# Apeiron A1110

### LED Recessed Light for Marine & Transportation Lighting

**PRODUCT HIGHLIGHTS**

- 4.5 Watts
- 9-30V DC Input
- 0 to 100% Dimming
- Active Thermal Management

- 3″ Diameter
- Stainless Steel Construction
- Exterior Rated
- Multiplex Compatible

**TYPICAL APPLICATIONS**

- Marine / RV General Lighting
- Transit / Rail General Lighting
- Specialty Vehicle Lighting

## SPECIFICATIONS

### SUITABLE ENVIRONMENTS

Dry    Damp    Wet*

### LED COLORS

○ Cool White
○ Neutral White
○ Warm White

### BEZEL FINISHES

**PVD Coated:**

- Polished Chrome
- Polished Gold
- Brushed Nickel

**Powder Coated:**

- White
- Off-White

### BEZEL SHAPES

Round    Square    Square/Square

Double    Triple

### BEAM ANGLES

120°
Full Angle

### CERTIFICATIONS

CE    FC    RoHS compliant 2002/95/EC    IP67
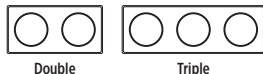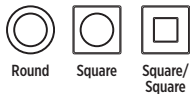
## Features

■ **ADVANCED OPTICAL SYSTEM**

120° full angle. Even light, no LED "dots" or pixilation.

■ **0 TO 100% DIGITAL DIMMING**

Connection with i2Systems LightLink Series allows simple and seamless integration to most of today's conventional dimming systems.

■ **RUGGED DESIGN**

Stainless steel / anodized aluminum construction, sealed design, and electronic regulation to the LED source ensure product longevity.

■ **NO HEAT OR UV IN THE LIGHT BEAM**

With no heat in the light beam, the fixture lens remains much cooler than halogen sources, allowing safe and 'burn free' operation. In addition, no UV means reduced risk of fading or deteriorating products or artifacts on display.

■ **STAINLESS STEEL TRIM, WITH PVD**

Round, square, square/square, double or triple, five finish options. Physical Vapor Deposition (PVD) coating provides a very durable surface finish which will not tarnish or discolor.

■ **SPRING CLIP MOUNTING**

Spring clip mounting offers simple installation while ensuring a secure fit when installed in dynamic applications.

## Exclusive Technology

■ **ACTIVE THERMAL MANAGEMENT**

Active Thermal Management (ATM) continuously monitors, and when required, thermally regulates the fixture. If for any reason the fixture begins to overheat, ATM will reduce the LED power level in order to protect the LED source. Smooth dimming ensures this background task does not interfere with normal operation of the fixture.

■ **SMARTDRIVER™ INTEGRATED**

i2Systems SmartDriver technology is integrated directly inside of every fixture. Connect the Apeiron to a wide range of voltages without sacrificing light output or lifetime. No external drivers are required and wiring is made simple.

■ **ACCUWHITE™**

i2Systems AccuWhite technology allows integration of Apeiron fixtures to traditional applications without sacrifice in color temperature (CCT) or color rendering (CRI). AccuWhite ensures accurate and consistent color matching from fixture to fixture and across product lines.

■ **LIGHTLINK™ COMPATIBLE**

i2Systems LightLink controllers represent the next generation in lighting control and connectivity. LightLink modules provide seamless integration of today's commercial and residential dimming systems through a wide variety of desirable interfaces.

■ **MULTIPLEX COMPATIBLE**

Without external controllers, fixture is Multiplex compatible, interfacing directly to most Multiplex type dimming systems, including Eplex® and Moritz Octoplex™ systems.

Eplex® is a registered trademark of ED&D Technologies.
Moritz Octoplex™ is a trademark of Moritz Aerospace.

