

## Manual

DVS050  
DVS100  
DVS170  
DVM050  
DVM100  
DVM170



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**VISION Spectra**



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## Technical specifications

Lamp Type	Description	Voltage	Power	Color temp	Luminous flux*
DVS050-RGB	RGB color 50 mm	10-14 VAC	9 W	n.a.	450 lm
DVS050-TW	Tunable white 50mm	10-14 VAC	9 W	3000-6500K	450 lm
DVM050-WH	Low Day white 50mm	10-14 VAC	5,5 W	5000K	400 lm
DVS100-RGB	RGB color 100mm	10-14 VAC	22,5 W	n.a.	1300 lm
DVS100-TW	Tunable white 100mm	10-14 VAC	22,5 W	3000-6500K	1300 lm
DVM100-WH	Low Day white 100mm	10-14 VAC	10 W	5000K	800 lm
DVS170-RGB	RGB color 170mm	10-14 VAC	34,5 W	n.a.	2100 lm
DVS170-TW	Tunable white 170mm	10-14 VAC	34,5 W	3000-6500K	2100 lm
DVM170-WH	Low Day white 170mm	10-14 VAC	18 W	5000K	1450 lm
DVM170-RGB	Low RGB color 170mm	10-14 VAC	19,5W	n.a.	1050 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 Hz**  
(at lamp terminals)

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

Maximum input voltage: **14 VAC 50 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 minimize 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

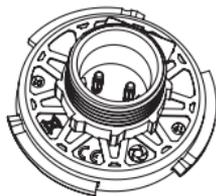


If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid hazard

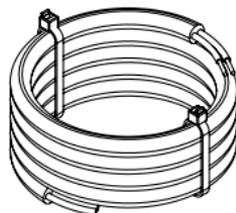


*Vision Spectra Pool lamps must be completely submerged into water during operation. Fixing the lamps with adhesives or silicone kit into a niche is not allowed. Not following these instructions, will void warranty.*

## Box contents



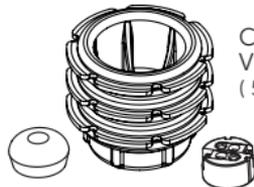
Vision Spectra lamp  
(50,100 or 170 mm)



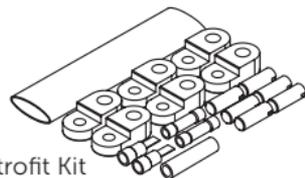
2m Cable  
(2x1mm<sup>2</sup>)



Manual



Connection Kit  
Vision Spectra  
( 513-0228 )



Retrofit Kit  
(only for 170mm models)

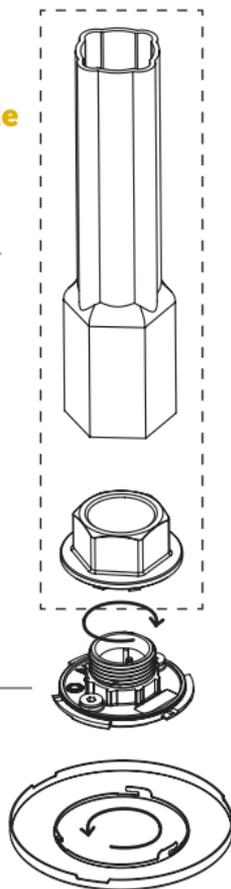
## mounting face plate

Toolset  
( not included )

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

Lamp

Face Plate



## Installation instructions

### mounting the connector

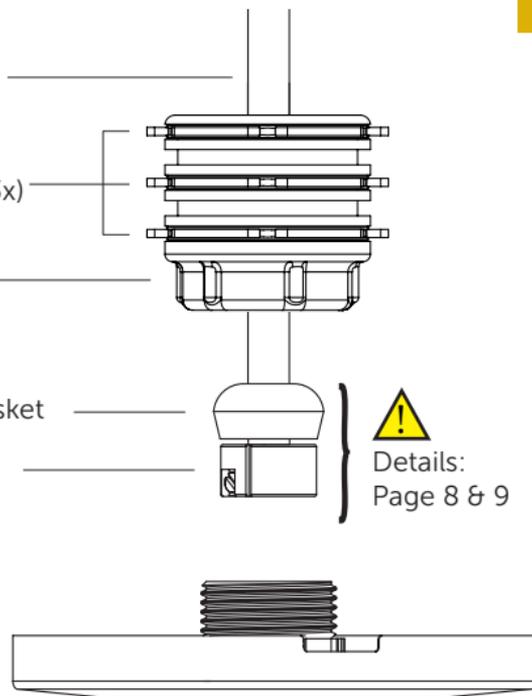
2m Cable

Fix Nut  
Washers (3x)

