Ultra flat Pool & Spa LED light

OWNER'S MANUAL

Moonlight

Spectravision

Ultra flat shape
2 wire 12VAC
ON/OFF control
NoAir™
PAR56 Retrofit

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Technical specifications

Reference	Description	Color	Light output	Power	Nominal CCT
PLS300 PLS300B	Bulb + housing Bulb only	RGB RGB	575 lm 575 lm	15W 15W	n.a. n.a.
PLW300 PLW300B	Bulb + housing Bulb only	White White	1250 lm 1250 lm	16 W 16 W	9000K 9000K
PLS700 PLS700B	Bulb + housing Bulb only	RGB RGB	1450 lm 1450 lm	25W 25W	n.a. n.a.
PLW700 PLW700B	Bulb + housing Bulb only	White White	2100 lm 2100 lm	28W 28W	9000K 9000K
PLS400B PLW400B	Bulb only Bulb only	RGB White	925 lm 1850 lm	21W 19W	n.a. 9000K

Beam Angle	120°
Diameter Optic	170 mm
Nominal input Voltage	12 VAC
Life time hrs	> 25.000 h
Power factor	> 0,73

For operation only with a safety isolation transformer

General specifications

4m non detacheable rubber cable included

Maximum water temperature	+35°C (Lamps have to be kept out of ice zones)
Ingress Protection Rate	IP68 (measured at 1m)

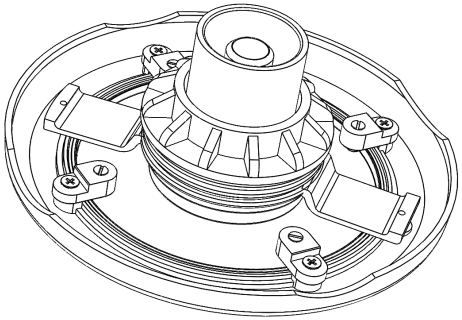
Moonlight Pool lamps must be completely submerged into water during operation. Not doing so, will void warranty.

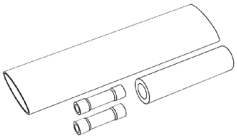
Optional: Stainless steel faceplate PZM170-RV-SS

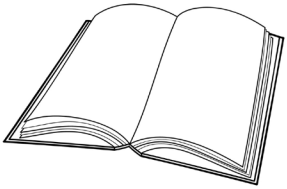
Box contents

Moonlight complete types:

- PLS300
- PLW300
- PLS700
- PLW700

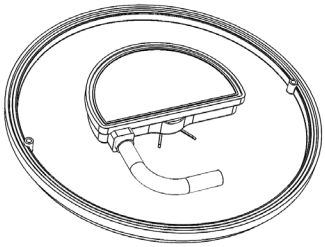


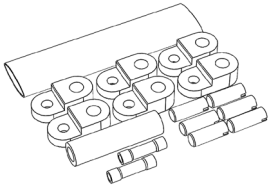


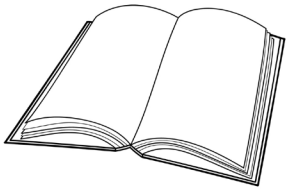


Moonlight Bulb only types:

- PLS300B
- PLW300B
- PLS700B
- PLW700B
- PLS400B
- PLW400B





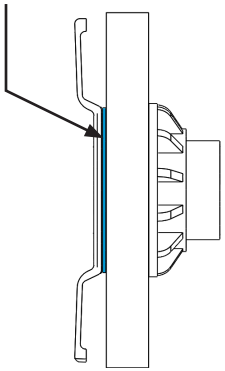


Installation instructions

No liner: Use 1 gasket

With liner: Use 2 gaskets

1



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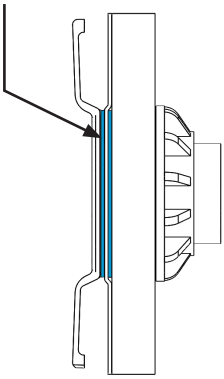

