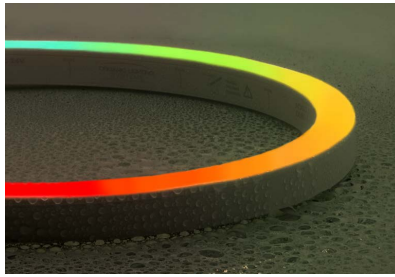


# Aqueon® Diffuse RGB/RGBW-Pixel

## Standard & High Power 24V DC



Aqueon Diffuse Pixel is a product that each 3.28"(83.3mm) segment is individually addressable so that you can achieve myriad color changing or animation effects via SPI controller. Available in both vertical and horizontal bending. IP67 or IP68 submersible UV and chemical resistant encapsulation.

SPI protocol product with built-in IC chip of USC2903 or UCS2904.

### FEATURES

- IK10, cUL Listed, UL Listed 676, UL Listed 2108 - Submersible / IP68
- Horizontal or Vertical bending options
- End to end continuous illumination
- Up to 49.2ft(15m) continuous runs; Flood and vibration proof
- Cuttable every 3.28"(83.3mm)
- Pixel RGB & RGBW options
- Ultra low energy; RGB - 2.74W/ft | RGBW - 3.66W/ft (12W/m)
- 6"(150mm) minimum bending radius
- 5 year limited warranty; 60,000 hrs LED lifetime
- Dimmable with SPI & DMX
- UV/IR protected Silicone material
- Ambient working temperature -40°F~113°F(-40°C~45°C)

### PART NUMBER & SPECIFICATIONS

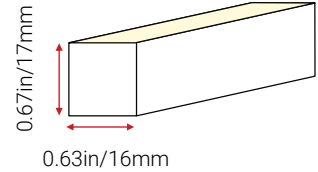
Part #	Color	CRI	lm/ft	lm/m	Max Run	W/ft	W/m	
<b>Standard Aqueon® Diffuse RGB/RGBW Pixel - Horizontal Bend</b>								
052248	RGB	>80	58	188	49.2ft	15m	2.74	9
052247	RGBW-27K	>80	63	205	49.2ft	15m	3.66	12
052244	RGBW-30K	>80	63	205	49.2ft	15m	3.66	12
052246	RGBW-40K	>80	63	205	49.2ft	15m	3.66	12
<b>High Power Aqueon® Diffuse RGB/RGBW Pixel - Horizontal Bend</b>								
052248-16.5	RGB	>80	105	345	49.2ft	15m	5.03	16.5
052247-22	RGBW-27K	>80	114	375	39.4ft	12m	6.7	22
052244-22	RGBW-30K	>80	114	375	39.4ft	12m	6.7	22
052246-22	RGBW-40K	>80	114	375	39.4ft	12m	6.7	22
<b>Standard Aqueon® Diffuse RGB/RGBW Pixel - Vertical Bend</b>								
052243	RGB	>80	62	202	49.2ft	15m	2.74	9
052242	RGBW-27K	>80	75	245	49.2ft	15m	3.66	12
052240	RGBW-30K	>80	75	245	49.2ft	15m	3.66	12
052241	RGBW-40K	>80	75	245	49.2ft	15m	3.66	12
<b>High Power Aqueon® Diffuse RGB/RGBW Pixel - Vertical Bend</b>								
052243-16.5	RGB	>95	113	370	49.2ft	15m	5.03	16.5
052242-22	RGBW-27K	>95	137	450	39.4ft	12m	6.7	22
052240-22	RGBW-30K	>95	137	450	39.4ft	12m	6.7	22
052241-22	RGBW-40K	>95	137	450	39.4ft	12m	6.7	22

Specifications may be modified or improved without notification



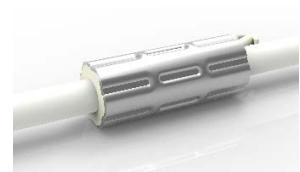
Project

Date

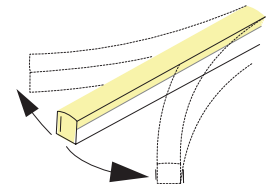


### ANTI-WICKING

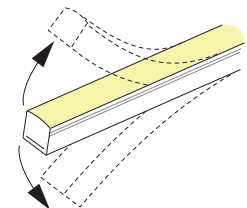
All connections include a ferrule on the power feed to prevent water wicking through the connection point.