Fix Nut

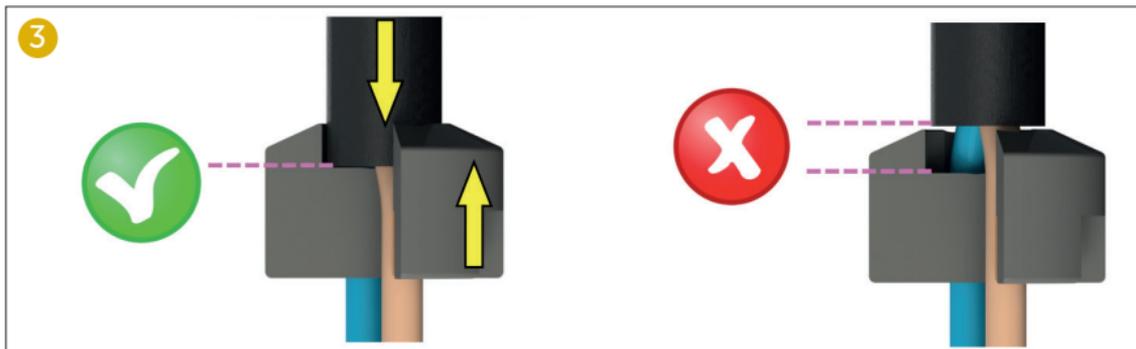
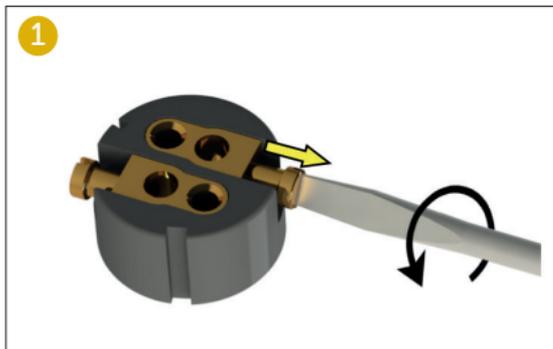
Silicone Gasket

