

i2Systems LED Lighting for Elevators and Escalators



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Group

Four reasons why i2Systems LEDs are the way to light your cab

Efficiency - more light with less power

Since their inception, LEDs have always remarkably efficient at around 8% of power converted to lumens. While other types of lamps use 13 to 40 watts per lamp to produce ANSI-mandated levels of illumination, an i2Systems LED uses as little as 4 watts to produce as many as 200 lumens. A standard installation of an Apeiron LTE+ fifth generation LED six-lamp package for a 2000 - 3500 lbs. capacity cab exceeds ANSI A17.1-2007 standards for illumination by a substantial amount.

Longevity - 4x to 20x more life than CFLs and halogen

Longevity is another i2Systems advantage. LEDs from i2Systems last four times longer than a fluorescent lamp and twenty times longer than a halogen lamp. Not only is that a substantial saving in material, it's a big savings in labor when replacing bulbs and ballasts. And as 'green' mandates become more and more prevalent, that also means fewer special disposal problems for 'dirty' burnt-out lamps.

Installed cost - they pay for themselves

i2Systems fifth generation LED cab lighting is not only within reach of any modernization budget, it is also the undisputed leader in installed and maintained cost. Based on energy savings alone, LEDs from i2Systems typically pay back the cost of installation in under one year (not including government rebates for energy efficient products).

Light color and quality - warm and bright beats green and flickering

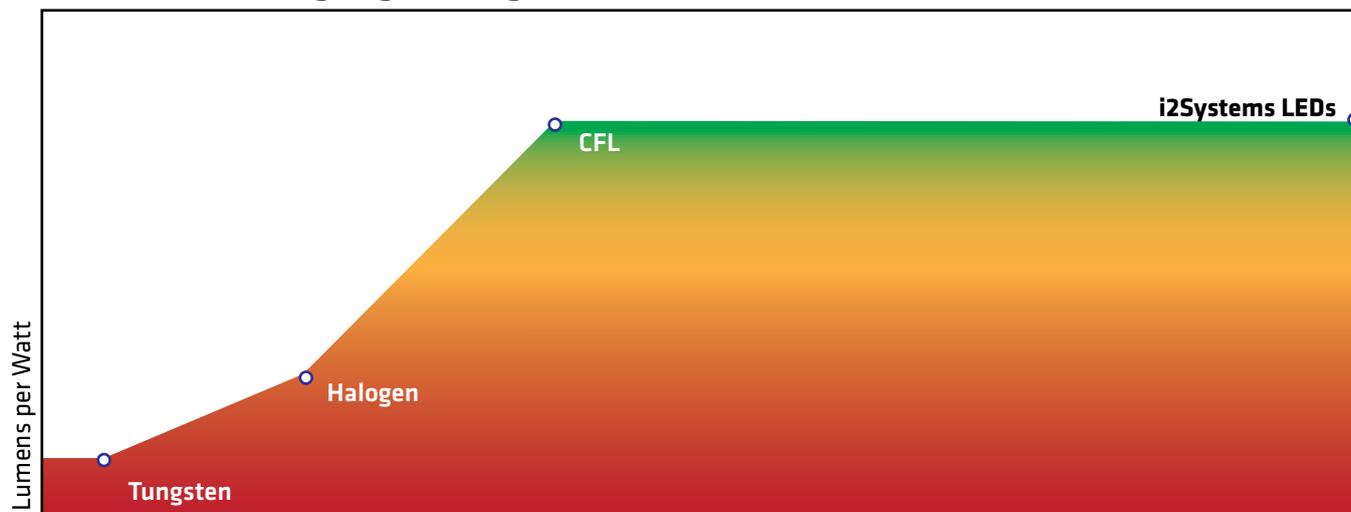
It has been shown that people are most comfortable with warm to neutral white light. Lamps from i2Systems are available in warm (3000°K) and bright white (4000°K) colors. And, unlike fluorescents, there is no annoying flicker.



Most important, LEDs from i2Systems are designed to look as good as they work. The Apeiron LTE+ puck-style lights come in gold, chrome, brushed nickel and black finishes, and in round and square styles. The Gen5 elevator linear LEDs easily replace up to 20 feet of fluorescent tubes with 12, 18, 24, 36 and 48 inch lengths that offer perfectly focused light that fit the ambiance of an elevator cab perfectly.

