

Mod-Lite™ LED Light



IP68



ERAC Registration No. E3011



Installation Instructions

Read all instructions before attempting to perform installation work
Installation information applies to current and future Mod-Lite™ models unless otherwise specified.

Patent Pending.

79-15281-00-INT



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IMPORTANT INSTALLATION INFORMATION

Ensure that the electrical system for your pool conforms with all National and Local Regulatory requirements¹.

1. This 12VAC Underwater Light must be installed in accordance with all National and Local Regulatory requirements by a Certified Electrician or a Qualified Pool Technician.
2. Waterproof conduit must be used from the S.R.Smith Mod-Lite™ LED Light to the 'above ground' power supply equipment.
3. For supply connection, use only an isolating low voltage power supply with ungrounded output, evaluated for swimming pool use.
4. **For operation only with safety isolating transformer. DO NOT CONNECT THIS 12VAC LIGHT DIRECTLY TO A MAINS 220~240VAC CIRCUIT - LIGHT WILL BE DAMAGED.**
5. Fit your S.R.Smith Mod-Lite™ LED Light/s as outlined in the following detailed installation instructions.
6. Except when the luminaire is installed in an area of the swimming pool that is not used for swimming and the lens is adequately guarded to keep any person from contacting it, the luminaire shall be installed in or on a wall of the pool, with the top of the lens opening not less than 100 mm (4 inches) below the normal water level of the pool.

NOTE: This light system is not intended to seal water out of the wall fitting. Water will eventually fill the conduit so be sure the conduit is watertight and terminates above ground.

CONNECT ONLY TO POWER SUPPLY INTENDED FOR USE WITH SUBMERSIBLE LUMINAIRES

THIS DEVICE IS NOT INTENDED FOR USE WITH EMERGENCY EXITS



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1. Electrical Standard AS/NZ 3000: 2007

OVERALL DIMENSIONS

ELECTRICAL SPECIFICATION

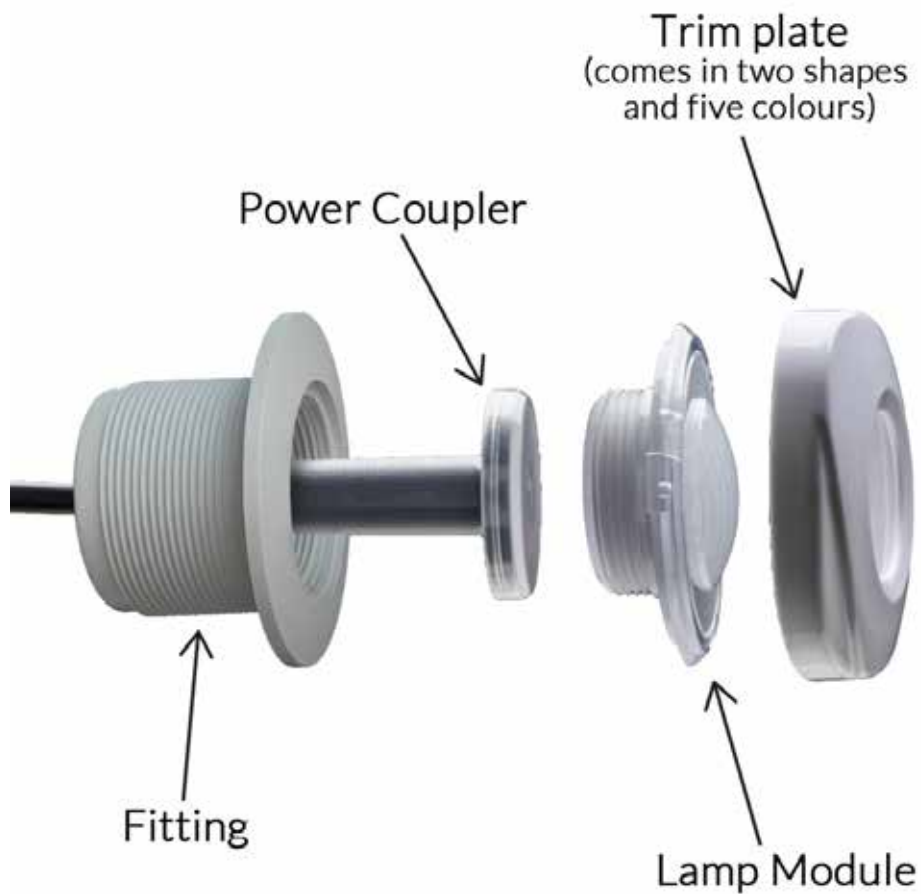
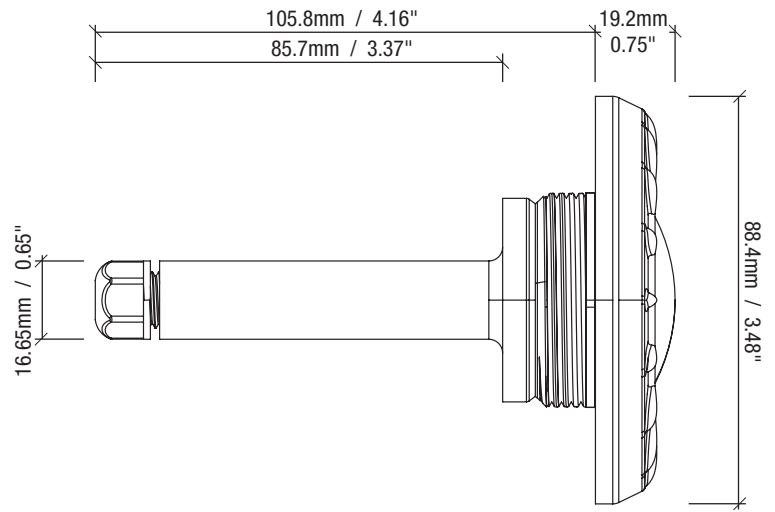
Input Voltage: 12VAC

