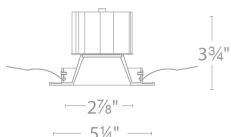
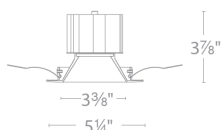


# ATMOSPHERE RPS 3.5IN Downlight Trim

A2RD-D46, A2RD-D56

**AISPIRE**  
A W A C C O M P A N Y



Fixture Type:

Catalog Number:

Project:

Location:

## FINISHES



Haze/  
White



White



Black/  
White



Brushed  
Nickel

| Model                | Power | Max Combined<br>Drive Current † | Max # of<br>Fixtures | Beam | Lumens<br>Ref Output* | CBCP<br>Ref Output* | Color Temp | CRI | Finish (Interior/Flange) |    |                          |  |
|----------------------|-------|---------------------------------|----------------------|------|-----------------------|---------------------|------------|-----|--------------------------|----|--------------------------|--|
| A2RD-D46<br>(Round)  | 13W   | 350mA                           | 1 per<br>2 Channel   | N    | 22°                   | 575                 | 2125       | C1  | 2700K-6500K              | 98 | HZWT<br>WT<br>BKWT<br>BN | Haze/White<br>White<br>Black/White<br>Brushed Nickel |
|                      |       |                                 |                      | F    | 45°                   | 610                 | 1210       |     |                          |    |                          |  |
| A2RD-D56<br>(Square) |       |                                 |                      | N    | 22°                   | 555                 | 2125       |     |                          |    |                          |  |
|                      |       |                                 |                      | F    | 45°                   | 595                 | 1225       |     |                          |    |                          |  |
| A2RD-D46<br>(Round)  | 13W   | 350mA                           | 1 per<br>2 Channel   | N    | 22°                   | 575                 | 2085       | C2  | 1800K-4000K              | 98 |                          |  |
|                      |       |                                 |                      | F    | 45°                   | 605                 | 1190       |     |                          |    |                          |  |
| A2RD-D56<br>(Square) |       |                                 |                      | N    | 22°                   | 565                 | 2155       |     |                          |    |                          |  |
|                      |       |                                 |                      | F    | 45°                   | 600                 | 1245       |     |                          |    |                          |  |

Example: A2RD-D46N-C1WT

†Maximum Combined Drive Current is the sum of the drive currents on both channels.  
If 350mA is applied to one channel, no current may be applied to the other channel.  
If 150mA is applied to one channel, then 200mA max may be applied to the other channel.

\*Reference output represents delivered photometrics at 3000K. Use multiplier table below to determine the output for other combinations.

| Lumen & CBCP Multiplier | COLOR TEMPERATURE |       |       |       |       |       |
|-------------------------|-------------------|-------|-------|-------|-------|-------|
| C1 (2700K-6500K)        | 2700K             | 3000K | 3500K | 4000K | 5000K | 6500K |
|                         | 0.96              | 1.00  | 1.06  | 1.09  | 1.12  | 1.11  |
| C2 (1800K-4000K)        | 1800K             | 2200K | 2700K | 3000K | 3500K | 4000K |
|                         | 0.68              | 0.82  | 0.94  | 1.00  | 1.07  | 1.11  |

## DESCRIPTION

Atmosphere RPS 3.5" Downlight packages innovation in a compact form factor. Its shallow housing is designed to fit in tight plenum spaces without sacrificing lumen output.

## FEATURES

- Natural and vivid precision LED CCT Tuning
- AISPIRE remote power supply (RPS) required, sold separately
- Designed to fit in tight plenum
- Wet location listed for trims
- 3.5" trim aperture, 3.5" housing height
- 35° cut-off angle
- Dimmable via AISPIRE RPS units, refer to RPS specification for compatibility
- 5 year product warranty

## SPECIFICATIONS

|                                   |   |
|-----------------------------------|---|
| <b>Construction:</b>              | Die-cast aluminum trim with extruded aluminum heat sink                                     |
| <b>Input:</b>                     | 36VDC Class 2 Low Voltage, DC Power Supply. See Fixture Configuration table above.          |
| <b>Dimming:</b>                   | Refer to RPS specification for protocol and compatibility                                   |
| <b>Remote Power Supply (RPS):</b> | <b>A2D20-BK, A2D40-BK.</b> Reference compatible RPS specifications for further requirements |
| <b>Mounting:</b>                  | Retention clips firmly hold trim to housing.  |
| <b>Ceiling thickness:</b>         | 1/2" - 1 1/2" (A2RD-268-CT)<br>1/2" - 1" (A2RD-466-CT)                                      |
| <b>Finish:</b>                    | Powder coated white and black, white, enamel coated haze, electroplated brushed nickel.     |
| <b>Standards:</b>                 | UL & cUL wet location listed  |