*Refer to Specifications table on page 2 for additional information.*

**www.i2systems.com**

# SPECIFICATIONS

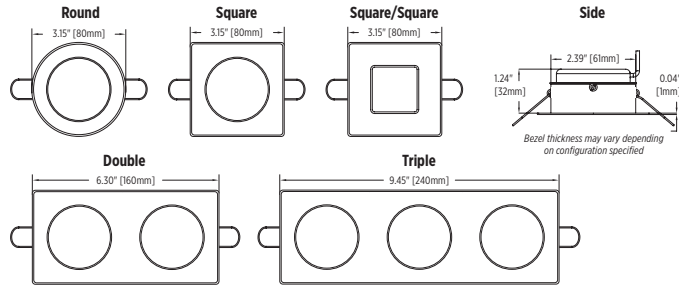| ITEM | PARAMETER | VALUE |
|---|---|---|
| Electrical | Input Power | 4.5 Watts* (single fixture) |
| | Input Voltage Range | 9-30V DC |
| | Integrated Driver | ✓ |
| | 0-100% Dimming | ✓ |
| | Protection Features | Active Thermal Management, Protected Dim Line, Transient Protection, Reverse Polarity, Autoreset Fuse |
| Optical | Emitting Angle | 120° Full Angle |
| | LED Color | Cool White, Neutral White, Warm White |
| | LED Colors per Fixture | 1 |
| | Class | Class 2 LED Product |
| Physical | Dimensions | Refer to drawings on right |
| | Housing Construction | Aluminum, Stainless Steel |
| | Lens Material | Tempered Glass, Frosted |
| | Bezel Shapes | Round, Square, Square/Square, Double, Triple |
| | Finishes | **PVD Coated:** Polished Chrome, Polished Gold, Brushed Nickel<br>**Powder Coated:** White, Off-White |
| | Mounting Method | Spring Clips, Stainless Steel |
| | Operating Temp. Range | -20°C to 40°C, Max. Case Temp (Tc): 50°C |
| | Humidity | 0 to 95%, non-condensing |
| | Environment | Dry, Damp, Wet** (IP67) |
| | Certification | CE 94/25/EC, FCC Part 15, Class B, RoHS Compliant |

*Due to constant power design, input current (Iin) will vary depending on input voltage. Be sure to size wire awg accordingly for worst case input voltage.

**Product is rated for exterior applications, however it is not rated for submersible applications and should not be mounted in conditions where there is, or is a possibility of, standing water. When installing in wet or damp locations, it is good practice to seal all fixtures and junction boxes with electronics grade RTV silicone sealant to ensure that moisture cannot enter or accumulate in wiring compartments, cables, or other electrical parts. Product should not be installed in extreme locations, including but not limited to those outside of its temperature/humidity ratings and/or applications where product is subject to water runoff or downspouts.
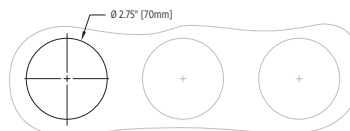
# ACCESSORIES

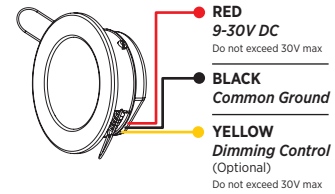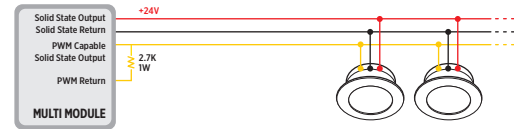| KEYWORD | ITEM NUMBER | DESCRIPTION | FIXTURE MAX |
|---|---|---|---|
| Trim Ring Extender | 3120177-11 (Chrome)<br>3120177-21 (Gold)<br>3120177-31 (White)<br>3120177-41 (Nickel)<br>3120177-51 (Off-White) | Extends round bezel diameter to 3.75" for retrofit applications requiring a larger bezel. | |
| LightLink LL-101 | LL-101 Series | Dimming Controller, Momentary (MOM) Switch Interface. | Dims up to 20 Apeiron A1110 |
| LightLink LL-105 | LL-105 Series | Dimming Controller, Multiple Interfaces including 0 to 10V Control. | Dims up to 50 Apeiron A1110 |
| LightLink LL-205 | LL-205 Series | Dimming Controller, Multiple Interfaces including 0 to 10V Control. | Dims up to 50 Apeiron A1110 |
| 45W Power Supply Enclosure | PS24V45W-E01D | Power Supply Enclosure, 45W, 120/240VAC Input, 24VDC Output, Steel Enclosure w/ Knockouts & Terminal Blocks. | Powers up to 5 Apeiron A1110 |
| 75W Power Supply Enclosure | PS24V75W-E01D | Power Supply Enclosure, 75W, 120/240VAC Input, 24VDC Output, Steel Enclosure w/ Knockouts & Terminal Blocks. | Powers up to 7 Apeiron A1110 |
| 75W Outdoor Power Supply Enclosure | PS24V75W-E02 | Outdoor Power Supply Enclosure, 75W, 120/240VAC Input, 24VDC x 1 Output, Stainless Steel NEMA 4 Enclosure. | Powers up to 7 Apeiron A1110 |
| 150W Outdoor Power Supply Enclosure | PS24V150W-E02 | Outdoor Power Supply Enclosure, Dual Power Supply, 75W x 2, 120/240VAC Input, 24VDC x 2 Output, Stainless Steel NEMA 4 Enclosure. | Powers up to 14 Apeiron A1110 |