Colour Change (RGB): 7 Watts max.

White Light Only: 7 Watts max.

COLOUR CONTROL

Basic 12VAC mode (off/on control toggling)



WALL FITTING INFORMATION

WALL FITTING FIT CHART 1.1

Brand	p/n	type	face-to-stop (internal) depth in mm (inches)	Use with spacer
SR Smith	LNS-2G	concrete	22.6mm (0.89)	No
SR Smith	LNS-2A	fiberglass	22.6mm (0.89)	No
SR Smith	LNS-2V	vinyl liner	28.9mm (1.14)	Yes
SR Smith	LNS-2GI	insider concrete (flangeless)	20.8mm (0.82) fitting only 22.6mm (0.89) plaster-to-stop required	No
Pentair	542404	concrete	22.6mm (0.89)	No
Pentair	542402	concrete	23.6mm (0.93)	No
Pentair	542414	fiberglass	23.1mm (0.91)	No
Pentair	542429	vinyl liner	23.4mm (0.92)	No
Pentair	86205100	vinyl liner	32mm (1.26)	Yes
Hayward	SP1022S	concrete	23.4mm (0.92)	No
Hayward	SP1022	concrete	23.8mm (0.94)	No
Hayward	SP2023S	fiberglass	23.4mm (0.92)	No
Hayward	SP1408A	vinyl liner	30.7mm (1.21)	Yes

The fittings referenced above have been tested for positive fitment.

For fittings not referenced above but that exhibit a face-to-stop depth range of **22.6mm – 32mm** (0.89" – 1.26") can be used and should have similar installation characteristics (Spacer/No Spacer Required) to the tested fittings.

For fittings with a face-to-stop depth of **25.4mm (1")** or greater the supplied spacer may need to be used.

For fittings with less than **22.6mm (0.89")** face-to-stop (internal) depth will have issues with gapping between the lamp module and wall fitting face. Fittings in this range are not recommended.

Due to manufacturing tolerances of white goods, even items from the chart may be tight in the diameter of the threaded area near the stop. Fortunately, this is easily addressed if the face to internal stop depth is between **22.6mm – 31.7mm (0.89" – 1.25")**. If the internal diameter of the wall fitting is tight, simply using a fine to medium grit sand paper to knock down the thread height in the lower threaded portion (last 2-3 threads) near the stop will provide the needed clearance – heavy sanding is not required.

DO NOT sand completely through the threads.

DO NOT sand the upper threads near the front face of the fitting.