### HORIZONTAL BENDING



### VERTICAL BENDING



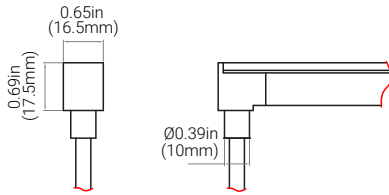
## CONNECTORS & ACCESSORIES

Factory assembled 3-wired RGBW Aqueon IP68 submersible accessories include end caps, extension cords and connectors with customizable cord lengths. IP67 self assembly connectors are also available.

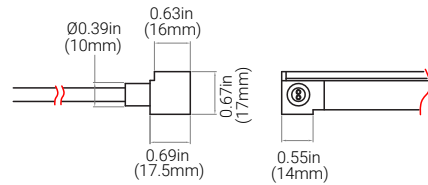
Project

Date

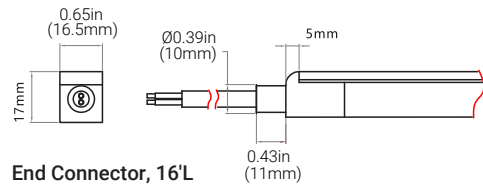
### FACTORY ASSEMBLED IP68 CONNECTORS



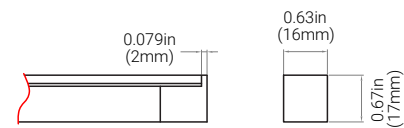
**Bottom Feed Connector, 16'L**  
#052255-CU16



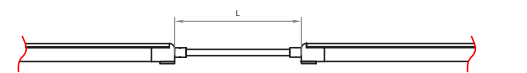
**Side Feed Connector, 16'L**  
#052257-CU16



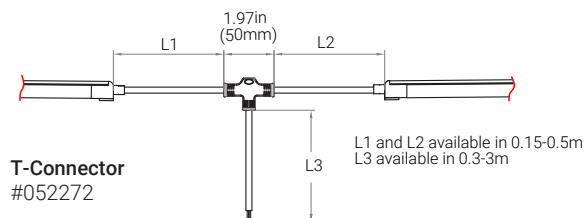
**End Connector, 16'L**  
#052256-CU16



**End Cap**  
#052286

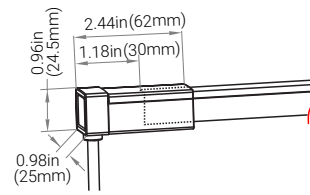


**Extension**  
#052270 L available in 0.3m-1m

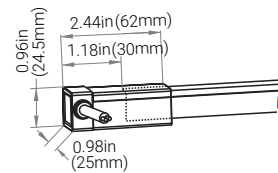


**T-Connector**  
#052272 L1 and L2 available in 0.15-0.5m  
L3 available in 0.3-3m

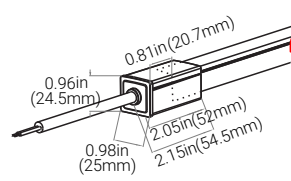
### FIELD ASSEMBLY SNAP IP67 CONNECTORS



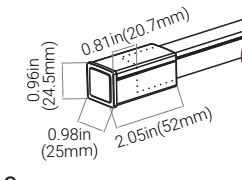
**Bottom Snap Connector, 16'L**  
#052255S-CU16



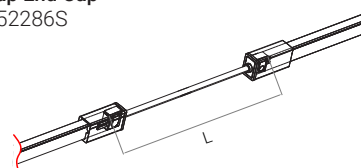
**Side Feed Snap Connector, 16'L**  
#052257S-CU16



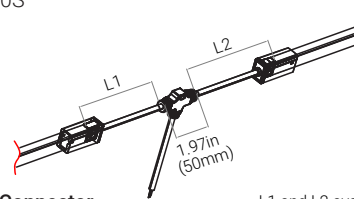
**End Snap Connector, 16'L**  
#052256S-CU16



**Snap End Cap**  
#052286S



**Snap Extension**  
#052270S L available in 0.3m, 1m, 3m



**Snap T-Connector**  
#052272S L1 and L2 available in 0.3m

Specifications may be modified or improved without notification

# Aqueon® Diffuse RGB/RGBW-Pixel Standard & High Power



## POWER SUPPLIES - 24V

Forward Phase, Reverse Phase, & 0-10V Dimming Drivers. Remote enclosures available.

