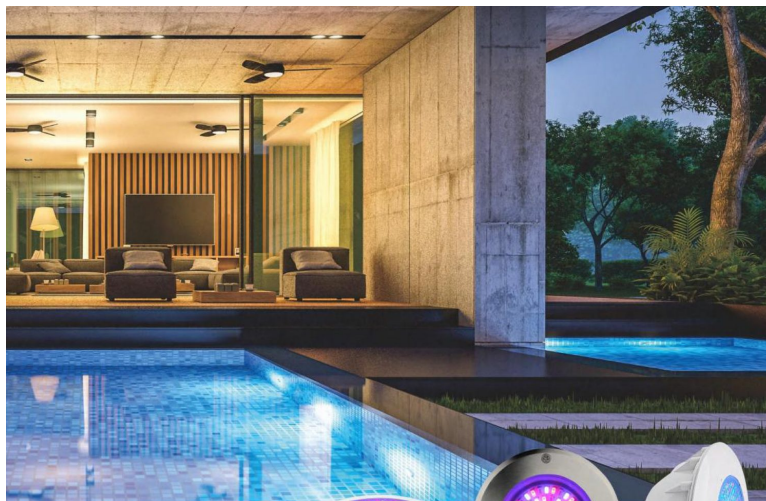




LED Pool Lighting

Underwater LED Lights, Transformers & Controls
Installation, Operation & Maintenance Manual

Product families: Par 56 · Flat/Resin · Skiathos · Spot · INOX — Series 105.xx



Scan for
lighting range

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Contents

1. Safety Warnings
2. Product Range
3. Models — Underwater Lights
4. Models — Spotlights & Replacement Lamps
5. Installation
6. Electrical Connection
7. RGB Control & Operation
8. Maintenance
9. Troubleshooting
10. Spare Parts & Accessories
11. Warranty & Contact

1. Safety Warnings

Read these instructions before installing, connecting or servicing Oxygen underwater LED lights. They apply to all light families (Par 56, Flat/Resin, Skiathos, Spot and INOX wall lights) and to the associated transformers and controllers.

EXTRA-LOW VOLTAGE ONLY

Underwater lights operate at 12 V AC (SELV). They must be powered exclusively through an approved IP68 safety isolating transformer — NEVER connected directly to mains voltage. The transformer must be installed at least 3.5 m from the pool edge and protected by a 30 mA residual-current device (RCD).

SUBMERSION & SEALING

Lights are IP68 and designed for permanent submersion, but every cable gland, niche and connector must be sealed correctly. Water ingress from a poor seal will destroy the LED. Never energise a light in air for more than a few seconds — it must be under water to dissipate heat.

EARTHING & BONDING

The pool structure and all metal parts must be equipotentially bonded per local regulations. INOX (AISI 316) fixtures must be included in the bonding network.

QUALIFIED INSTALLER

Installation and electrical connection must be carried out by a qualified professional in accordance with the national wiring rules for swimming pools (IEC 60364-7-702).

Note: Do not stare directly into an energised LED at close range. For warranty terms and contact details, see the final Warranty & Contact section of this manual.

2. Product Range

Oxygen offers a complete range of 12 V underwater LED lights, in cool-white and RGB (multicolour) versions, for concrete and liner pools:



Oxygen underwater LED lights — flat and Par 56 versions

- **Par 56** — round niche-mounted lights, the most common standard; concrete or liner pools.
- **Flat / Resin** — slim surface-mounted lights (resin-filled for long life), easy to fit.
- **Skiathos** — high-output lights (30–45 W) for larger pools.
- **Spot & Recessed** — compact accent lights (ABS or INOX).
- **INOX wall** — AISI 316 stainless-steel wall lights for a premium finish.
- **PAR56 replacement lamps** — retrofit lamps for existing Par 56 niches.

Common characteristics

Parameter	Value
Supply voltage	12 V AC (SELV, via IP68 transformer)
Ingress protection	IP68 (permanent submersion)
Lens / body	PC lens; resin/ABS body (AISI 316 on INOX models)
Light colour	Cool white (~6500 K) or RGB 9-mode multicolour
Rated lifetime	≥ 50,000 h
Beam angle	~120°

3. Models — Underwater Lights

Par 56 (niche-mounted)