For cab modernization, the goal is improvement. Puck and linear LEDs from i2Systems are a major improvement over traditional and outdated technologies. Not only do they improve performance, they do it at a best installed and operational cost.

Relative Efficiencies of Lighting Technologies



Operational Savings over Time

i2Systems' Apeiron LTE+ Cab Ceiling Lighting

SUPERIOR LOOKS AND PERFORMANCE AT A POPULAR PRICE

Introducing the Apeiron LTE+ - the LED cab lighting solution engineered specifically for elevators to accommodate every application and budget

The Apeiron LTE+ is a premium **dimnable**, yet cost-effective, LED system that outlasts similar halogen lights by a factor of 20.

The LTE+ system is literally a snap to install. The handsome lightweight lights click into position with spring clips - no screws are needed. They simply plug into the compact power box (available with an optional 4+ hour battery backup) - no wire nuts or terminals.

And unlike LED replacement bulbs, the LTE+ is designed specifically for elevators. The beam is focused for best illumination of the cab and the Color Rendering Index (CRI) is rated at 90+ for a 'true to life' light.

The Apeiron LTE+ is available in either a 3" round or 3" square size. The metal bezel is available in either chrome, gold, brushed nickel or black finishes. Dimmable power units are available with or without battery backup.



Features

- 3" round and square designs
- Available in multiple light system kits
- Emergency light operation
- Industry's best color rendering (CRI 90+)
- Light beam engineered specifically for elevators
- Simple installation - light clips in, wiring is plug and play
- Lightweight power box with dimming and optional battery backup
- cULus, RoHS, IGCC, uses LM-80 tested LEDs, LM-79 tested
- Made in the USA

Power supply options

- Power with dimming
- Power with dimming and battery back-up

Apeiron LTE+ Components



Part Number	Description	Finish	Size and Shape
A4390Z-14CBBR	Apeiron LTE+ warm white lamp	Chrome	3 in. x 3 in. square
A4390Z-11CBBR	Apeiron LTE+ warm white lamp	Chrome	3 in. diameter round
A4390Z-11BBD	Apeiron LTE+ neutral white lamp	Chrome	3 in. diameter round
A4390Z-21CBBR	Apeiron LTE+ warm white lamp	Gold	3 in. diameter round
A4390Z-41CBBR	Apeiron LTE+ warm white lamp	Brushed nickel	3 in. diameter round
A4390Z-41BBD	Apeiron LTE+ neutral white lamp	Brushed nickel	3 in. diameter round
A4390Z-61CBBR	Apeiron LTE+ warm white lamp	Black	3 in. diameter round
A4390Z-61BBD	Apeiron LTE+ neutral white lamp	Black	3 in. diameter round
PS24V45W-E12D	Power supply with dimming		
PS24V45W-E12E	Power supply with dimming and battery backup (two lamps for 4+ hours)		

NOTE: Each power box will power up to 9 lamps

Parts listed here are in-stock and ready to ship. Additional models and options are available.

Contact www.i2systems.com.

Number of Fixtures Required

Typical Capacity	Soft Light	Standard light	Bright light
2100 lbs	4	6	9
2500 lbs	4	6	9
3000 lbs	6	9	12
3500 lbs	6	9	12

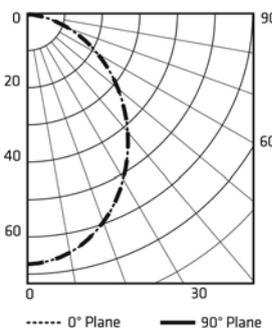
Specifications

Input Voltage	24V DC nom., 12V DC Battery Backup
Input Power	4 Watts
Lumens	150 lms typical @ 3000°K 204 lms estimated @ 4000°K*
Efficiency	39 lms / W typical @ 3000°K 51 lms / W estimated @ 4000°K*
Operating Temp	-20°C to 30°C
Max. Case Temp	50°C
Humidity	0 to 90% Non Condensing
CRI	90 min, 92 typ. @ 3000°K
Wiring	Each light includes 6 ft Cable w/ In-Line Connector
Housing	Plated / Powder-coated Carbon Steel
Lens	Tempered Glass

*calculated as 1.3x measured LM-79 data at 3000°K

Photometrics

Results shown are for one (1) Apeiron LTE+ fixture measured at 3000°K. Does not take into account elevator cab wall reflections or multiple fixtures.