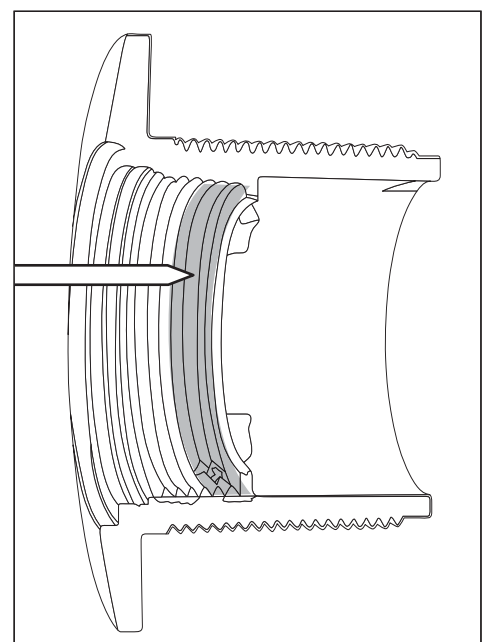


Illustration A

INSTALLATION INSTRUCTIONS

FOLLOW PROPER WIRING PRACTICES IN ACCORDANCE WITH ALL NATIONAL AND LOCAL REGULATORY REQUIREMENTS.

Universal 40mm (1.5") wall fittings for pools or spas

1. Lights are intended to be installed in no less than **450mm (16")** below the normal water level unless the luminaire has been investigated for use at lesser depths. S.R.Smith lights have been investigated and identified for use at depths no less than **100mm (4")** below the normal water level. Max depth is **915mm (36")** below water surface. All depth measurements are from the normal water level to the top of the Luminaire lens.
2. Fit an S.R.Smith LNS-2G, LNS-2A, LNS-2V or similar (see chart 1.1), **40mm (1.5")** pool wall fitting into the pool wall at the selected location. Watertight PVC conduit must be used from the wall fitting to the above water/ground level conduit termination on the equipment or supply side of the 12V AC line. Please refer to the Typical Installation illustration below.
3. To confirm that the wall fitting will accept the Power Coupler to the full depth, simply insert the head of the Power Coupler into the wall fitting from the front, pool side (**Illustration B**). If it reaches the internal stop, proceed to step 5. If there is interference from the ID of the threads, go to step 4.
4. Assuming that the fitting you are working with falls within the acceptable range of measurements in **Chart 1.1**, the diameter interference is most likely due to injection tolerances of the fitting itself. This can be addressed with the careful application of some medium grit sand paper or a sanding drum on a rotary tool - see **Illustration A**, page 6. Carefully and gradually use the sanding device to take some material off of the circumference of the threads in the affected area. Do not sand more than $\frac{1}{4}$ of the thread height or you risk sanding through the threads.
Take your time and go gradually - test often (step 3) until Power Coupler fits snugly at the internal stop.
5. Referring to the **Chart 1.1** on page 6, check the face-to-stop distance on the wall fitting to be used. If the distance is between **22.6mm - 25.4mm (0.89" - 1")** the black foam rubber spacer on the Power Coupler is not required and should be cut off with scissors. If the face-to-stop distance is greater than **25.4mm (1.0")** the black foam rubber spacer should remain on the Power Coupler.