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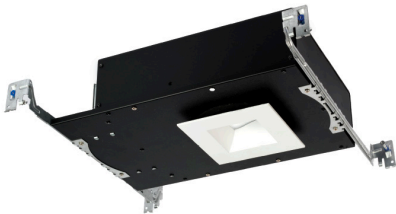
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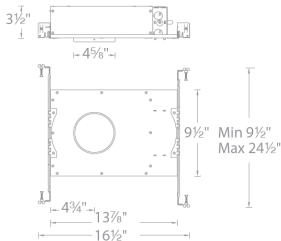
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# ATMOSPHERE RPS 3.5IN Housing

## A2RD-268-CT, A2RD-446-CT



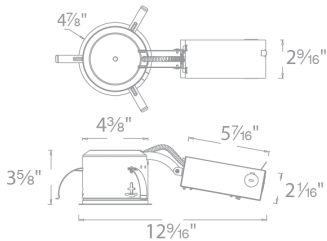
Shown with open square white trim



Model

|             |                                      |
|-------------|--------------------------------------|
| A2RD-268-CT | New Construction, IC-rated, Airtight |
|-------------|--------------------------------------|

Example: A2RD-268-CT



Model

|             |                                 |
|-------------|---------------------------------|
| A2RD-446-CT | Remodel, Non IC-rated, Airtight |
|-------------|---------------------------------|

Example: A2RD-446-CT

# AiSPIRE® Remote Power Supply (RPS)

## A2D LED DMX Power Unit



Fixture Type:

Catalog Number:

Project:

Location:

\* See RPS spec sheet for wiring diagram details

### INPUT

|                            |                 |
|----------------------------|-----------------|
| Voltage Range:             | 120VAC          |
| Frequency Range:           | 50/60Hz         |
| Power Factor:              | 0.99 @100VAC    |
| THD:                       | <15% @full load |
| Current:                   | 0.9A @100VAC    |
| Standby Power Consumption: | <0.5w           |

### OUTPUT

|                     |  |
|---------------------|--|
| LED Channels:       | APD20-BK: 4 Channels<br>APD40-BK: 8 Channels   |
| Selectable Current: | 250mA, 300mA, 350mA, 400mA, 450mA, 500mA,<br>600mA, 700mA, 800mA, 900mA, 1A, 1.1A, 1.2A, 1.3A,<br>1.4A, 1.5A |
| DC Voltage Range:   | 6-48VDC  |
| Current Tolerance:  | ± 3%   |
| Rated Power:        | 72W per channel<br>75W max (per 2-channel output)  |

### CONTROL

|                   |                               |
|-------------------|-------------------------------|
| Control Protocol: | DMX 512-A, DMX 512            |
| Diming Range:     | 0%-100%                       |
| Control Input:    | DMX RJ45                      |
| Dimming Curve:    | Linear/Logarithm (Selectable) |

### PROTECTION

|                                    |   |
|------------------------------------|---|
| Short Circuit, Voltage, Over Temp: | Recovers automatically after fault condition is removed |
|------------------------------------|---|

### ENVIRONMENT

|                         |                             |
|-------------------------|-----------------------------|
| Ambient Operating Temp: | -4°F - 113°C (-20°F - 45°C) |
|-------------------------|-----------------------------|

### SAFETY & EMC

- Safety Standard: UL, Damp Location
- EMC Emission: FCC Part 15 Class B
- Surge Immunity: Line-Line 1 kV

| Model   | # of channels | Finish   |
|---|---------------|----------|
| A2D20 2 x 75W Class 2 output DMX LED power unit | 4             | BK Black |
| A2D40 4 x 75W Class 2 output DMX LED power unit | 8             | BK Black |

Example: A2D20-BK

### FINISHES

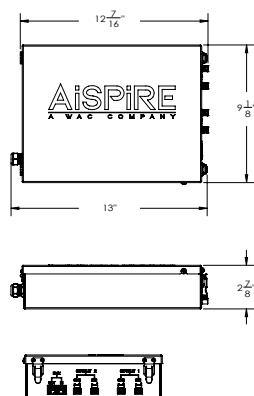


### FEATURES

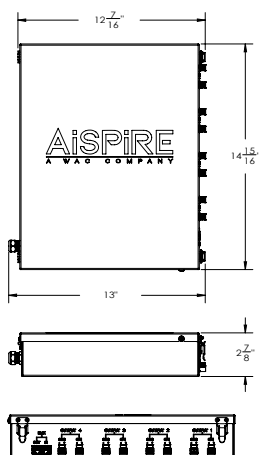
- 75W Max. Output Power (Per DMX Power Unit)
- 250mA-1500mA output current selection
- Class 2 power supply
- Built-in DMX512 interface
- IP20 rating
- UL Damp location listed

### LINE DRAWING

A2D20 - 4 Channel



A2D40- 8 Channel



aispire.com  
Phone (800) 526.2588  
Fax (800) 526.2585

Headquarters/Eastern Distribution Center  
44 Harbor Park Drive  
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# ATMOSPHERE RPS

## Natural Tunable White - DMX Tuning Chart



### Natural White CCT Tuning:

The CCT of an Atmosphere RPS fixture may be adjusted, when installed to 2 Channels on any output of the AISPIRE Remote Power Supply.

