



# DURATECH DVA050 Vision Allegro LED Installation Guide

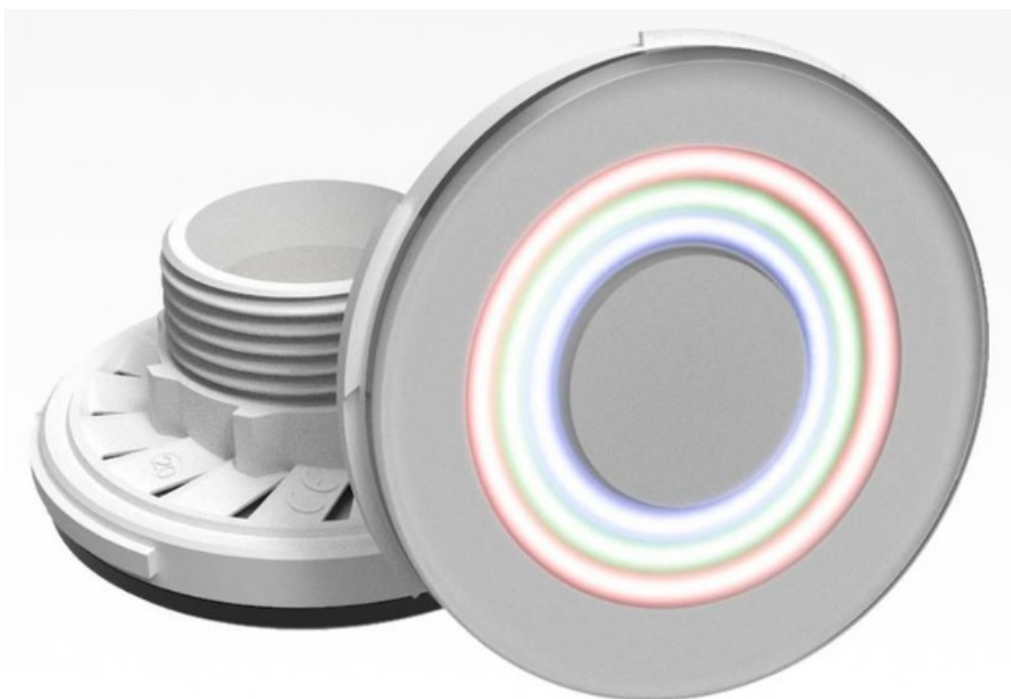
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**DURATECH DVA050 Vision Allegro LED**



## Technical specifications

Lamp Type	Description	Voltage	Power	Color temp	Luminous flux*
DVA050-WH	White	10-14 VAC	8,5	7700	800 lm
DVA100-WH	White	10-14 VAC	25	7700	2600 lm
DVA170-WH	White	10-14 VAC	50	7700	5500 lm
DVA050-WW	Warm white	10-14 VAC	8,5	3500	800 lm
DVA100-WW	Warm white	10-14 VAC	25	3500	2600 lm
DVA170-WW	Warm white	10-14 VAC	50	3500	5500 lm
DVA050-RGB	All colours and Tunable white	10-14 VAC	10	n.a.	650 lm
DVA100-RGB	All colours and Tunable white	10-14 VAC	25	n.a.	1900 lm
DVA170-RGB	All colours and Tunable white	10-14 VAC	50	n.a.	3800 lm

(\*) Propulsion systems remains a tolerance of +/- 10% on luminous flux measurements @ 25°C ; 12VAC



For operation only with a safety isolation transformer

Minimum input voltage: **10 VAC 50/60 Hz**  
(at lamp terminals)

Nominal input voltage: **12 VAC 50/60 Hz**  
(at lamp terminals)

Maximum input voltage: **14 VAC 50/60 Hz**  
(at lamp terminals)



IEC Protection Class III

Operation on DC voltages is NOT allowed

Maximum water temperature: **+40°C**  
Lamps have to be kept out of ice zones

Ingress protection rate: **IP68**  
measured at 3m max depth = 3m

## Remarks

### Water conditions

Prevent damage to your pool lamps and wires due to unstable water conditions.

Your local government may have enacted guidelines for your pool water conditions to apply by. If not we strongly advise the following parameter specifications to be applied:

- pH level 6,8 – 7,6

- Free Chlorine max. 3ppm
- Combined chlorine max. 1 ppm
- Water temperature max +40°C and lamps need to be kept out of ice zones

Always adhere to the instructions provided by your chemical brand/supplier for the correct use and application of pool chemicals.

Salt water pools, or pools fitted with a salt water chlorine generator contain salt in the pool water. Salt is a corrosive material. Overdosage and/or consistent levels of salt increase the possibility of deterioration of your pool lamps and cables. As a rule of thumb, a concentration of 35gr/l salt can be accepted when pH values are between 7,2-7,4.

In any case, we urge proper use, care and maintenance of your installation, in order to mini-mize the effect of corrosion and deterioration.

Please be aware that pool lamps and cables with defects caused due to abnormalities in the water condition are not covered by our factory warranty.