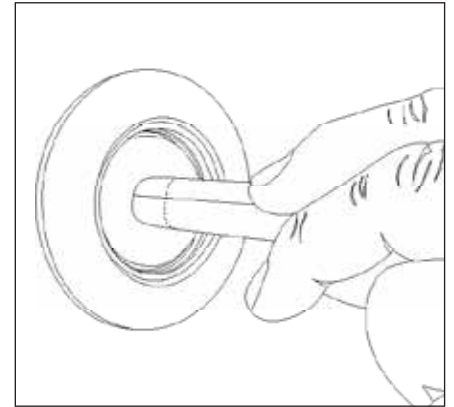


Illustration B

6. Fit the Power Coupler module cord end first into the **40mm (1.5")** wall fitting and carefully pull most of the waterproof supply cable through to the power equipment. **ONLY** pull the cord until the face of the Power Coupler is flush with the front face of the wall fitting (see **Illustration D**), **DO NOT PULL FURTHER**.
7. Attach the desired trim plate to the Mod-Lite™ LED lamp module by lining up the 3 tabs on the plate to the 3 notches in the lamp module. Holding the lamp module by the threaded section, twist the trim plate clockwise until it reaches the end of the rotational adjustment range just under ¼ turn – see **Illustrations E & F**
8. Holding the LED lamp module by the trim plate, position the threaded portion at the mouth of the wall fitting. Thread the lamp assembly into the wall fitting by applying gentle but firm pressure while twisting clockwise until secure. Be sure to not cross thread the lamp into the wall fitting. The depth position of the Power Coupler will be determined by the threaded position of the lamp module. If binding occurs before the lamp is bottomed on the wall fitting face, **STOP**. Unthread the lamp module and inspect the fitting to be sure that the Power Coupler can fully seat on the internal stop in the fitting **AND** that the stop is at least **22.6mm (0.89")** deep (see **Chart 1.1**), **AND** that the wall fitting threads are in good shape. **DO NOT** Over-tighten the light as damage may occur.
9. Connect the red / black wire conductors of the S.R.Smith Mod-Lite™ to an approved, low voltage, isolating type Power Source that complies with National and Local Regulatory requirements².
10. The Mod-Lite™ is now ready for use and will operate similar to any of the SR Smith family of LED lights.

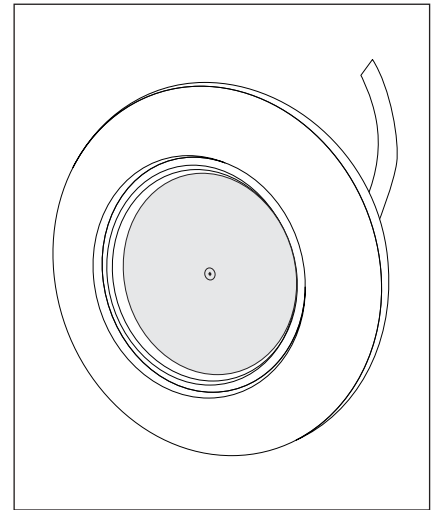


Illustration C

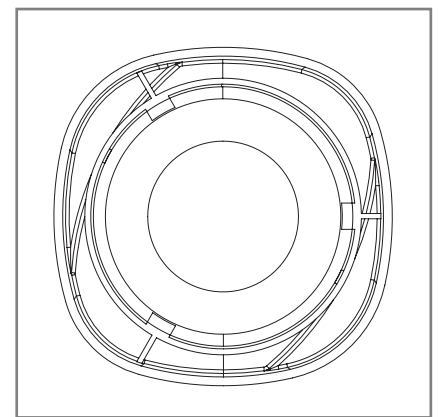


Illustration D

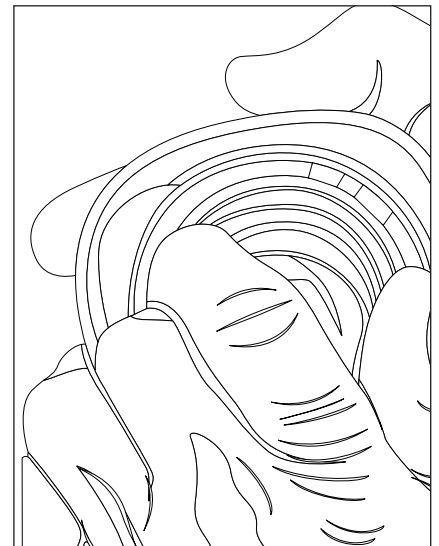


Illustration E



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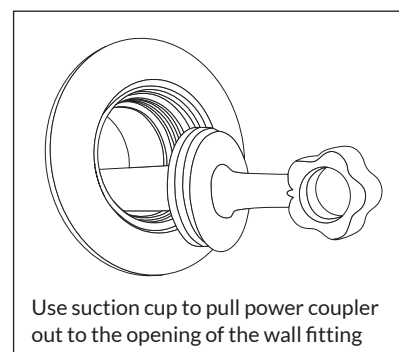
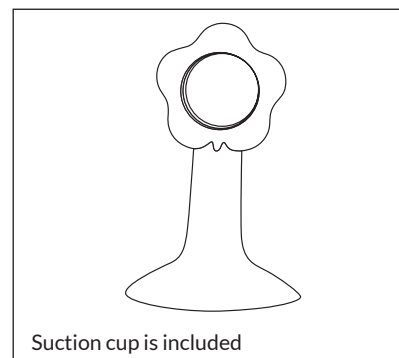
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SUCTION CUP TOOL