## DIMENSIONS

**Round** — 3.15" [80mm]

**Square** — 3.15" [80mm]

**Square/Square** — 3.15" [80mm]

**Side** — 2.39" [61mm], 1.24" [32mm], 0.04" [1mm]

Bezel thickness may vary depending on configuration specified

**Double** — 6.30" [160mm]

**Triple** — 9.45" [240mm]

## MOUNTING

Ø 2.75" [70mm]

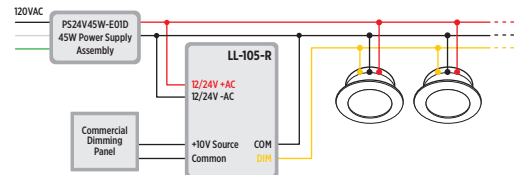For Double or Triple applications, bore the appropriate number of holes 3.15" apart on center.

## WIRE FUNCTION

**RED**
*9-30V DC*
Do not exceed 30V max

**BLACK**
*Common Ground*

**YELLOW**
*Dimming Control*
(Optional)
Do not exceed 30V max

## INSTALLATION EXAMPLES

**Marine / Transportation
EXAMPLE 1:**
Momentary Switch Dimming via LightLink LL-101

Fuse — +24V Common — BATTERY — LL-101 — COMMON, +24 IN, MOM SW1, MOM SW 2 — Momentary Switch
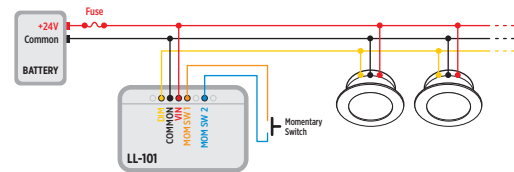
**Marine / Transportation
EXAMPLE 2:**
Multiplex Dimming Integration (Typical)

*Refer to your Multiplex system integrator and/or available application notes prior to wiring.

Solid State Output / Solid State Return — +24V — PWM Capable Solid State Output — PWM Return — MULTI MODULE — 2.7K 1W

**Commercial Lighting
EXAMPLE:**
Shown with 0 to 10V Dimming via LL-105-R

120VAC — PS24V45W-E01D 45W Power Supply Assembly — LL-105-R — 12/24V +AC, 12/24V -AC — Commercial Dimming Panel — +10V Source Common, COM DIM

## ORDERING NUMBER

⬛ FIXED FACTORY NUMBER

🟦 USER SELECTED OPTION

**EXAMPLE: A1110Z-12CXXX**
Polished Chrome Finish, Square Bezel, Warm White LED

| A1110Z | - | * | * | * | XXX |
|---|---|---|---|---|---|

**Bezel Finish**

PVD Coated:
- **1** Polished Chrome
- **2** Polished Gold
- **4** Brushed Nickel

Powder Coated:
- **3** White
- **5** Off-White

**Bezel Shape**
- **1** Round
- **2** Square
- **4** Square/Square
- **5** Double
- **6** Triple

**LED Color**
- **A** Cool White
- **B** Neutral White
- **C** Warm White