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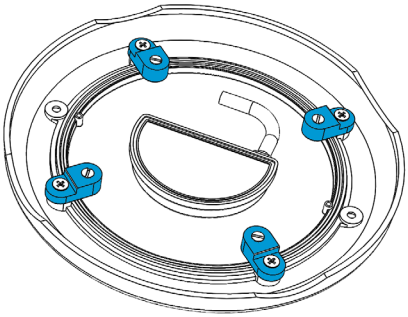

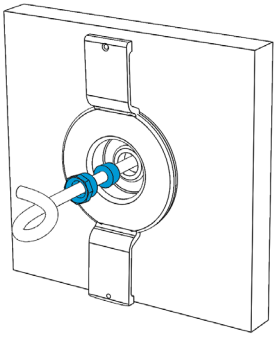

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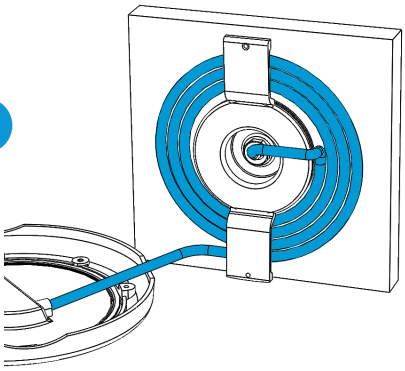
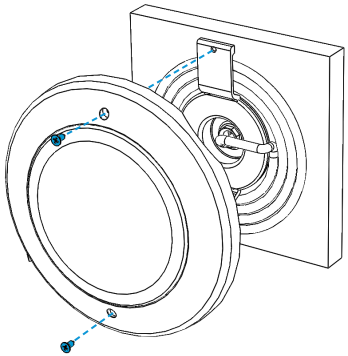
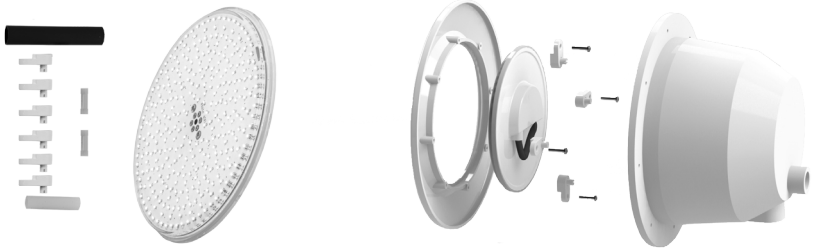




Retrofit with PAR56 niche

1

2



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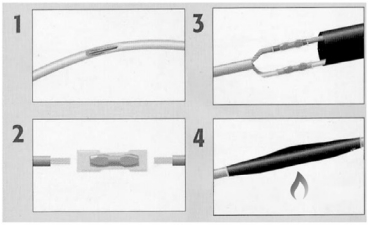
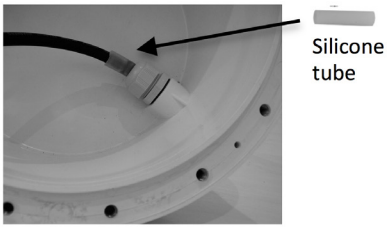


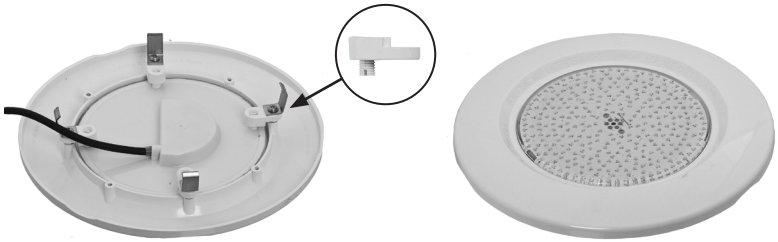
If old cable is re-used

OR



If new (thinner) cable is used

4



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16 Color programs (only for RGB lamps)