Using the DMX byte values in the adjacent table mapped to CH1 and CH2 of the desired output, the Atmosphere RPS fixture may be tuned in increments of 100K (Kelvin) from 2700K to 6500K for C1 and 1800K to 4000K for C2, at full intensity.

#### CAUTION:

For Atmosphere RPS systems, control channel inputs and resulting channel outputs are critical to not overdriving fixtures.

It is critical to follow fixture specifications for Maximum Combined Drive Current which is the sum of the drive currents on both channels.

#### Example:

Reference fixture specification sheet for specific maximum current ratings.  
When 350mA is the rated Maximum Combined Drive Current of the fixture:

- If 350mA (DMX byte value: 255) is applied to one channel, no current (DMX byte value: 0) may be applied to the other channel.
- If 150mA (DMX byte value: 107) is applied to one channel, then 200mA current (DMX byte value: 148) maximum may be applied to the other channel.

† Byte values generated with RPS at default settings.

### C1 DMX Byte Values† at Full Intensity

| CCT (K) | CH1:<br>2700K | CH2:<br>6500K |
|---------|---------------|---------------|
| 6500    | 0             | 255           |
| 6400    | 6             | 249           |
| 6300    | 10            | 245           |
| 6200    | 14            | 241           |
| 6100    | 19            | 236           |
| 6000    | 24            | 231           |
| 5900    | 29            | 226           |
| 5800    | 34            | 221           |
| 5700    | 39            | 216           |
| 5600    | 45            | 210           |
| 5500    | 50            | 205           |
| 5400    | 55            | 200           |
| 5300    | 60            | 195           |
| 5200    | 66            | 189           |
| 5100    | 71            | 184           |
| 5000    | 77            | 178           |
| 4900    | 83            | 172           |
| 4800    | 89            | 166           |
| 4700    | 95            | 160           |
| 4600    | 101           | 154           |
| 4500    | 107           | 148           |
| 4400    | 113           | 142           |
| 4300    | 119           | 136           |
| 4200    | 126           | 129           |
| 4100    | 133           | 122           |
| 4000    | 140           | 115           |
| 3900    | 147           | 108           |
| 3800    | 154           | 101           |
| 3700    | 161           | 94            |
| 3600    | 168           | 87            |
| 3500    | 177           | 78            |
| 3400    | 186           | 69            |
| 3300    | 195           | 60            |
| 3200    | 204           | 51            |
| 3100    | 215           | 40            |
| 3000    | 227           | 28            |
| 2900    | 243           | 12            |
| 2800    | 254           | 1             |
| 2700    | 255           | 0             |

### C2 DMX Byte Values† at Full Intensity

| CCT (K) | CH1:<br>1800K | CH2:<br>4000K |
|---------|---------------|---------------|
| 4000    | 0             | 255           |
| 3900    | 3             | 252           |
| 3800    | 15            | 240           |
| 3700    | 27            | 228           |
| 3600    | 41            | 214           |
| 3500    | 53            | 202           |
| 3400    | 62            | 193           |
| 3300    | 70            | 185           |
| 3200    | 80            | 175           |
| 3100    | 90            | 165           |
| 3000    | 100           | 155           |
| 2900    | 110           | 145           |
| 2800    | 120           | 135           |
| 2700    | 132           | 123           |
| 2600    | 144           | 111           |
| 2500    | 155           | 100           |
| 2400    | 166           | 89            |
| 2300    | 178           | 77            |
| 2200    | 190           | 65            |
| 2100    | 204           | 51            |
| 2000    | 218           | 37            |
| 1900    | 230           | 25            |
| 1800    | 255           | 0             |

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## Spectral Matching to Natural Light

- ATMOSPHERE technology delivers optimized spectral syncing to natural light in a tunable white solution
- ATMOSPHERE maximizes the emotional elements of light and color to deliver a first class human experience
- ATMOSPHERE significantly reduces the blue spike and cyan valley to deliver a closer match to natural light

## What is Human Centric Lighting (HCL)

- Throughout evolution, the human visual system has evolved under the natural light of sun and fire.
- Human-centric lighting by definition encompasses the effects of lighting on the physical and emotional being of people.
- As part of the HCL initiative, there is a drive to develop "natural" sources of lighting. The human species has been conditioned to function in daylight hours by the light of the sun, and after dusk, of the warm glow of fire. Thus, we define natural light sources as those which match the spectral distribution of sunlight and firelight.

## Human Centric Light Spectrum

| FEATURES  | BENEFITS   |
|---|--|
| Spectrum engineered to closely emulate natural light with reduced short blue wavelength intensity | Full, consistent light spectrum with fewer spectral spikes, the closest match to natural light available |
| Natural and vivid color rendering   | Typical 98 CRI. Excellent TM-30 metrics; Skin tones and artwork render impeccably                        |
| High efficacy human-centric spectra   | Greater energy savings, lower utility and environment costs  |
| Affordable spectra optimized for humans   | Accelerate adoption of full spectrum natural lighting  |