

DESCRIPTION

Recessed 1.5" directional pinhole luminaire utilizing a LED array. Housing is suitable for 2x8 residential or commercial constructions, airtight and can be used in direct contact with insulation. Housing platform + primary reflector + optical element combination supports various distributions and reflector types providing design flexibility. Use where excellent light control and low aperture brightness are demanded.

SPECIFICATION FEATURES

Frame

Galvanized steel plaster frame with integral bar hanger receivers. Setscrews provide positive horizontal locking. Integral gun sights facilitate the use of guide strings or laser lines. Shipped with overspray protector installed.

Housing

Steel housing painted matte black for visually dark interior. Removable access panels allow splice inspection and service of all electrical components including LED module and driver from below the ceiling thru the aperture. Removable hinged top allow top access. All fasteners are captive.

Bar Hangers

Captive preinstalled bar hangers adjust from 8-1/2" to 24" wide; pass thru feature allows shortening without removal. Captive nail penetrates standard and engineered lumber. Mounting flange levels platform with ceiling. Integral clip attached directly to tee-bar.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 3" vertically from above the ceiling.

Gaskets

Closed cell gaskets achieve restrictive airflow requirements without additional caulking.

Adjustment Mechanism

Dynamic aiming rotates 365°, tilts 45° and locks in position. Angle markings assist in repeatable settings. Translating center beam optics aligns axis of primary reflector with aperture from nadir to 45°.

LED Module

Field replaceable module utilizes Cree® MT-G2 LED array and conforms to Zhaga standards for interchangeability. Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation. Color accuracy within 2 SDCM and optional 90 CRI provides excellent color. Passive cooling achieves L70 at 40,000 hours.

Primary Optic

Borosilicate glass segmented optic with > 95% reflective multi-layer hard coating delivers a highly efficient and uniform beam. Various distributions are available and can be interchanged without tools. Elastomeric glare shield accepts theatrical color filters and diffusion films.

Media

Optional media holder accepts one or two 2 inch [50mm] diameter L series color filters or beam modifying lens. Order media holder, color filters and lens separately.

Splay

Die cast aluminum splay with pinhole aperture and black oculus for glare control. Oculus can be removed to facilitate painting or to create 1.75" aperture (E3PINLARGE). Can be installed flush mount with optional flush mount collar accessory.

Trim Retention

Retained with two torsion springs holding the flange tightly to the finished ceiling surface and accommodates ceiling thickness from 1/2" - 1" thick. Use optional plaster lip extender for ceilings up to 2" thick.

Catalog

Project

Comments

Prepared By

Type

Date

Junction Box

(6) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs.

Driver

Integral constant current driver provides noise free operation. Continuous, flicker-free 1% dimming, available with 2 or 3 wire phase cut and EcoSystem/DALI digital control interfaces. The DALI option is Fifth Light compatible.

Emergency Option

Provides 90 minutes of standby lighting meeting most life safety codes for egress lighting. Remote charge indicator and test switch. The maximum battery pack ambient is 50°C.

Compliance

Type IC inherently protected, suitable for direct contact with insulation and cULus listed for damp locations. Restrictive airflow per ASTM-E283. EMI/RFI emissions per FCC 47CFR Part 18 consumer limits. Contains no mercury or lead and RoHS compliant. Photometric testing in accordance with IES LM-79-08. Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11. Zhaga compliant. Meets EMI/RFI emission per FCC 47CFR Part 18 consumer limits at 120V input. Lighting Facts Labeled.

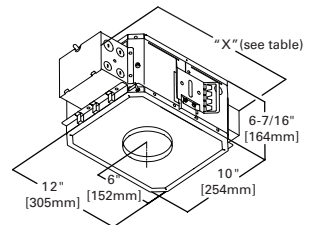
Warranty

5 year warranty.



P3LED09 E3PINL

LED Directional Pinhole
1.5" Aperture
900 Lumen Series



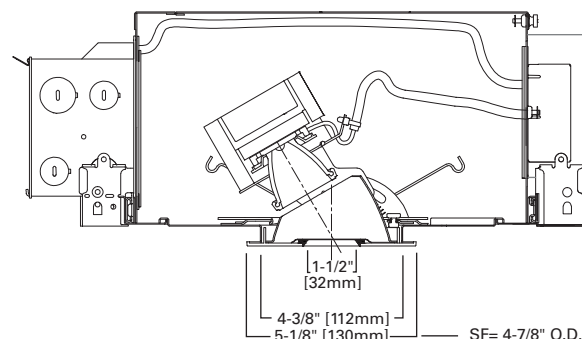
Catalog #	X-Dimension
P3LED09*E	16.4" (416mm)
P3LED09*E010	16.25" (413mm)
P3LED09*E5LT	16.25" (413mm)
P3LED09*EDMX	16.25" (413mm)
P3LED09*1ELTE	16.9" (429mm)
P3LED09*EL3D	16.9" (429mm)

