 1,2,3,4,5,6		5	
6	Master (Dip1=On, Dip4=Off)	6		6	Master (Dip1=On,Dip4=Off)		6	
7	Strobo (Dip1=On, Dip4=Off)	7		7	Strobo (Dip1=On,Dip4=Off)		7	
				Mode4: Dip2=On				
1	Red 1	1	Amber 1	1	Red 1	16 Red 4	1	Amber 1
2	Green 1	2	White 1	2	Green 1	17 Green 4	2	White 1
3	Blue 1	3	Amber 2	3	Blue 1	18 Blue 4	3	Amber 2
4	Amber 1	4	White 2	4	Amber 1	19 Amber 4	4	White 2
5	White 1	5	Amber 3	5	White 1	20 White 4	5	Amber 3
6	Red 2	6	White 3	6	Red 2	21 Red 5	6	White 3
7	Green 2	7	Master (Dip1=On, Dip4=Off)	7	Green 2	22 Green 5	7	Amber 4
8	Blue 2	8	Strobo (Dip1=On, Dip4=Off)	8	Blue 2	23 Blue 5	8	White 4
9	Amber 2	9		9	Amber 2	24 Amber 5	9	Amber 5
10	White 2	10		10	White 2	25 White 5	10	White 5
11	Red 3	11		11	Red 3	26 Red 6	11	Amber 6
12	Green 3	12		12	Green 3	27 Green 6	12	White 6
13	Blue 3	13		13	Blue 3	28 Blue 6	13	Master (Dip1=On, Dip4=Off)
14	Amber 3	14		14	Amber 3	29 Amber 6	14	Strobo (Dip1=On, Dip4=Off)
15	White 3	15		15	White 3	30 White 6	15	
16	Master (Dip1=On, Dip4=Off)	16				31 Master (Dip1=On, Dip4=Off)	16	
17	Strobo (Dip1=On, Dip4=Off)	17				32 Strobo (Dip1=On, Dip4=Off)	17	

Extention and control functions:	
Dip4=Off, Dip1=Off =>DipBCD: use rotating switch for DMX start address (RS1-100, RS2-010, RS3-001) from 001 to 511	
Dip4=Off, Dip1=On:	address+2channel (Master+Strobo)
Dip4=On, Dip1=Off:	switch on AutoRun-table functions: "100"=Prg.0-9, "10"=StepTime, "1"=FadeTime
Dip4=On, Dip1=On:	switch all channels on 50% - test function

Dip2=Off: Mode 1 (5+2ch)	Dip2=Off: Mode 1 (2+2ch)	Dip2=Off: Mode 1 (5+2ch)	Dip2=Off: Mode 1 (2+2ch)
Dip2=On: Mode 4 (15+2ch)	Dip2=On: Mode 4 (6+2ch)	Dip2=On: Mode 4 (30+2ch)	Dip2=On: Mode 4 (12+2ch)

Dip3=Off:	standard curve
Dip3=On:	ultraSoft curve

For one luminary LL PRO WASH 1200 is necessary to order 3pieces
LL VARIO OPTIC 400 WASH1200

180°

AIMING POSSIBILITY
The fixture could be aim to wish position with bracket.

1.2

VARIO OPTIC INSTALLATION

The optic installation is easy and fast by 2 screws.

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04 PERNAMENT USE LIMITATIONS FOR HEATING DISSIPATION

- **Pernament use limitations for heating dissipation of LL PRO WASH RGBAW body temperature must be less then 55°C**

40°C ambient temperature -20% of total power
30°C ambient temperature -10% of total power
20°C ambient temperature -0% of total power

Black version - 30%
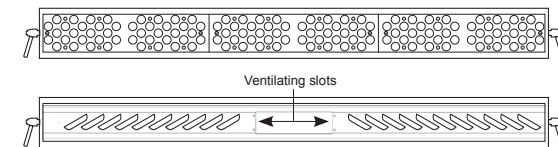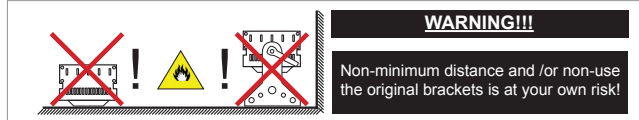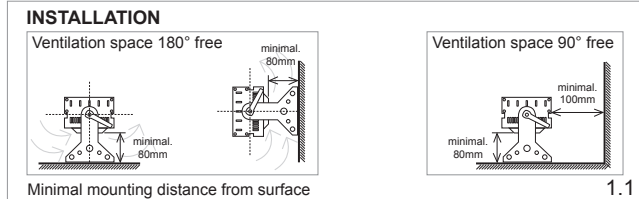**Silver or White version - 50%**

Example: Then final pernament value for BLACK colour and 40°C ambient temperature = -30% -20% = 56% = max 143 ≥ (R + G + B + W +A) / 5

It's mean average of power go inside the fixture at DMX signal

Example:
black LL PRO WASH: 180 ≥ (R + G + B + W + A) / 5
Silver or White LL PRO WASH: 128 ≥ (R + G + B + W + A) / 5

Value for R or G or B or W or A is 100% = 256 = 8bit levels * RED 50% = 128 value, RED 75% = 192 value**

Final information we don't drop down each colour power with temperature control to get maximum for each colour under total recomMendations , therefore you need setup limitations from control desk !!!

INSTALLATION

Ventilation space 180° free

minimal. 80mm
minimal. 80mm

Ventilation space 90° free

minimal. 100mm
minimal. 80mm

Minimal mounting distance from surface

1.1

WARNING!!!

Non-minimum distance and /or non-use the original brackets is at your own risk!

Ventilating slots

05 MAINTENANCE

- **To tackle all Safety Information- 01!**
- Damage caused by inadequate cleaning or maintenance is not coverd by warranty.
- Regular cleaning is demand (dust, dirt, ...)

Maintenance policy:
- Unplug mains before maintenance and at least 10 minutes cool off
- Appliance do not illegal open or demount
- Clean-up dust only from outer surface (for ex. scuttle, diffuser and lenses).
- Use vacuum or dumpy duster (warm water)
- Before reinstalling to check failure-free state – no wet parts!

If you have any question please, contact support@leaderlight.sk