

# **TECHNOLOGY**



# Heat Sense

Automatically reduces LED power at high temperatures, ensuring longevity and safety in Filix products.



## Flow Sense

A built-in protector against power-related issues, ensuring lasting performance and safety.



# Split & Seal

Uses protective polymers to shield Filix products from water and moisture, boosting durability and resilience.















Specification Sheet





UL STD 676 water feature and fountain rated IP68

#### LUMINAIRE FEATURES

## Design and Application

Powerfull projector for medium to large installations

### Mechanical details

- IK10 crystal-clear tempered glass, 10mm (0.39") thick
- IP68, rated for permanent submersion
- Maximum installation depth up to 5m (16')
- AISI316L stainless steel body
- Suitable for chlorine and marine environments
- Supplied with 3m(10') oil and water resistant feed cable as standard
- Surface mount with adjustable bracket
- · Galvanic protection
- Electrical details
- LED Lifetime TM-21 @ 105°C
   L80(24K) = 145,000 hours
- Operating temperature: -20°C (-28°F) to +50°C (122°F)
- LED CRI: >85
- 3 step MacAdam
- · Remote power supply
- Low voltage operation

## Sustainabilty

· Recyclable materials

# Controls

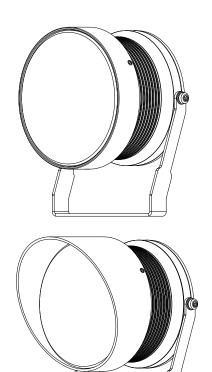
- DMX, with compatible LED power supply
- DALI, with compatible LED power supply
- 0-10V, with compatible LED power supply
- Mains, with compatible LED power supply

## Integrated systems

- · Split & Seal
- Heat Sense
- Flow Sense

## Links and Downloads

- List of available drivers
- Voltage drop calculator
- Fixture installation manual
- CAD file
- IES-LTD data



Ø104mm X H139mm X L98/135mm

### Note

Underwater luminaire – must be constantly submersed.





# ORDERING INFORMATION

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• AXMP - H-139mm x Ø104mm x L-98mm

( H-4,5"x Ø4,1"x L-3,9" )

• AXMPS - H-139mm x Ø104mm x L-135mm

(H-4,5"x Ø44,1"x L-5,3")

**POWER** 

• L - 21W 2700/3000/4000K, 1700 lm

• L - 21W RGBW (W 4000K)

COLOR TEMP.

• 27 - 2700K

• 30 - 3000K

• 40 - 4000K

• TW - Tunable white (2200-4000K)

RGBW • RGBW (W 4000K)

**OPTICS** 

• SP - Spot - 15°

• FL - Flood - 40°

• W - Wide - 70°

• SE - Eliptical - 20°x 120°

• SPX - Spot - 15° + hex

• FLX - Flood - 40° + hex

• WX - Wide - 70° + hex

**VOLTAGE** 

• 12 - 12VDC fixture voltage

• 24 - 24VDC fixture voltage

**OPTIONS** 

• 3\* - standard feed cable 3m (10')

• 6 - luminaire supplied with 6m (20') feed cable

• 9 - luminaire supplied with 9m (30') feed cable

• 20 - luminaire supplied with 20m (65') feed cable

**GLARE CONTROL** 

• 1 - Half moon





# MANDATORY ACCESSORIES

# Power supplies



• List of available drivers





# **OPTIONAL ACCESSORIES**

Telescopic soft bed spike - TSBS

# 

# Telescopic bracket - TB

LENGTHS	
03	• 03 - 300mm lenght
13	• 13 - 1300mm lenght
OPTION	
S	• S - Single
D	• D - Double

# Various Accessories

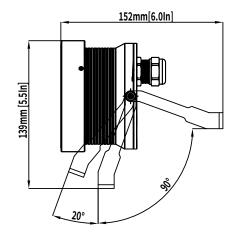


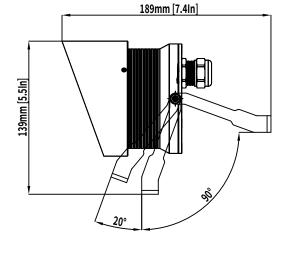


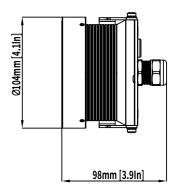


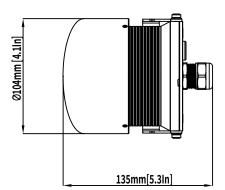
# **INSTALLATION DETAILS**

# **Fixture**









Note

For details on specific depths, tiling thickness and other please refer to both Installation instructions for fixture and housing.