The blue Suction Cup tool is for extraction of the Power Coupler in the event the Power Coupler needs to be repositioned or removed. It is intended to grab the large flat face of the Power Coupler and bring it towards the opening of the wall fitting. If the cord has not been pulled back fully as outlined on step 6, on page 8, this will allow full access to the Power Coupler. To extract the Power Coupler:

1. Wet or moisten the suction cup side of the tool.
2. Use a rag to wipe out any debris from the face of the Power Coupler.
3. Place the suction cup side of the tool, centered into the wall fitting and place it against the face of the Power Coupler – push gently.
4. Pull on the tool to bring the Power Coupler out to the opening of the wall fitting.
5. To remove the tool, simply slide the suction cup off sideways from the Power Coupler. Place the tool in secure storage for future use.



TYPICAL INSTALLATION

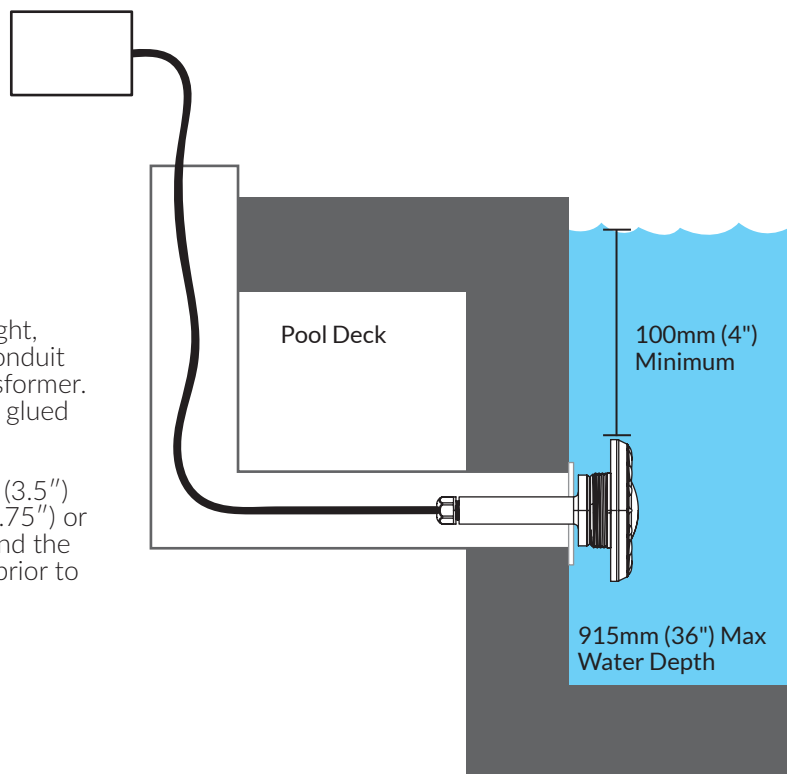
The figure below illustrates a typical Mod-Lite installation in PVC conduit.

*Approved 12VAC
isolating type
Power Source

See #9 on the
previous page.

40mm (1.5") watertight,
underground PVC conduit
back to 12VAC transformer.
All fittings should be glued
and watertight.

*Minimum of 90mm (3.5")
of straight, 20mm (0.75") or
greater conduit behind the
wall fitting required prior to
any bends or turns.



Luminaire was
investigated and identified
for use in minimum of
100mm (4.0") or more
below the normal water
level of the pool.

Optimal lighting
coverage may be found
at 254 - 305mm (10-12")
below water level.
Maximum depth is
915mm (36")

BASIC OPERATION FOR LED COLOUR CHANGING LAMP (RGB)

When connected to an approved, 12VAC, Isolating type power supply - The S.R.Smith Mod-Lite™ LED colour changing light uses simple 'off / on' power switching to control the basic, predefined colour modes with memory function.

Memory

The memory function remembers the last colour setting. For example, if the light was last used in the blue mode, the next time the light is turned on it will be blue mode.