Code	Description	Power	Pool
105.01.42	Par 56 cool white, plastic niche	18 W	Concrete
105.01.43	Par 56 RGB 9-mode, plastic niche	18 W	Concrete
105.01.44	Par 56 cool white, plastic niche	24 W	Concrete
105.01.45	Par 56 RGB 9-mode, plastic niche	24 W	Concrete
105.01.46	Par 56 cool white, plastic niche	18 W	Liner
105.01.47	Par 56 RGB 9-mode, plastic niche	18 W	Liner
105.01.48	Par 56 cool white, plastic niche	24 W	Liner
105.01.49	Par 56 RGB 9-mode, plastic niche	24 W	Liner

Flat / Resin surface lights

Code	Description	Power	Colour
105.01.32 / .33	Flat resin light, 12 W	12 W	Cool / RGB
105.01.34 / .35	Flat resin light, 18 W	18 W	Cool / RGB
105.01.36 / .37	Flat resin light, 24 W	24 W	Cool / RGB
105.01.38 / .39	Flat underwater light, 18 W	18 W	Cool / RGB
105.01.40 / .41	Flat underwater light, 24 W	24 W	Cool / RGB
105.01.60 / .61	Luminux flat light (2137 / 924 lm)	18 W	Cool / RGB

Skiathos & INOX wall

Code	Description	Power	Pool
105.50.10	Skiathos cool white	30 W	Concrete
105.50.11	Skiathos RGB	45 W	Concrete
105.50.12	Skiathos cool white	30 W	Liner
105.50.13	Skiathos RGB	45 W	Liner
105.01.79	AISI 316 wall light, cool white	12 W	All
105.01.80	AISI 316 wall light, RGB 9-mode	12 W	All

4. Models — Spotlights & Replacement Lamps

Spot & recessed lights

Code	Description	Power	Colour
105.01.84 / .84C	Ultra-thin LED spot	6 W	Cool / RGB
105.01.53 / .56	LED spot, 450 lm	6 W	Cool / RGB
105.01.54 / .57	LED spot, 450 lm	9 W	Cool / RGB
105.01.55 / .58	LED spot, 450 lm	12 W	Cool / RGB
105.01.94 / .95	Recessed spot, ABS	8 W	Cool / RGB
105.01.96 / .97	Recessed spot, INOX	8 W	Cool / RGB

PAR56 replacement lamps

Retrofit lamps for existing Par 56 niches (bulb only):

Code	Description	Power	Colour
105.13.35	PAR56 lamp cool white	18 W	Cool white
105.13.36	PAR56 lamp RGB 9-mode	18 W	RGB
105.13.37	PAR56 lamp cool white	24 W	Cool white
105.13.38	PAR56 lamp RGB 9-mode	24 W	RGB

5. Installation

BELOW WATER LEVEL

Underwater lights must be mounted so the fixture is permanently below the lowest water level (typically 40–60 cm below the coping). Never position a light where it can run dry.

Oxygen underwater lights suit every pool construction — concrete (with conduit or niche), concrete + liner, fibreglass and panel + liner:

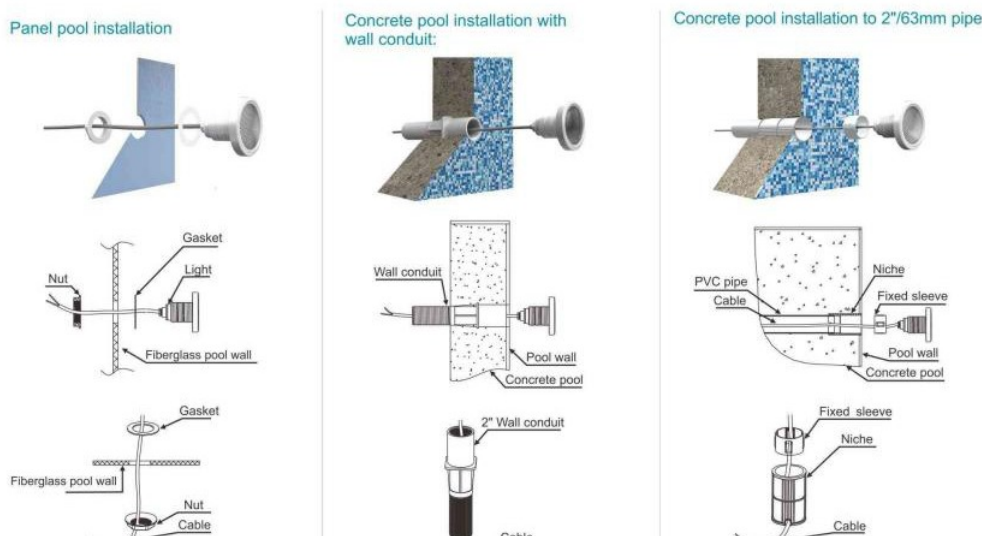
Suitable for all kinds of pools



Suitable for all pool types

Niche-mounted lights (Par 56)

The niche is fitted into the pool wall and connected to a conduit that carries the cable to a dry junction box above water. The method depends on pool type, as shown below.