Mounting Height	fc @ Center Beam	Diameter of Lighted Plane
1.0 ft	67.0 fc	2.6 ft
2.0 ft	16.8 fc	5.2 ft
3.0 ft	7.4 fc	7.8 ft
4.0 ft	4.2 fc	10.4 ft
5.0 ft	2.7 fc	12.9 ft
6.0 ft	1.9 fc	15.5 ft
7.0 ft	1.4 fc	18.1 ft
8.0 ft	1.0 fc	20.7 ft

For lux, multiply by 10.8

i2Systems' Apeiron LED Cab Ceiling Lighting

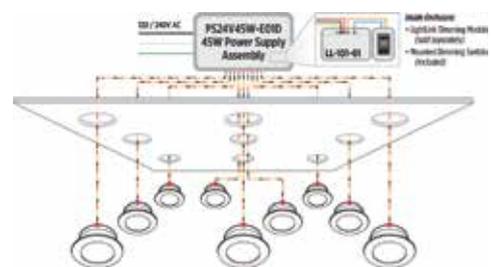
SUPERIOR PERFORMANCE FOR CHALLENGING APPLICATIONS

Apeiron A1161 LEDs are the preferred technology for harsher environments, such as exterior applications.

They feature a rugged stainless steel and anodized aluminum construction, a sealed design, PVD titanium coating and sophisticated electronic regulation to ensure product longevity. Spring clip mounting offers simple installation with a secure fit. Apeiron systems are dimmable. Apeiron LED puck-style lamps fit almost all existing recessed installations. All A1161 systems offer battery backup as an option.

Apeiron round dimmable LED lamps

Part Number	Description	Finish	Light Color
A1161Z-11B01L	A1161 round LED, with full range dimming	Chrome	Neutral White
A1161Z-21B01L	A1161 round LED, with full range dimming	Gold	Neutral White
A1161Z-41B01L	A1161 round LED, with full range dimming	Nickel	Neutral White
A1161Z-61B01L	A1161 round LED, with full range dimming	Black	Neutral White
A1161Z-11CAA3	A1161 round LED, with full range dimming	Chrome	Warm White
A1161Z-21CAA3	A1161 round LED, with full range dimming	Gold	Warm White
A1161Z-41CAA3	A1161 round LED, with full range dimming	Nickel	Warm White
A1161Z-61CAA3	A1161 round LED, with full range dimming	Black	Warm White
PS24V45W-E01D	E01D power box for up to nine LED fixtures		
PS24V45W-E06D	E06 power box with battery back-up for up to nine LED fixtures		
LL-101-01	LightLink dimming module, used with the E01 power source		
LL-101-04	LightLink dimming and battery management module		



i2Systems' LED Linear Cab Ceiling Lighting

PERFECT FOR COVE, ISLAND AND RECESSED APPLICATIONS

Gen5 S1205B linear lights are optimized for elevator installations

S1205B lamps are long strips of evenly lit LED covering 12 to 48 inch lengths with a very wide (65°) throw. This eliminates dark spots (socket shadow) between lamps. The Gen5 designation means that these lamps use power more efficiently.

The S1205B system has been engineered specifically for elevators in that a standard cab uses 20 feet of linear lamps - a single power supply comfortably delivers the necessary wattage. Where dimming is required, simply plug a LightLink dimmer into the power box.

Installation is simple - each lamp has a 6 foot cable that easily plugs into the power box. Adjustable brackets allow the linear lamps to be mounted either flat or pivoted on a drop ceiling.