### Installation/maintenance

The luminaire is maintenance free

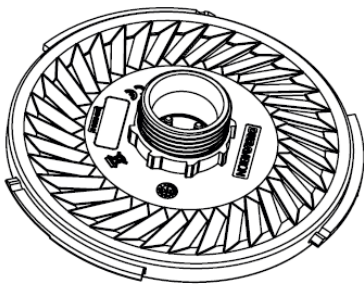
If the luminaire needs to be replaced, it needs to be completely removed from the water

If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid hazard

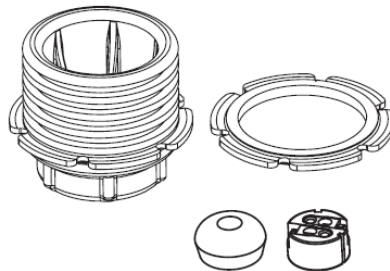
VISION Allegro pool lamps must be completely submerged into water during operation. Fixing the lamps with adhesives or silicone kit into a niche is not allowed.

Not following these instructions, will void warranty.

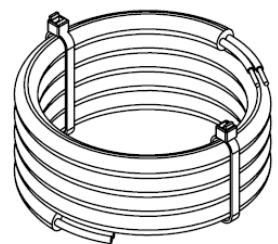
### Box contents



VISION Allegro  
(50, 100 or 170 mm)



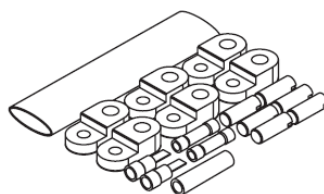
Connection Kit\*



3m Cable\*\*



Quick Start Guide



Retrofit Kit  
(only for 170mm models)

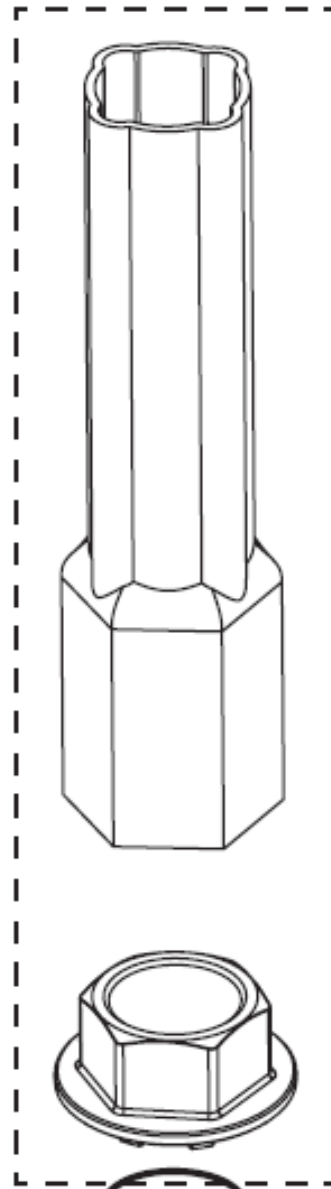
Lamp type	Connection kit	Cable
DVA050	513-0480 ; 1 washer for fixnut ; blue cable gasket + 1 spare washer	1 mm <sup>2</sup>
DVA100	513-0636 ; 1 washers for fixnut ; orange cable gasket + 1 spare washer	1,5 mm <sup>2</sup>
DVA170	513-0651 ; 1 washers for fixnut; green cable gasket+ 1 spare washer	2,5 mm <sup>2</sup>

## Installation instructions

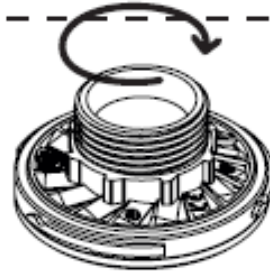
### Installing faceplate

Toolset \_\_\_\_\_  
( not included )

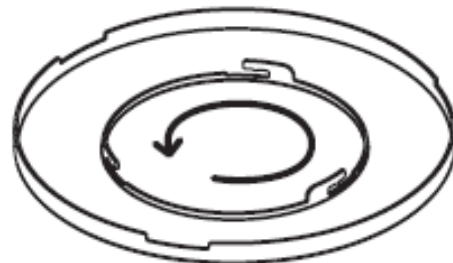
Contact your local  
distributor for a  
toolset (513-0151)