1	SUN WHITE	warm white
2	RED	fixed color red
3	GREEN	fixed color green
4	BLUE	fixed color blue
5	GREEN-BLUE	fixed color green-blue
6	RED-GREEN	fixed color red-green
7	BLUE-RED	fixed color blue-red
8	EVENING SEA	slow animation red-blue
9	EVENING RIVER	slow animation red-green
10	RIVIERA	slow animation green-blue
11	NEUTRAL WHITE	cold white
12	RAINBOW	slow animation blue-red-green
13	RIVER OF COLORS	program 12, followed by program 15
14	DISCO	fast animation
15	FOUR SEASONS	slow animation red-blue-green-violet
16	PARTY	fast animation

Operation

Synchronizing multiple lamps:

1. All lamps need to be connected to the same transformer
2. Turn the lamps ON for a few seconds
3. Turn them OFF for MINIMUM 12 seconds, then switch back ON
4. Change the color 2 times. Now they are synchronized

Changing colors:

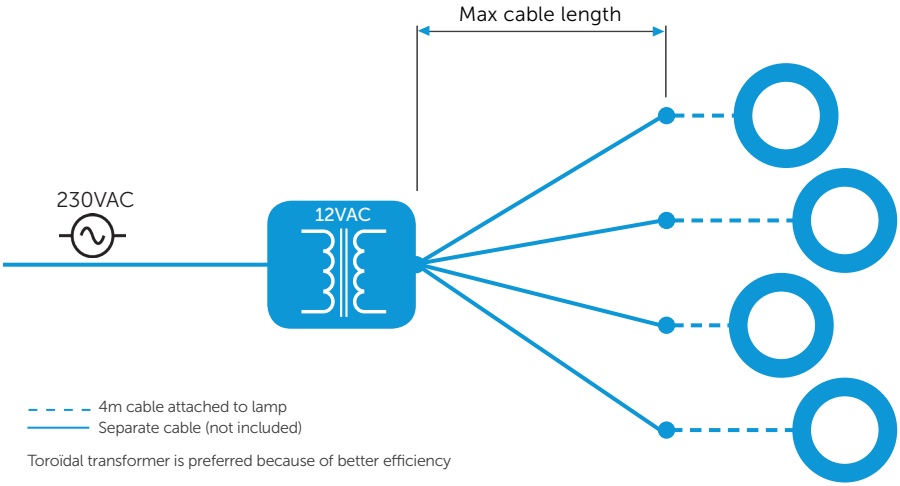
Turn the lamps OFF and quickly back ON (max 10 sec OFF)
Or use our optional remote controllers PL-REM(-60, -200).

Memorizing the last color:

1. Select the desired color
2. Turn the lamps OFF for MINIMUM 12 seconds
3. The chosen color has now been memorized

Wiring instructions Setup 1

Each lamp is connected to the transformer by a separate cable (Preferred for new installations)



LAMP TYPE	MAX CABLE LENGTH BY CABLE SECTION 1,5 mm²	2,5 mm²	4,0 mm²	6,0 mm²	VA TRANSFORMER (12VAC) *
PLS300(B)	70m	120m	180m	200m	16
PLS400(B)	70m	120m	180m	200m	22
PLS700(B)	60m	100m	160m	200m	25
PLW300(B)	90m	150m	200m	200m	18
PLW400(B)	60m	100m	160m	200m	26
PLW700(B)	50m	85m	140m	200m	30