Part #	Ingress	Voltage	Wattage	Dimensions (inches / mm)	Description
045001	IP67	100-305V	20W	7.6 x 1.18 x 0.79 / 193 x 30 x 20	Dimmable LED Driver
045002	IP67	100-305V	40W	5.83 x 1.57 x 0.87/148 x 40 x 22	Dimmable LED Driver
045003	IP67	120-277V	60W	6.3 x 2.24 x 1.5/160 x 57 x 38	Dimmable LED Driver
045004	IP67	120-277V	75W	6.3 x 2.24 x 1.5/160 x 57 x 38	Dimmable LED Driver
045005	IP67	120-277V	96W	7.6 x 2.24 x 1.5/193 x 57 x 38	Dimmable LED Driver
045006	IP67	120-277V	200W	10.1 x 3.03 x 1.8/257 x 77 x 46	Dimmable LED Driver
045007	IP67	120-277V	300W	11.9 x 3.03 x 1.8/302 x 77 x 46	Dimmable LED Driver

## ENCLOSURES

Part #	Ingress	Dimensions (inches / mm)	Description
045008	IP67	9.4 x 2.6 x 1.9 / 239 x 66 x 48	20W Enclosure
045009	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	40W Enclosure
045010	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	60W Enclosure
045011	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	75W Enclosure
045012	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	96W Enclosure
045013	IP67	16.7 x 9.8 x 2.3 / 424 x 249 x 58	200W Enclosure
045014	IP67	16.7 x 9.8 x 2.3 / 424 x 249 x 58	300W Enclosure
PC-JBOX	IP67	4.25 x 1.63 x 1.25 / 108 x 41 x 32	Waterproof J-Box

## DMX CONTROLLER

Part #	Description
011410	Nicolaude DE3 DMX 512 Controller
011403	Nicolaude DINA-DR1 DMX 512 Controller
050203	LT-200 SPI Controller - For Pixel
050205	DMX512 SPI Converter Decoder - For Pixel

## MOUNTINGS & EXTRUSIONS

Mounting Channels to Match any Installation

### Aluminum Profile



- High Quality Aluminum
- Lightweight
- Cost Effective
- Warp/corrosion resistant

1.38in(35mm) L - #053001  
39.37in(1000mm) L - #053000

### Flanged Aluminum Profile



- High Quality Aluminum
- Lightweight
- Cost Effective
- Flange for Recessed Installation

1.38in(35mm) L - #053003  
39.37in(1000mm) L - #053002

### Flanged Internal Serrated Aluminum Profile



- Lightweight
- Easy to Install & Dismantle
- Continuous & Strong Gripping
- Flange for Recessed Installation

0.79in(20mm) L - #053011  
39.37in(1000mm) L - #053010

### Internal Serrated Aluminum Profile



- Continuous & Strong Gripping
- Lightweight
- Easy to Install & Dismantle
- For Suspended Installations

0.79in(20mm) L - #053009  
39.37in(1000mm) L - #053008

### Bendable Serrated Aluminum Profile



- High Quality Aluminum
- Easy to Install & Dismantle
- Continuous & Strong Gripping
- Memory Retaining
- Perfect for Curved Installations

19.68in(500mm) L - #053013  
39.37in(1000mm) L - #053012

### Thickened Plastic Profile



- Plastic Profile 0.12in(3mm) thick
- Lightweight
- Cost Effective
- Rust & Corrosion Resistant

1.38in(35mm) L - #053005  
39.37in(1000mm) L - #053004

Project

Date

### 20W-60W Dimmable Driver



### 75W-300W Dimmable Driver



### Nicolaude DE3 DMX 512 Controller



Specifications may be modified or improved without notification



### CABLE REQUIREMENT

Cable X Information	LED Strip	Max. Cable Length
		24V
18 AWG x 2 *Standard	3.28ft / 1m	187ft / 57m
	16.4ft / 5m	33ft / 10m
	39.4ft / 12m	10ft / 3m
	49.2ft / 15m	1ft / 0.3m
16 AWG x 2	3.28ft / 1m	305ft / 93m
	16.4ft / 5m	50ft / 15m
	32.8ft / 10m	16ft / 5m
	49.2ft / 15m	23ft / 7m
14 AWG x 2	3.28ft / 1m	479ft / 146m
	16.4ft / 5m	79ft / 24m
	32.8ft / 10m	26ft / 8m
	49.2ft / 15m	33ft / 10m

The Aqueon® LED strips need a minimum voltage at the beginning of the LED strip to function according to the specifications. The table below gives an indication of the maximum cable length based on the cable thickness. The standard starter cable is (18 AWG), see table below for max cable lengths.

In case the required length is longer than the length mentioned in this cable, it is recommended to cut the starter cable down to 1ft (0.3m) and splice a larger gauge cable. Please contact your distributor for a detailed cable calculation.

NOTE: To avoid signal degradation, please ensure the data cable length is within the maximum signal transmission distance according to the specification of controller/decoder.

### ELECTRICAL DETAILS

#### Pixel / Single-end Feed