Colour Mode Selection

The LED will turn on to the colour in memory. To move to the next colour mode, quickly (within one second or faster) toggle the power to the lights 'OFF / ON'.

Advance through the modes until the desired mode is selected. The modes will cycle 1,2,3,4,5,6,7,8, then cycle back to 1. See table for details.

COLOUR MODE SELECTION GUIDE	
Mode 1	Soft Colour Change
Mode 2	White
Mode 3	Blue
Mode 4	Green
Mode 5	Red
Mode 6	Amber
Mode 7	Magenta
Mode 8	Flash Colour Change

Colour Sync Reset

To synchronize all lights on the system you must use the following sequence:

1. Turn lights 'ON' to confirm the colour modes are out of sync.
2. Turn lights 'OFF' for 5 seconds or more.
3. Toggles lights 'ON' / OFF' three times within three seconds - must end in 'OFF' condition
4. Leave lights in 'OFF' condition for 5 seconds.
5. Turn lights 'ON' and confirm that all lights are in mode #1, Soft Colour Change

THERMAL PROTECTION

This light is equipped with a thermal protection circuit built into the LED lamp assembly. If the circuit detects that the lamp assembly is getting too hot for a given environment, it will automatically reduce the brightness in increments until the lamp remains below the thermal threshold. If this condition occurs, it may or may not be noticeable by the human eye and is a normal function, not a sign of malfunction or failure.



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Mod-Lite™ MAINTENANCE INSTRUCTIONS

1. Remove Lamp Module by unscrewing the Lamp Module from the wall fitting. It is OK to use the trim plate for grip and leverage, just keep the tabs engaged in the track by pushing the trim plate on towards the Lamp Module.
2. Use a damp cloth to wipe the back of the Lamp Module clean from any dirt or debris that may have settled. Do the same to the front (pool side) of the Power Coupler inside the wall fitting. The Power Coupler does not need to be removed to perform this step.
3. Use the suction cup tool to pull the Power Coupler flush with the face of the wall fitting. Remove the suction cup tool.
4. Reattach the trim plate to the Lamp Module by lining up the 3 tabs of the trim plate to the notches in the Lamp Module and turning the trim plate clockwise to engage.
5. Holding the LED lamp module by the trim plate, position the threaded portion at the mouth of the wall fitting. Thread the lamp assembly into the wall fitting by applying gentle but firm pressure while twisting clockwise until secure. Be sure to not cross thread the lamp into the wall fitting. The depth position of the Power Coupler will be determined by the threaded position of the lamp module. If binding occurs before the lamp is bottomed on the wall fitting face, STOP, remove the Lamp Module inspect for thread damage and carefully try again.

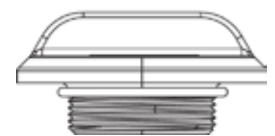
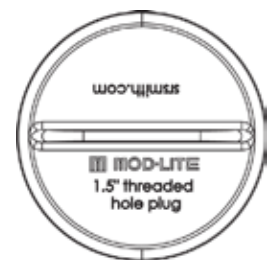
Depending on water chemistry, installation environment and usage patterns, the Mod-Lite™ may require occasional maintenance for consistent performance. Maintenance may be timed to coincide with seasonal closing and opening of pools. For pools that operate year-round, S.R.Smith recommends that maintenance should be performed once a year.

WINTERIZATION

NOTE – If water is trapped in conduit, damage may occur from freeze expansion.

1. Swimming Pools may or may not be drained completely. If not drained completely, the water level should be lowered below the S.R.Smith Mod-Lite LED Light and make sure that all water is drained from the wall fitting and conduit by removing the Lamp Module and letting the water drain out, then replacing the Lamp Module. This will require that the water level remain below the wall fitting level for the duration of the 'winter' season.
2. Alternatively, the S.R.Smith Mod-Lite LED Lamp Module may be removed completely, the conduit purged of all water, and the custom 44mm (1½") Threaded Hole utility plug with triple density, PTFE thread sealing tape may be used to close the wall fitting. As there are differences in wall fitting types in both new or used condition, the wall fitting should be inspected to determine the suitability of the custom 44mm (1½") Threaded Hole utility plug and it's ability to seal the fitting.

DO NOT USE a standard 'Off the shelf' threaded plug part as the deeper depth may damage the Power Coupler.



Part # MLED-THP