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

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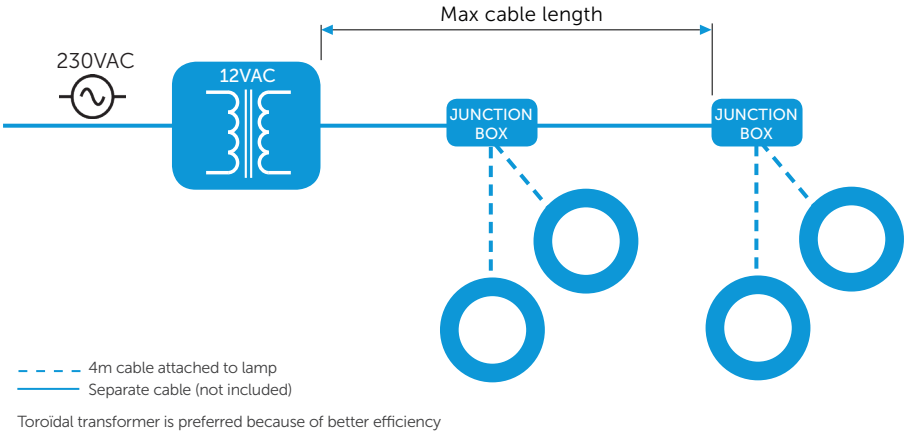
Wiring instructions Setup 2

All lamps are connected to the transformer via 1 cable



Toroïdal transformer is preferred because of better efficiency

LAMP TYPE	QTY LAMPS	MAX CABLE LENGTH BY CABLE SECTION 2,5 mm²	4,0 mm²	6,0 mm²	10,0 mm²	VA TRANSFORMER (12VAC) *
PLS300(B) PLS400(B)	1	120m	180m	200m	200m	16
	2	60m	90m	140m	200m	32
	3	35m	60m	90m	150m	48
	4	25m	40m	65m	110m	64
PLS700(B) PLW400(B)	1	100m	160m	200m	200m	25
	2	50m	80m	120m	200m	50
	3	30m	50m	80m	130m	75
	4	25m	40m	60m	100m	100
PLW300(B)	1	150m	200m	200m	200m	18
	2	75m	120m	180m	200m	36
	3	50m	80m	120m	200m	54
	4	35m	60m	90m	150m	72
PLW700(B)	1	85m	140m	200m	200m	30
	2	40m	70m	100m	170m	60
	3	25m	45m	70m	110m	90
	4	20m	35m	50m	85m	120

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

Troubleshooting

PROBLEM	SOLUTION
The Pool light is flickering or or lights up faint	• Check the output voltage at the transformer terminals. This voltage should be between 12VAC and 13VAC. Verify that the used transformer VA rating is sufficient for powering all connected lamps • Verify if the cables that are used to connect the lamps to the transformer are correctly dimensioned (see tables p. 8-9) • Check if there are no bad contacts or interruptions in the cables.
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 procedure as explained on page 7.

EC Declarations of Conformity

We, the undersigned,

Manufacturer:	**Propulsion Systems bvba**
Address, City:	**Dooren 72, Merchtem BE-1785**
Country:	**Belgium**

Declaration the following apparatus:

Product name:	**LED underwater Light**
Model name:	**Moonlight**
Used as:	PLS300(B), PLS400(B), PLS700(B), PLW300(B), PLW400(B), PLW700(B) PLS600B, PLW600B

Product description: White and color LED lightings for swimming pools and similar applications.

Conform with the essential requirements of the follow standards & directives:

CE directives

EU 1194/2012	ECO Design
EC 1907/2006	REACH
2011/65/EU	RoHS
2004/108/EC	Electromagnetic Compatibility (EMC)
2012/19/EU	WEEE waste electronic equipment

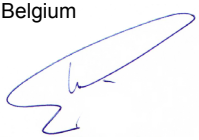
Conformity with the following harmonised norms:

EN60598-1	General requirements and tests
EN60598-2-18	Luminaire Part 2: Luminaires for swimming pools & similar applications
EN55015	Emission
EN61457	Immunity
EN61000-3-2/3	Harmonics
EN50419	WEEE marking
EN 50581:2012	RoHS2

I hereby declare that the equipment above named has been designed to comply with the relevant sections of above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives.

CE

Name: Marc Lamberts
Position: GM
Place: Brussegem, Belgium
Date: 11/10/2013



Contact details

Propulsion Systems bvba
Dooren 72
1785 Merchtem, Belgium

Tel +32 2 461 02 53
Fax +32 2 706 59 60

www.propulsionsystems.be
info@propulsionsystems.be

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