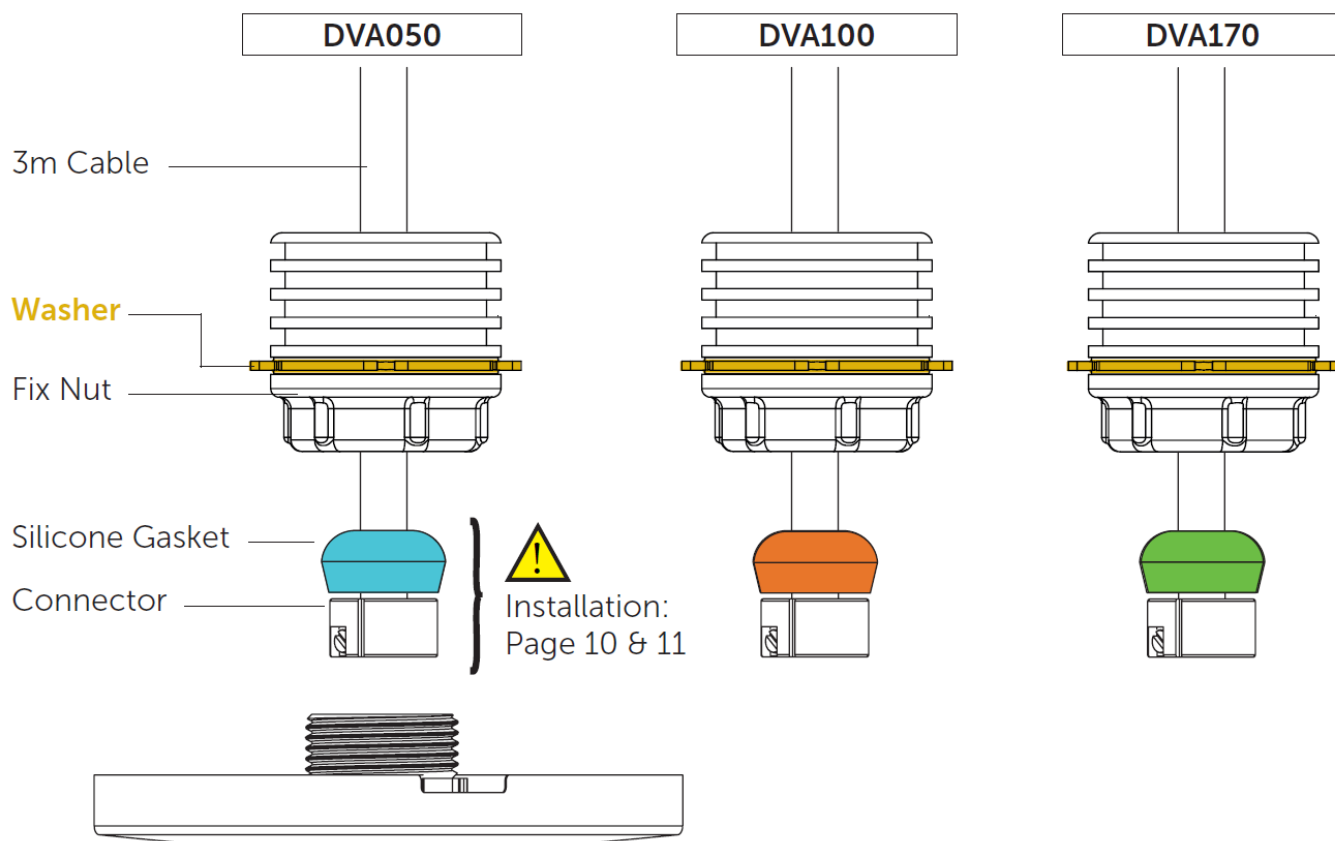
Lamp \_\_\_\_\_



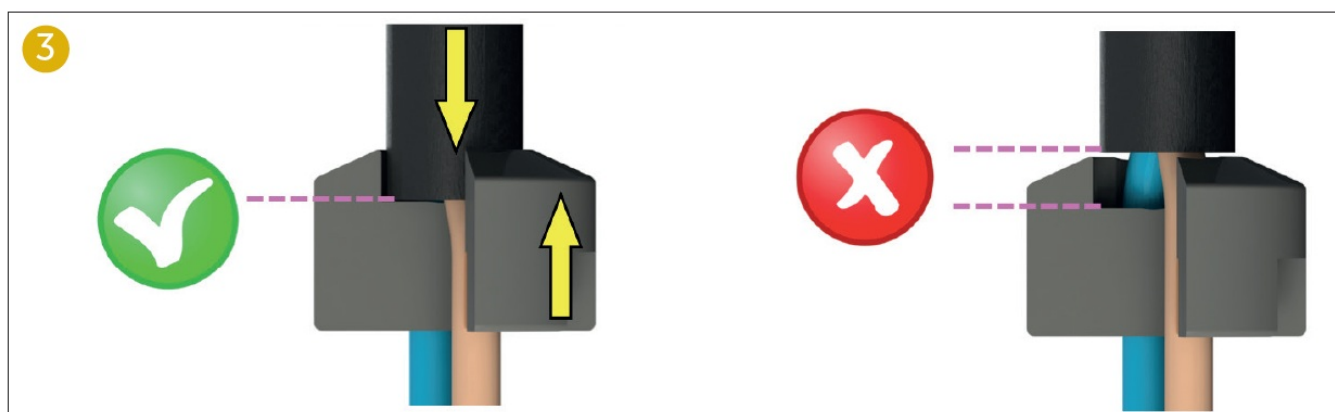
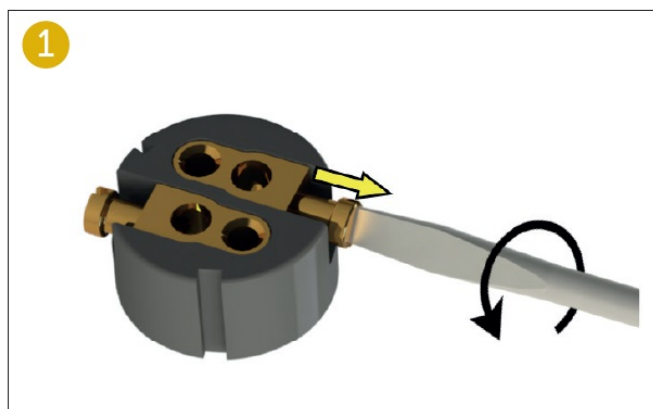
Face Plate \_\_\_\_\_