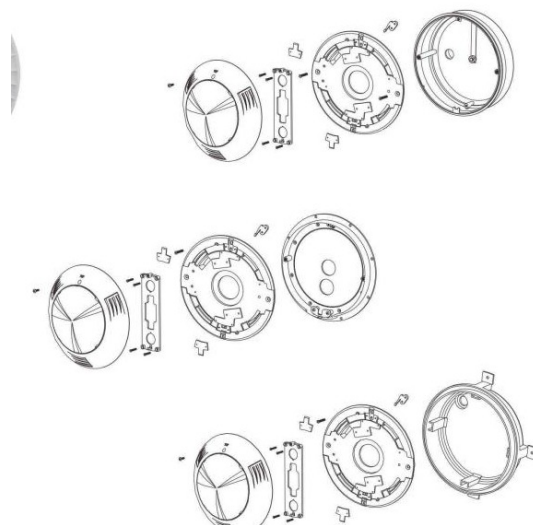


Niche installation — panel pool, concrete pool with conduit, and concrete pool with 2"/63 mm pipe

- Fit the niche (105.01.59) into the wall; seal the conduit connection watertight.
- Leave a service loop of cable in the niche so the light can be withdrawn for lamp changes.
- Route the cable through the conduit to a junction box mounted at least 3.5 m from the pool.

Flat / surface-mounted lights

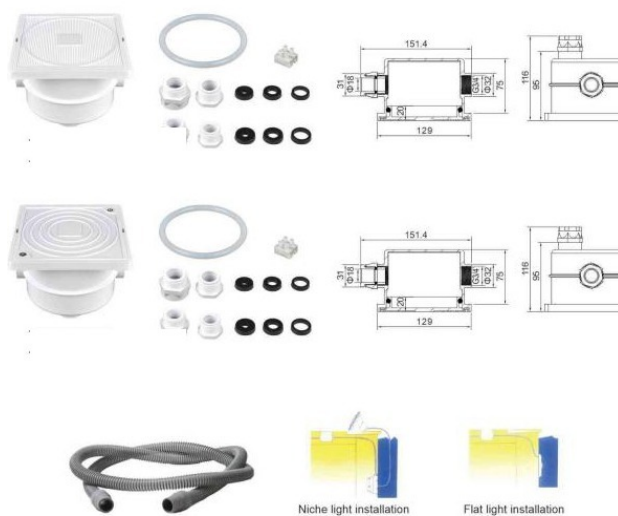
Flat lights mount directly on the wall over a recessed back-box or flush plate. The exploded view shows the sealing sequence — gasket, body and front ring.



Flat light — assembly / sealing sequence

Cable, hose & junction box

Use the flexible protection hose (3/4") between niche and wall, and terminate the cable in the ABS junction box with IP68 glands. Use pool-rated H07RN-F 2×2.5 mm² cable (105.27.50).



Junction box, glands, flexible hose — niche vs flat installation

6. Electrical Connection

IP68 TRANSFORMER — 12 V AC

Every light circuit must be fed from an IP68 safety isolating transformer (12 V AC output), protected by a 30 mA RCD. Never connect a light to mains voltage.



Waterproof IP68 transformers for pool lights

Transformer sizing

Choose a transformer whose rated power is at least 25% above the total wattage of the lights on the circuit (allowing for cable losses). Available Oxygen IP68 transformers:

Code	Transformer (12 V AC output)	Power
105.05.18	Waterproof IP68 transformer	100 W
105.05.19	Waterproof IP68 transformer	150 W
105.05.20	Waterproof IP68 transformer	200 W
105.05.21	Waterproof IP68 transformer	300 W
105.05.22	Waterproof IP68 transformer	400 W
105.05.23	Waterproof IP68 transformer	600 W

Wiring

- Connect lights in parallel to the 12 V transformer output.
- Keep cable runs as short and equal as possible to avoid voltage drop and uneven brightness.
- Make all underwater/buried joints with IP68 waterproof connectors only.
- Total connected light wattage must not exceed ~80% of the transformer rating.