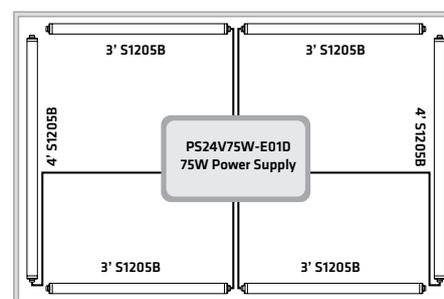


S1205 Lamps and Power Supplies



Part Number	Description	Length
S1205B-16CBB	S1205 warm white lamp	12 inches • 316 mm
S1205B-16BBD	S1205 neutral white lamp	12 inches • 316 mm
S1205B-86CBB	S1205 warm white lamp	18 inches • 468 mm
S1205B-86BBD	S1205 neutral white lamp	18 inches • 468 mm
S1205B-26CBB	S1205 warm white lamp	24 inches • 621 mm
S1205B-26BBD	S1205 neutral white lamp	24 inches • 621 mm
S1205B-36CBB	S1205 warm white lamp	36 inches • 621 mm
S1205B-36BBD	S1205 neutral white lamp	36 inches • 621 mm
S1205B-46CBB	S1205 warm white lamp	48 inches • 1230 mm
S1205B-46BBD	S1205 neutral white lamp	48 inches • 1230 mm
PS24V75W-E01D	Power box	
LL-101-01	LightLink dimmer	

NOTE: Each power box will power up to 20 feet of lamps - plan accordingly.
Additional models and options are available. Contact www.i2systems.com for details.



Mounting Brackets for Linear LEDs - Order Two for Each Lamp

Part Number	Description
SLA-1	Adjustable mounting bracket
SLA-2	Fixed mounting bracket
SLA-3	End mount pivot

Specifications

Input Voltage	24V DC nominal
Input Power	4 Watts
Lumens	180 lms typical
Efficiency	47 lms / W typical
Operating Temp	-20°C to 40°C
Max. Case Temp	50°C
CRI	85 typical
Wiring	Each light includes 6 Ft Cable w/ In-Line Connector and Ferrules
Housing	Mil-Spec Anodized Aluminum
Lens	Impact Resistant Polycarbonate

Escalator Demarcation Lighting Systems

S1203 AND SL1/VL3 DEMARCATION LIGHTING

Escalator demarcation LEDs are designed for damp and wet conditions. They offer the same operating advantages (longevity, low operating cost, light quality) as the other i2Systems LED lamps.

S1203 escalator demarcation lamps are part of our super-efficient Gen5 family of lamps. These 9 watt lamps offer rugged mil-spec aluminum and polycarbonate construction. The lamps connect to the power supply with the attached 6 foot cables. Use one power supply and two lamps for each landing. Note that escalator demarcation lamps are not dimmable.

Use the SLA-1 or SLA-2 mounting brackets for fast installations.

Order two brackets per lamp.



S1203 Escalator Demarcation LEDs



Part Number	Description
S1203A-86D	Escalator demarcation lamp for damp conditions, 18", 9W, vibrant green light
PS24V60W-01	Power supply for up to two S1203 lamps
SLA-1	Adjustable mounting bracket for S1203, stainless steel, for damp areas
SLA-2	Fixed mounting bracket for S1203, stainless steel, for damp areas

SL1 escalator demarcation LEDs are for damp conditions. VL1 escalator demarcation LEDs are for wet conditions.

Note that the mounting brackets are specified for either damp or wet environments. Order two brackets per lamp.

SL1 and VL3 Escalator Demarcation LEDs

Part Number	Description
SL1-865-3	Escalator demarcation lamp for dry/damp conditions, 18", 7.5W, white light
VL3-865-3-HB	Escalator demarcation lamp for wet conditions, 18", 12W, white light
PS24V35W-01	120/240V AC power supply for escalator LEDs
SLA-1	Adjustable mounting bracket for SL1-865-3, stainless steel, for damp areas
SLA-2	Fixed mounting bracket for SL1-865-3, stainless steel, for damp areas
SLA-3	End-mount pivot mounting bracket for SL1-865-3, stainless steel, for damp areas
VLA-5	Adjustable mounting bracket for VL3-865-3-HB, stainless steel, for wet areas
VLA-3	Fixed mounting bracket for VL3-865-3-HB, stainless steel, for wet areas
VLA-6	End-mount mounting bracket for VL3-865-3-HB, stainless steel, for wet areas

Due to constant power design, input current will vary depending on input voltage. Be sure to use the correct AWG wire size for worst case input voltage.



Specifications

Input Voltage	9 to 30 V DC
Input Power	9 Watts
Operating Temp	-20°C to 40°C
Max. Case Temp	50°C
CRI	85 typical
Max. Lights per Power Supply	0 to 95% Non Condensing
Wiring	6 Ft Cable
Housing	Mil-Spec Anodized Aluminum
Lens	Impact Resistant Polycarbonate

Draka Elevator North American Sales Offices

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