**Installing connector**



## Connector installation





## Installation specialties

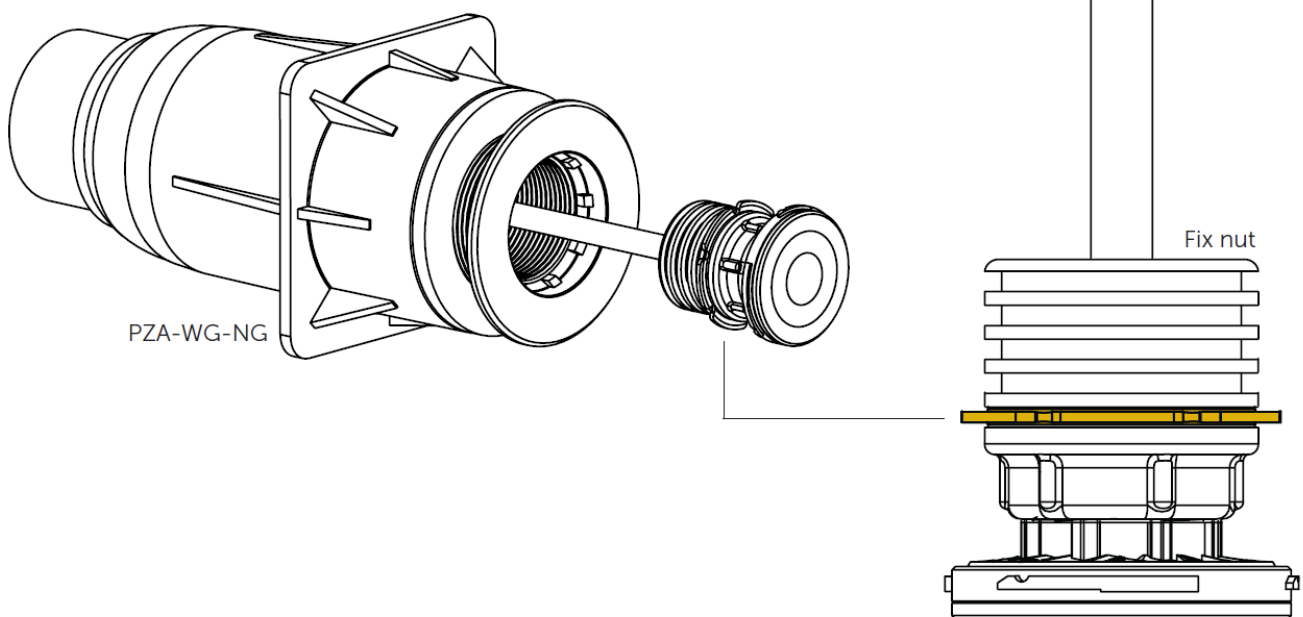
### DVA050 & PZA-WG

For installations with DVA050 & PZA-WG-NG:

Please make sure to only use 1 silicone washer for the Fix nut

For installations with DVA050 & PZA-WG-NG:

Please make sure to *only use 1 silicone washer* for the Fix nut

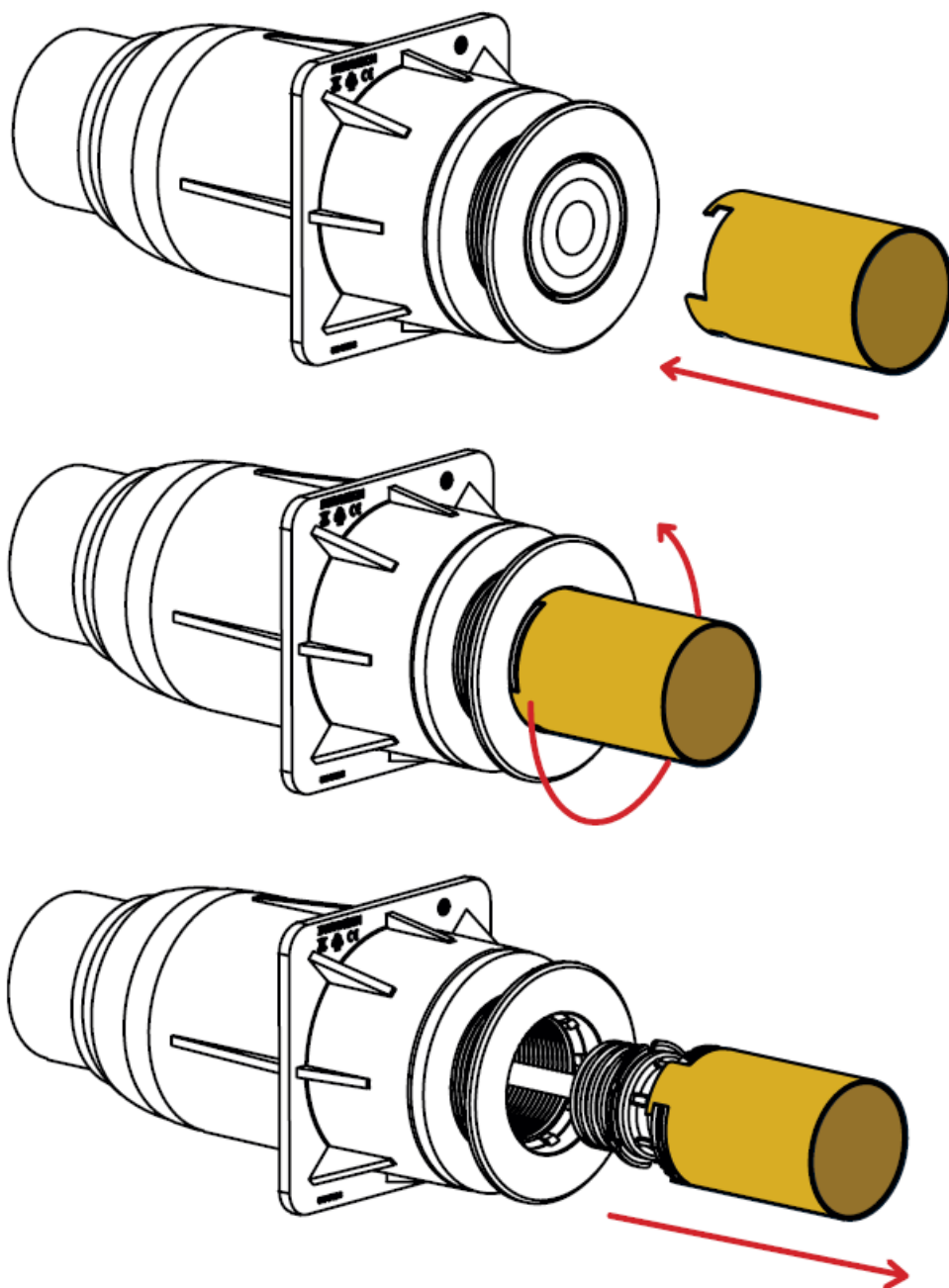


### DVA050 Removal tool

When DVA050 needs to be removed from the PZA-WG-NG wall conduits, a special tool is needed (513-0491)\*



1. Insert the tool over the lamp, straight into the wall conduit
2. Twist the tool counter clockwise the lamp should be snapped into the 3 hooks of the tool
3. Pull the lamp straight out of the wall conduit