7. RGB Control & Operation

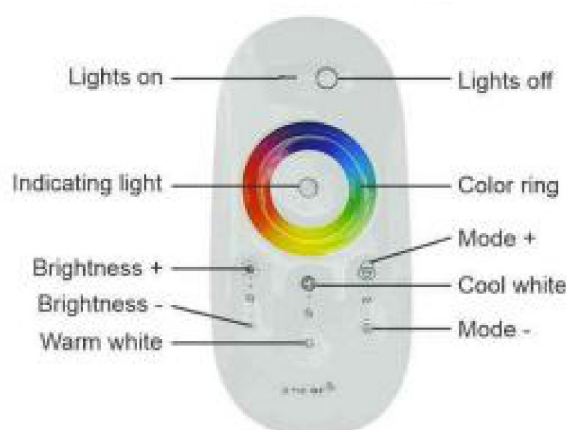
Cool-white lights

Cool-white lights are simply switched on and off from the supply / wall switch.

RGB (multicolour) lights

RGB lights have 9 built-in colour/effect modes. Without a controller, the mode advances each time the light is switched off and on again; the light memorises the last mode. For full colour and brightness control, use an Oxygen RGB controller.

RGB controllers & remote / app



RGB touch remote — colour ring, brightness and mode control

Code	Controller	Power
105.05.14	RGB control system with transformer + remote	100 W
105.05.15	RGB control system with transformer + remote	150 W
105.05.16	RGB control system with transformer + remote	300 W
105.05.17	RGB control system (add to existing transformer)	—

- 2.4 GHz wireless remote, effective range up to 30 m; touch colour ring and brightness dimming.
- Multiple automatic change modes; synchronises all lights on the circuit.
- App-capable models add smartphone control and linkage with pool equipment.

8. Maintenance

ISOLATE FIRST

Switch off and isolate the transformer before removing any light.

- Periodically inspect gaskets, O-rings and cable glands; replace any that are perished.
- Clean the lens gently with a soft cloth; do not use abrasive or solvent cleaners.
- Check that the light stays fully submerged as the water level changes.

Replacing a Par 56 lamp

Withdraw the fixture from the niche using the service loop, open the housing, replace the PAR56 lamp (105.13.35–38) with the same wattage, renew the seal and refit. Do not energise the lamp in air.

Winterising

If the pool water level is dropped below the lights for winter, disconnect them so they cannot be energised while exposed.

9. Troubleshooting

Symptom	Possible cause	Action
Light does not come on	No 12 V supply / transformer off	Check RCD, transformer and wiring
	Blown transformer (overload)	Check total wattage vs rating; replace
Dim or uneven brightness	Voltage drop on long cable	Shorten run / increase cable size
Flickering	Loose or corroded connection	Remake joint with IP68 connector
RGB colour will not change	Fast on/off cycling	Cycle slowly, or use the RGB controller
Condensation / water inside lens	Failed seal or gland	Replace light and renew all seals
Remote has no effect	Out of range / battery / not paired	Move within 30 m, replace battery, re-pair

If a fault persists, isolate the circuit and contact your Oxygen dealer. Do not open a light under water.

10. Spare Parts & Accessories

Order genuine Oxygen parts, quoting the code from the tables above and the pool/light type:

- PVC niche with cable sealer — 105.01.59
- IP68 transformers 100–600 W — 105.05.18–23
- RGB control systems + remote — 105.05.14–17
- PAR56 replacement lamps — 105.13.35–38
- Pool light cable H07RN-F 2×2.5 mm² (50 m roll) — 105.27.50
- IP68 waterproof connectors, junction box and flexible hose

Note: Use only 12 V SELV components and IP68-rated accessories. Never substitute mains-voltage parts.

11. Warranty & Contact

Warranty

Oxygen LED pool lights are warranted against manufacturing defects under the terms of the accompanying warranty card, from the date of purchase. The warranty does not cover damage from incorrect installation, water ingress due to poor sealing, connection to mains voltage instead of a 12 V SELV transformer, operating the light in air, chemical imbalance or unauthorised repair.

Installation and electrical connection must be carried out by qualified personnel. Keep your proof of purchase and quote the product code when requesting service.

Contact Information

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ISO Certifications

ISO 9001:2015 Quality Management <i>EUROCERT</i>	ISO 14001:2015 Environmental Management <i>BQV</i>	ISO 45001:2018 Health & Safety <i>BQV</i>
ISO 22301:2019 Business Continuity <i>EUROCERT</i>	ISO 46001:2019 Water Efficiency <i>BQV</i>	

Recycling of materials must be carried out in accordance with applicable regulations.