# MANDATORY ACCESSORIES

### Power supply

A LED power supply, is an electrical device designed to control the power supplied to an LED or an array of LEDs. It plays a critical role in LED lighting systems as LEDs demand a specific type and level of electrical current or voltage for optimal operation. It's important to note whether a constant current or constant voltage LED power supply is required. The power supply should be installed in a dry and easily accessible area.







# **ACCESSORIES**

## Waterproof wall duck

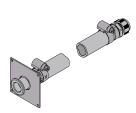
Ensures a secure, watertight transition between the water body and the concrete shell, with adjustable features to accommodate different wall thicknesses.

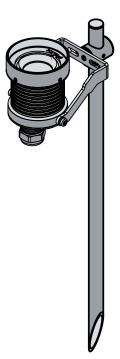
## Telescopic soft bed spike

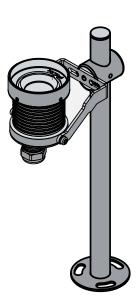
The Filix telescopic soft bed spike, offered in both 550mm and 1550mm lengths, ensures stable ground support for outdoor lighting installations in soft ground beds. It is suitable for mounting up to 2 projectors.

## Telescopic bracket

Telescopic bBracket, offered in both 300mm and 1300mm heights, provides secure and adjustable support for outdoor lighting installations. It is suitable for mounting up to two projectors.











# **GLARE CONTROL**

## Internal glare control:

#### Hex louvre

Provides low glare control with 45% less lumen output than product without louvres. Best for use when there is no need for segment beam cut off such as in half moon

#### Half moon

Provides glare control by reducing lumen output and implementing a light beam cut-off, resulting in a 50% reduction in stray light and minimized light dispersion in undesirable directions.

#### Honeymoon

Combines the benefits of Hex Louvre and Halfmoon, offering both reduced glare and controlled light dispersion for comprehensive glare management.









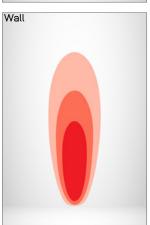


# **OPTICS**

**Spot** Angle: 15°

Delivered lumen: 1700lm





**Spot + Hex** Angle: 15° Delivered lumen: 935lm





Flood Angle: 40° Delivered lumen: 1200lm





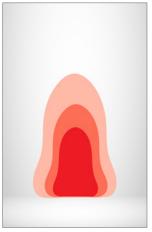
Flood + Hex Angle: 40° Delivered lumen: 660lm





**Wide** Angle: 70° Delivered lumen: 800lm





**Wide + Hex** Angle: 70° Delivered lumen: 440lm





## Notes

• Light output values based on 21W and 3000K product





# **ON/OFF SYSTEM TOPOLOGY**

## Integrated systems:

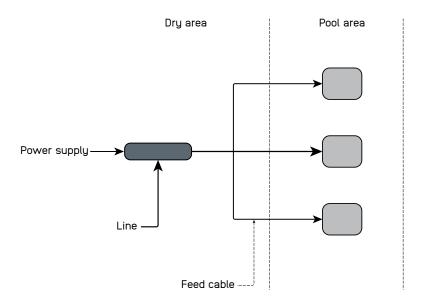
- · Heat Sense
- · Flow Sense
- · Split & Seal

### System components

- · Wiring and additional accessories leading up to the product feed cable are the responsibility of others.
- · Housing and neccessarry accessories that are marked as mandatory must to be ordered separately

## System topology

• In the system design, any of the following system topologies can be utilized: line wiring, star wiring, or tree wiring.



# Addressing & dimming notes

- ON/OFF system does not allow device addressing
- Dimming of the product not avaliable in this system

## Segment length and limitations

- For parallel connections of multiple fittings circuit size is constrained by the power supply ratings and a maximum allowable voltage drop of 10%.
- All wire splicing should be performed in a dry area to ensure a proper connection.
- Used in single colour applications

#### Fault tolerance

• In a parallel connection, if one product fails, the rest of the system continues to work.





# 0-10V SYSTEM TOPOLOGY

#### Integrated systems:

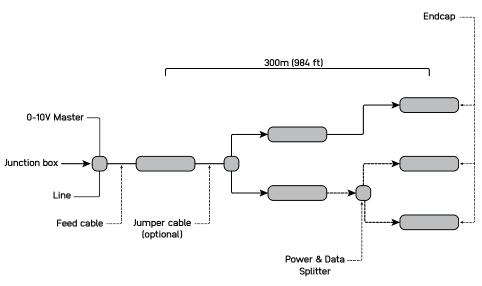
- X Line
- · Heat Sense
- · Split & Seal

### System components

- The 0-10V system, wiring, protective devices and junction boxes leading up to feed cable at the start of the line are the responsibility of
- · Feed cables and neccessarry accessories that are marked as mandatory must to be ordered separately
- · For optional branching of the system Power & Data Splitter must be used
- Advised protective components: · Surge protector device
  - · Inrush current limiter

### System topology

· In the system design, any of the following system topologies can be utilized: line wiring, star wiring, or tree wiring.