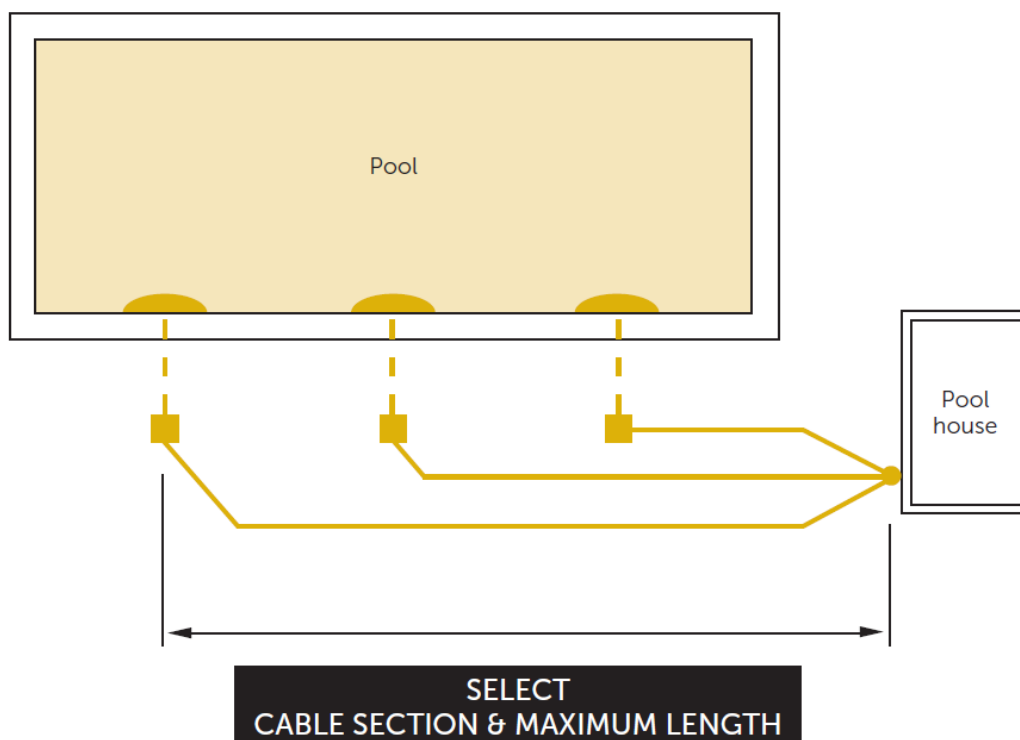


## Wiring instructions Setup 1

### For new installations

Each lamp is connected to the transformer via 1 cable





--- 3m cable included in lamp package  
 — Separate cable ( not included )



Always use a toroidal transformer

## SELECT CABLE SECTION & MAXIMUM LENGTH

	LAMP TYPE	1,5mm <sup>2</sup>	2,5mm <sup>2</sup>	4,0mm <sup>2</sup>	6,0mm <sup>2</sup>	10mm <sup>2</sup>	VA TRANSFORMER (12VAC)*
	DVA050-RGBW	55	90	145	200	350	18
	DVA050-WH	95	160	250	350	600	10
	DVA050-WW	95	160	250	350	600	10
	DVA100-RGBW	20	40	65	95	165	40
	DVA100-WH	30	50	80	120	200	30
	DVA100-WW	30	50	80	120	200	30
	DVA170-RGBW	10	15	25	40	70	91
	DVA170-WH	12	20	35	50	90	74
	DVA170-WW	12	20	35	50	90	74

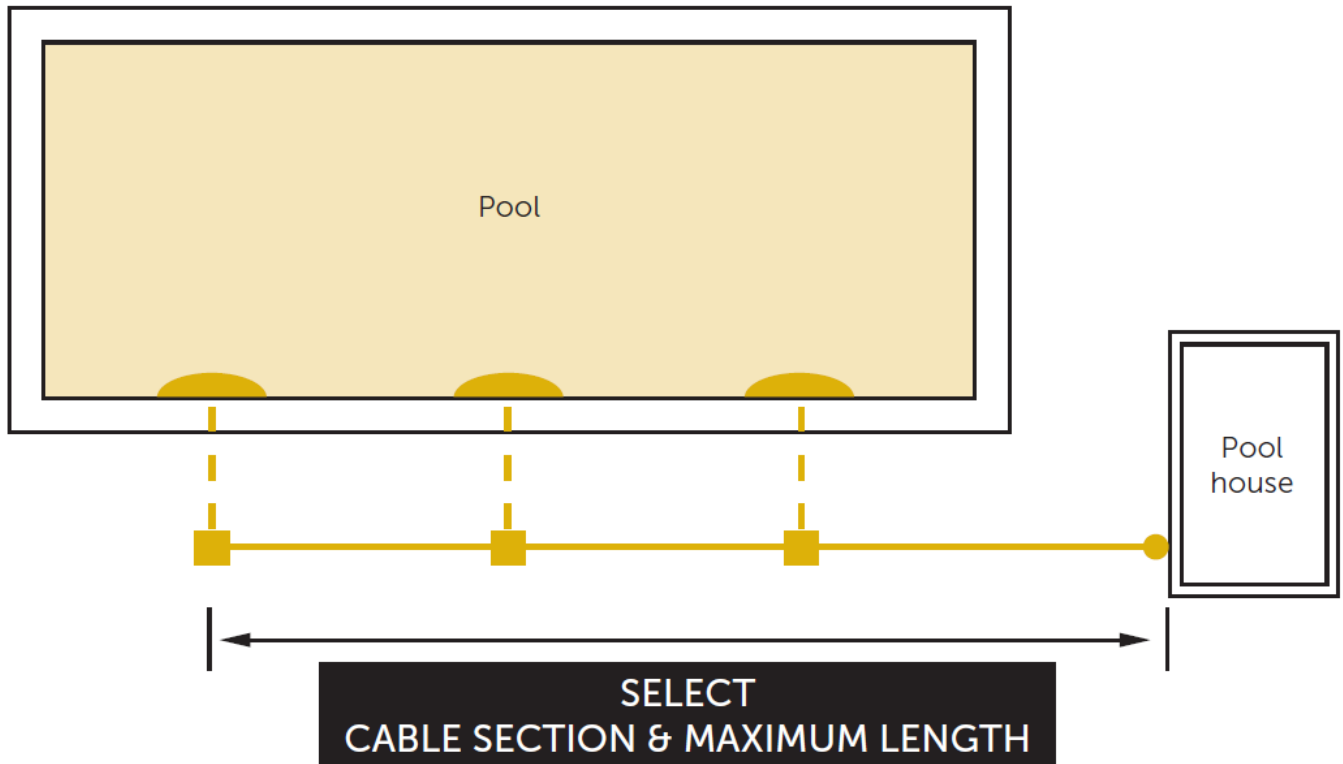
STABLE OPERATION OF THE POOL LIGHTS IS ONLY GUARANTEED WHEN THE INSTALLED CABLE CROSS SECTION MATCHES OR EXCEEDS THE ADVISED VALUES IN THE ABOVE TABLE

The transformer VA rating must be greater or equal to the sum of VA ratings of all connected lamps.  
 These cable lengths are calculated with worst case voltage drops in the electrical wiring.