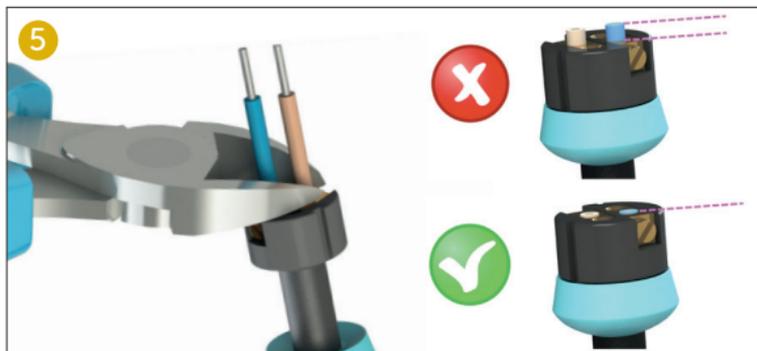
Connector



Details:  
Page 8 & 9

## Connector installation

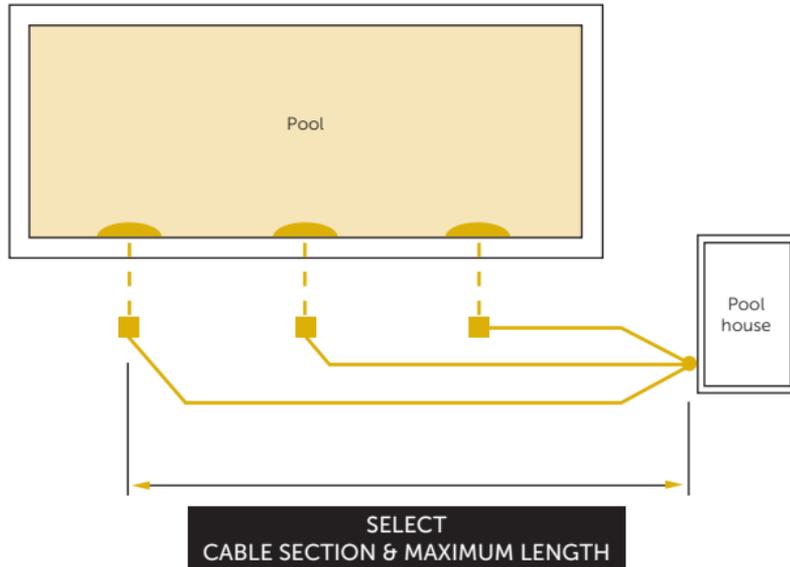




# Wiring instructions Setup 1

## For new installations

Each lamp is connected to the transformer by a separate cable



- 2m 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)*
	 DVS050-TW	85m	140m	200m	300m	550m	12 VA
	 DVS050-RGB						
	 DVM050-WH	140m	200m	350m	550m	950m	7 VA
	 DVS100-TW	30m	55m	90m	135m	200m	30 VA
	 DVS100-RGB						
	 DVM100-WH	75m	125m	200m	300m	500m	13 VA
	 DVS170-TW	20m	35m	55m	85m	145m	45 VA
	 DVS170-RGB						
	 DVM170-WH	40m	70m	110m	170m	250m	24 VA
	 DVM170-RGB	35m	65m	105m	155m	250m	25 VA

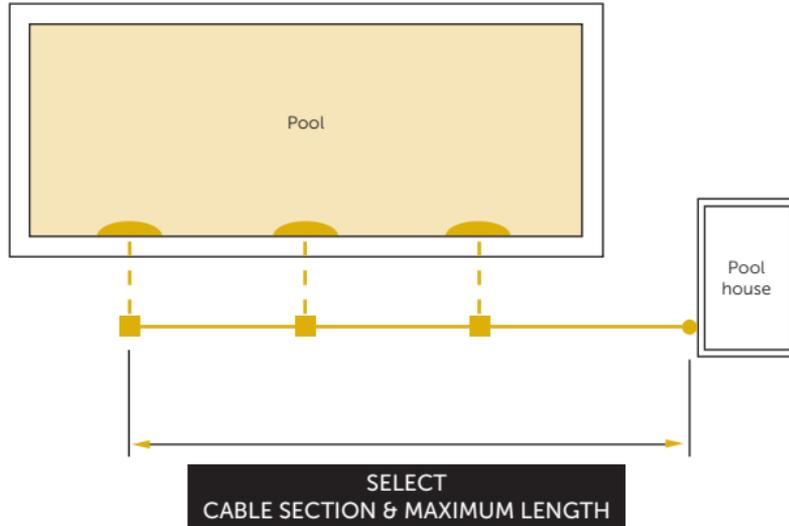
**STABLE OPERATION OF THE POOL LIGHTS IS ONLY GUARANTEED WHEN THE INSTALLED CABLE CROSS SECTION MATCHES OR EXCEEDS THE ADVISED VALUES IN THE ABOVE TABLE**

\* 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

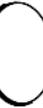
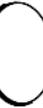
All lamps are connected to the transformer via 1 cable



- - - - 2m cable included in lamp package
- Separate cable ( not included )



Always use a toroidal transformer

		SELECT CABLE SECTION & MAXIMUM LENGTH				VA TRANSFORMER (12VAC)	
LAMP TYPE	QTY	2,5mm <sup>2</sup>	4,0mm <sup>2</sup>	6,0mm <sup>2</sup>	10mm <sup>2</sup>		
	 DVS050-TW	1	140m	200m	300m	550m	12
	 DVS050-RGB	2	70m	100m	150m	275m	24
		3	47m	67m	100m	183m	36
		4	35m	50m	75m	138m	48
	 DVM050-WH	1	200m	350m	550m	950m	7
		2	100m	175m	275m	475m	14
		3	67m	117m	183m	317m	21
		4	50m	88m	138m	238m	28
	 DVS100-TW	1	55m	90m	135m	200m	30
	 DVS100-RGB	2	28m	45m	68m	100m	60
		3	18m	30m	45m	67m	90
		4	14m	23m	34m	50m	120
	 DVM100-WH	1	125m	200m	300m	500m	13
		2	63m	100m	150m	250m	26
		3	42m	67m	100m	167m	39
		4	31m	50m	75m	125m	52
	 DVS170-TW	1	35m	55m	85m	145m	45
	 DVS170-RGB	2	18m	28m	43m	73m	90
		3	12m	18m	28m	48m	135
		4	9m	14m	21m	36m	180
	 DVM170-WH	1	70m	110m	170m	250m	24
		2	35m	55m	85m	125m	48
		3	23m	37m	57m	83m	72
		4	18m	28m	43m	63m	96
	 DVM170-RGB	1	65m	105m	155m	250m	25
		2	32m	52m	77m	125m	50
		3	21m	35m	51m	83m	75
		4	16m	26m	38m	62m	100