#### Addressing & dimming notes

- 0-10V protocol does not allow addressing devices individually
- The product is initially equipped with linear dimming settings and it is suggested for the controlers to be logarithmic in order to get the dimming that is most preferred in most cases due to the dimming curve perceived by human eye
- 0%-100% dimming range
- The product is initally set up as a source instead of as a sink type
- · The product could also be set up as a sink type but this should be noted to sales represenative

## Segment length and limitations

- · The minimum segment length is equal to one product
- The maximum distance between two fittings is 30 meters [98ft], and the maximum distance between the first and last fitting is 300m [984ft).
- Used in single colour applications

## Fault tolerance

• If the product is source type and in the case the control line doesn't have power the light fitting will turn at 100% in the opposite case where the light is sink type, light will not work.

FILIX

- · If one product fails the rest of the system continues to work
- · Class I wiring implemented in the fixture and voltage flxtuation filter implemented





# DALI SYSTEM TOPOLOGY

#### Integrated systems:

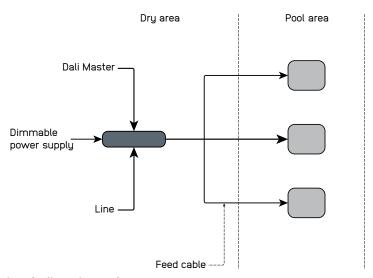
- · Heat Sense
- · Flow Sense
- Split & Seal

### System components

- · The DALI system, wiring and additional accessories leading up to the product feed cable are the responsibility of others.
- · Housing and neccessarry accessories that are marked as mandatory must to be ordered separately

### System topology

· In the system design, any of the following system topologies can be utilized: line wiring, star wiring, or tree wiring.



# Addressing & dimming notes

- · Without a DALI dimmable power supply, the product cannot be controlled.
- Individual device addressing (short address) and group addresses for up to 16 groups can be achieved by connecting each group of products
  to a separate output channel of the DALI dimmable power supply. A broadcast address targets everything on the line of the DALI dimmable
  LED driver.
- Logarithmic and linear dimming options depend on the DALI dimmable LED power supply.
- The dimming range is determined by the DALI dimmable LED power supply.

# Segment length and limitations

- The minimum controllable segment is one product.
- · A DALI dimmable power supply cannot control fittings individually unless they are connected to separate channels of a DALI dimmable power supply.
- In a serial connection of multiple fittings, the maximum length of a cable loop is 50 meters, and the electrical circuit size is limited by power supply ratings, such as output voltage range.
- All wire splicing should be performed in a dry area to ensure a proper connection.
- · Suitable for both single-color and multi-color applications.

### Fault tolerance

• In a serial connection, if one product fails, the rest of the system stops working.





# DMX SYSTEM TOPOLOGY

### Integrated systems:

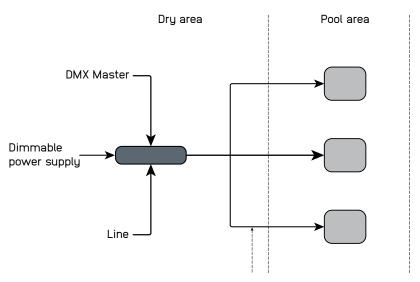
- · Heat Sense
- Flow Sense
- · Split & Seal

### System components

- · The DMX system, wiring and additional accessories leading up to the product feed cable are the responsibility of others.
- · Housing and neccessarry accessories that are marked as mandatory must to be ordered separately

## System topology

· In the system design, any of the following system topologies can be utilized: line wiring, star wiring, or tree wiring.



## Addressing & dimming notes

- The minimum controllable segment is one product.
- A DMX dimmable power supply cannot control fittings individually unless they are connected to separate channels of a DMX dimmable power supply.
- In a parallel connection of multiple fittings, the maximum distance between the LED power supply and the last fitting in line is limited to the maximum allowed voltage drop.
- In a serial connection of multiple fittings, the maximum length of a cable loop is 50 meters, and the electrical circuit size is limited by power supply ratings, such as output voltage range.
- All wire splicing should be performed in a dry area to ensure a proper connection.

### Segment length and limitations

- Without a DMX dimmable power supply, the product cannot be controlled.
- Individual device addressing (short address) and group addresses can be achieved by connecting each product or a group to a separate out put channel of the DMX dimmable power supply.
- Logarithmic and linear dimming options depend on the DMX dimmable LED power supply.
- The dimming range is determined by the DMX dimmable LED power supply.
- Suitable for both single-color and multi-color applications.

#### Fault tolerance

- In a parallel connection, if one product fails, the rest of the system continues to operate.
- In a serial connection, if one product fails, the rest of the system stops working.