## Wiring instructions Setup 2

**For existing or other installations**

All lamps are connected to the transformer via 1 cable



**SELECT  
CABLE SECTION & MAXIMUM LENGTH**

	LAMP TYPE	QTY	2,5mm <sup>2</sup>	4,0mm <sup>2</sup>	6,0mm <sup>2</sup>	10mm <sup>2</sup>	VA TRANSFORMER (12VAC)
	 DVA050-RGBW	1	90	145	200	350	18
		2	45	73	100	175	36
		3	30	48	67	117	54
		4	23	36	50	88	72
 	DVA050-WH DVA050-WW	1	160	250	350	600	10
		2	80	125	175	300	20
		3	53	83	117	200	30
		4	40	63	88	100	40
	 DVA100-RGBW	1	40	65	95	165	40
		2	20	33	48	83	80
		3	13	22	32	55	120
		4	10	16	24	41	160
	DVA100-WH DVA100-WW	1	50	80	120	200	33
		2	25	40	60	100	66
		3	17	27	40	67	99
		4	13	20	30	50	132
	 DVA170-RGBW	1	15	25	40	70	91
		2	8	13	20	35	182
		3	5	8	13	23	273
		4	4	6	10	18	364
	DVA170-WH DVA170-WW	1	20	35	50	90	74
		2	10	18	25	45	148
		3	7	12	17	30	222
		4	5	9	13	23	296

## Wiring remarks

For installations with LINK Controller or LINK Master

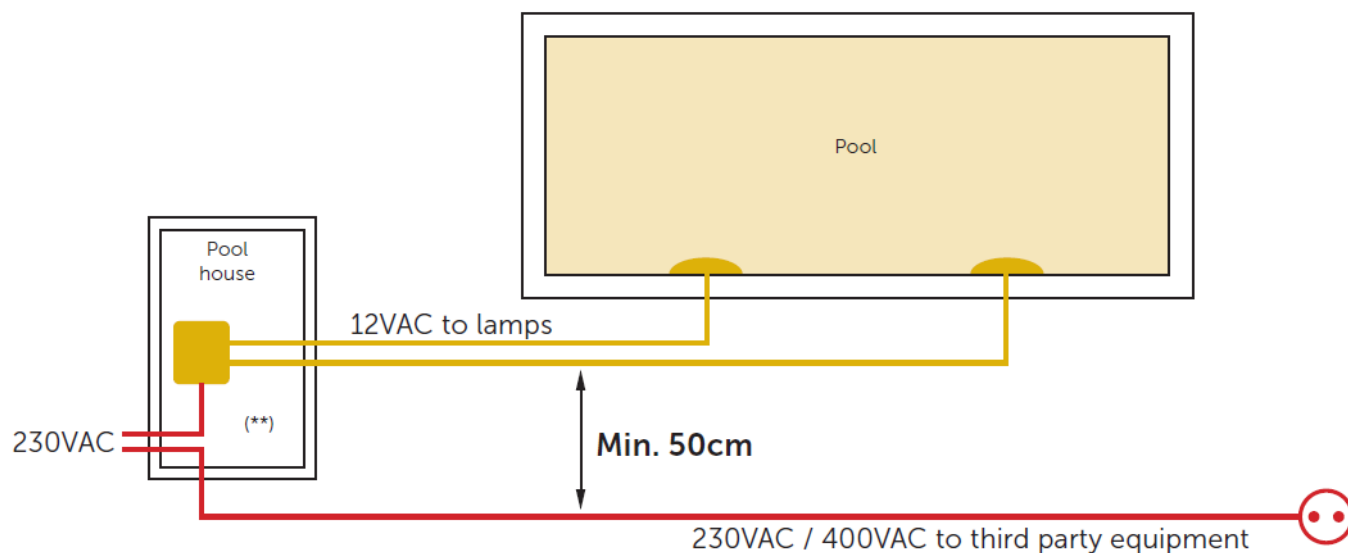
Third party equipment such as frequency inverters and electric motors can generate excessive noise on the 230VAC / 400VAC power line.

This noise might be injected into the adjacent 12VAC power line and disturb the power line communication towards the VISION Allegro lights.