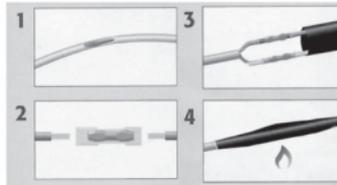
**STABLE OPERATION OF THE POOL LIGHTS IS ONLY GUARANTEED WHEN THE INSTALLED CABLE CROSS SECTION MATCHES OR EXCEEDS THE ADVISED VALUES IN THE ABOVE TABLE**

## Retrofit in PAR56 niche (only Vision Spectra 170mm)

1

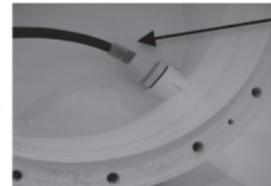


2



If old cable is re-used

OR



Silicone tube

If new (thinner) cable is used

3



## Color programs



### RGB LAMPS

1	CANDLE LIGHT	<2000K very warm white
2	WARM WHITE	3000K warm white
3	NEUTRAL WHITE	5000K neutral white
4	COLD WHITE	9500K cold white
5	CARIBBEAN BLUE	cyan
6	BLUE	blue
7	GREEN	green
8	RED	red
9	PURPLE	purple
10	YELLOW DYNAMIC	slow animation yellow
11	BLUE DYNAMIC	fast animation blue



### TW LAMPS

1	CANDLE LIGHT	<2000K
2	WARM WHITE	3000K
3	NEUTRAL WHITE	5000K
4	COLD WHITE	9500K
5	BLUE-WHITE	13500K
6	COOL BLUE	>17500K

## Synchronizing & color changing (for RGB and TW lamps only)

### Manual synchronization

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 20 sec (max 60 sec)
3. Switch ON and switch OFF (max 3 sec ON and max 3 sec OFF)
4. Switch ON and switch OFF (max 3 sec ON and max 3 sec OFF)
5. Switch ON
6. The lamps should now all be on color program 6: Blue

*\* TW lamps: the lamps will all flicker after 15 seconds on color program 6. You can now choose to lock the lamp on a desired color program by switching off/on within the next 5 seconds. After 5 seconds the flickering will stop and the lamp is locked.*

*See next page for details.*

*If you did not select a color when flickering, the lamps will stop flickering after 5 seconds and the lamp will be unlocked.*

### Changing colors

Quickly turn the lamps OFF and back ON

The lamp will jump to the next color program

### Memorizing the actual color

Turn the lamp OFF for MINIMUM 20 seconds

The last chosen color has now been memorized

## Color Locking (only for TW lamps)

If desired, TW lamps can be “locked” on a color program of choice. This means the lamp will only light up in that specific color, and it is no longer possible to change the color program of the lamp.

This process can be reversed anytime by “unlocking” the color program. All color programs will then be available again, and can be changed at any time.

### Locking/Unlocking procedure

Locking the color of a lamp starts with a synchronisation procedure:

1. Switch ON the 12 VAC line voltage
2. Switch OFF the 12 VAC line voltage and wait for at least 20 sec (*max 60 sec*)
3. Switch ON and switch OFF (*max 3 sec ON and max 3 sec OFF*)
4. Switch ON and switch OFF (*max 3 sec ON and max 3 sec OFF*)
5. Switch ON
6. Wait for about 15 seconds. The lamp(s) will now flicker

LOCKING: - during the flickering of the lamp, select the desired color program by switching (within 5 seconds) the lamps OFF and ON quickly.

- When the right color is selected, then wait 5 seconds, until the flickering stops
- The lamp is now locked on the chosen color program

UNLOCKING: - When the lamps flicker, then do nothing for 5 seconds.

- The flickering will stop, and it is again possible to change the color program of the lamps.

## 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 50Hz.  
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. 10-13)
- In case of TW lamps: make sure the lamp is not in color locking mode

- 
- 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.16



Contact details  
Contactgegevens  
Coordonnées de contact  
Kontaktdaten  
Los datos de contacto

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**DURAVISION**



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