## To prevent this, please take care of the following:

Keep 230VAC / 400VAC power line cables at least 50cm separated over their full length from the 12VAC power line towards any lights

Do not mix 12VAC and 230VAC / 400VAC power line cables into the same cable trays

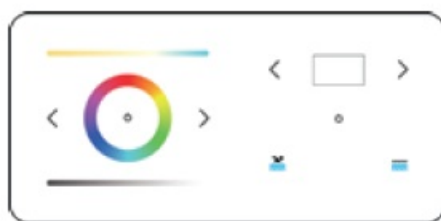


(\*\*) Do not mix 12VAC and 230VAC / 400VAC power line cables into the same cable trays

## Synchronizing

### With LinkTouch

- + LINK Controller (PLP-REM or PLP-REM-350)\*
- + LINK Master (DLM450 or DLM600)



First make sure the LinkTouch is paired (see manual LinkTouch)

Turn the lamps on and spin the color wheel on the LinkTouch until the lamps react.

If the lamps do not react, turn them off and back on until they react to the color wheel. As soon as the lamps follow the color wheel: wait 1 minute. The lamps are now synced.

### With Transmitter

- + LINK Controller (PLP-REM or PLP-REM-350)\*



Turn the lamps on and push the UP button 10 times. Wait for 20 seconds, then turn the lamps off. Repeat this process until the lamps react to the remote. As soon as the lamps follow the remote: wait 1 minute. The lamps are now synced.

## Manual synchronization (without DURALINK control products)

1. Switch ON the 12 VAC line voltage and make sure that all lamps light up.
2. Switch OFF the 12 VAC line voltage and wait for at least 1 minute
3. Switch ON
4. The lamps should now all be on color program 1: Blue

## Color programs

 RGBW LAMPS		
1	DEEP BLUE SEA	Saturated blue
2	DAYLIGHT BLUE	Light blue
3	SUNSET	Slow animation orange - red
4	LOVE IS IN THE AIR	Red
5	FOREST SPRING	Green
6	THINK PINK	Pink
7	SUNSHINE	Yellow
8	JUNGLE BEACH	Slow animation blue & green tints
9	VOODOO	Slow animation red & purple tints
10	DISCO	Fast animation lila-pink-peach-yellow-green blue
11	PARTY	Fast animation blue-green-red-pink-yellow-green
12	WARM WHITE	3000 K
13	NEUTRAL WHITE	6000 K
14	SUN WHITE	10.500K

 fixed colors  
 dynamic colors  
 white tints

\*all color programs are dimmable if LINK Touch, LINK Controller or LINK Master are used (in PLC mode)

## Troubleshooting

## PROBLEM

- The pool light is flickering

## SOLUTION

1. Switch the lamps ON and select Cold white color program
2. Remove the lamp from the water, unscrew the fix nut, pull back the gasket and the black cable jacket, so you can reach the brass contacts inside the connector block (do not remove the connector block)
3. Measure the voltage at the lamp terminals (while the lamp is still ON)
4. The voltage at the lamp should be at least 10VAC 50/60Hz.  
If the measured line voltage is below 10VAC:
  - A. Check the output voltage at the transformer terminals.  
This voltage should be between 12VAC and 14VAC.  
Verify that the used transformer VA rating is sufficient for powering all connected lamps
  - B. If the transformer output voltage is ok, then install a thicker cable between the transformer and the lamp.  
(wiring instructions p. 14-19)

- Several pool lights in the pool show different color programs

Make sure that all lamps are connected to the same 12VAC power line. Execute the synchronization as explained on p.20

- The lamp is flashing red

The lamp is exposed to an overvoltage. Consult an electrician to verify the installation and to make sure the voltage at the lamp side is below 14VAC.

### Declaration of Conformity

Declarations of conformity covering this product are available for download from the House of Duratech website:  
[www.duratech.be](http://www.duratech.be)

## HOUSE OF DURATECH — innovative pool products —

### DURAVISION Pool Light products

- VISION Moonlight
- VISION Spectra
- VISION Adagio Pro
- VISION Pro
- VISION Allegro
- VISION Wall Conduits
- VISION Face Plates
- VISION Specials

### DURAHEAT Heat Pump products

- HEAT Hot Splash
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- HEAT Dura V
- HEAT Dura Vi
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- HEAT Dura Pro
- HEAT Accessories

### DURAFLOW Pool Flow products

- FLOW Inverter
- FLOW Cartridge Filter
- FLOW Vortex

### DURACOVER Cover System products

- COVER Tube
- COVER Motor
- COVER Wall Duct
- COVER Cable Duct
- COVER Hanging System

### DURALINK Control products

- LINK Driver
- LINK Touch
- LINK Controller
- LINK Cover
- LINK Master
- LINK Accessoires

### Contact details

**Propulsion Systems bv Dooren 72**


1785 Merchtem, Belgium

Tel +32 2 461 02 53


[www.duratech.be](http://www.duratech.be)



## Documents / Resources

	<a href="#">DURATECH DVA050 Vision Allegro LED</a> [pdf] Installation Guide DVA050 Vision Allegro LED, DVA050, Vision Allegro LED, Allegro LED, LED
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## References

-  [Duratech | Homepage](#)
- [User Manual](#)

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