E Driver Option

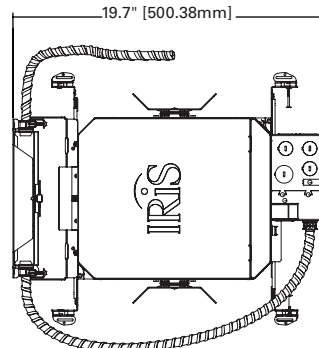
Input Voltage	120V	277V
Input Current (A)	0.12	0.06
Input Power (W)	14.3	15
Inrush Current (A)	0.17	0.43
THD: ≤ 20%		
PF: ≥ 0.90		
T Ambient: -20 to +40°C		
T Plenum: +65°C Max.		
Sound Rating: Class A		

E010 Driver Option

Input Voltage	120V	277V
Input Current (A)	0.13	0.06
Input Power (W)	14.3	15
Inrush Current (A)	0.6	1
THD: ≤ 20%		
PF: ≥ 0.90		
T Ambient: -20 to +40°C		
T Plenum: +65°C Max.		
Sound Rating: Class A		



EM OPTION



ORDERING INFORMATION

P3LED E3PINL

Complete luminaire consists of a housing platform and optical element. Housing platform can be ordered without primary optic. Order primary optics separately.

Example: P3LED09830E RG50SP15 E3PINL

Platform	Lumens ¹	Distribution	Color	Driver	Options
P3LED					
P3LED = 3.5" Aperture IC, AT LED Housing Platform P3LEDCEP = 3.5" Aperture IC, AT LED Housing Platform, CCEA listed for City of Chicago Plenum Requirements	09 = 900 Lumens (Nominal)	[Blank] = Omit Primary Optic NSP10 = 10° Beam SP15 = 15° Beam NFL25 = 25° Beam FL40 = 40° Beam	827 = 80 CRI Minimum, 2,700 K CCT 927 = 90 CRI Minimum, 2,700 K CCT 830 = 80 CRI Minimum, 3,000 K CCT 930 = 90 CRI Minimum, 3,000 K CCT 835 = 80 CRI Minimum, 3,500 K CCT 840 = 80 CRI Minimum, 4,000 K CCT	E = 120 – 277V 50/60Hz Leading or Trailing Edge Phase Cut 1% Dimming (phase cut dimming at 120V only) E010 = 120 – 277V 50/60Hz 0 -10V 10% Dimming ED010 = 120 – 277V 50/60Hz 0 -10V 1% Dimming E5LT = 120 – 277V 50/60Hz DALI 1% Dimming EDMX = 120 – 277V 50/60Hz DMX 1% Dimming 1ELTE = 120V 60Hz Leading Edge 1% Dimming, Lutron A-Series EL3D = 120 – 277V 50/60Hz 3-wire and EcoSystem 1% Dimming, Lutron A-Series	EM = Integral Battery Backup with Remote Test Switch and Indicator Light (Not available with 1ELTE and EL3D driver options)

Optical Element	Flange Style and Finish Options	Accessories
E3PINL		
E3PINL = 1.5" Aperture Pinhole Splay	[Blank] = Matte White Die-cast Flange with Black Oculus POL = Polished Aluminum Die-cast Flange with Black Oculus RAW = Raw Aluminum Die-cast Flange with Black Oculus SAL = Satin Aluminum Die-cast Flange with Black Oculus W = Matte White Die-cast Flange with White Oculus	RG50NSP10 = 10° Beam Glass Reflector, 50mm RG50SP15 = 15° Beam Glass Reflector, 50mm RG50NFL25 = 25° Beam Glass Reflector, 50mm RG50FL40 = 40° Beam Glass Reflector, 50mm RG50MH = Media Holder for two inch [50mm] diameter L series color filters or beam modifying lens. Attaches directly to RG50 series 50mm Reflectors FMC3 = Flush Mount Collar Accessory PLE3 = Plaster Lip Extender for Up to 2" Thick Ceilings ZLM03 = Replacement LED module, see specification sheet for catalog number and performance data

ENERGY DATA

P3LED E3PINL

1ELTE Driver Option			EL3D Driver Option			E5LT Driver Option			EDMX Driver Option		
Input Voltage	120V	277V	Input Voltage	120V	277V	Input Voltage	120V	277V	Input Voltage	120V	277V
Input Current (A)	0.13		Input Current (A)	0.13	0.06	Input Current (A)	0.12	0.06	Input Current (A)	0.13	0.06
Input Power (W)	15.7		Input Power (W)	15.6	16	Input Power (W)	14.3	15.2	Input Power (W)	15.1	16.1
Inrush Current (A)	1.9		Inrush Current (A)	1.9	2	Inrush Current (A)	1.73	1.8	Inrush Current (A)	1.82	1.89
THD: ≤ 20%			THD: ≤ 20%			THD: ≤ 20%			THD: ≤ 20%		
PF: ≥ 0.90			PF: ≥ 0.90	≥ 0.90	≥ 0.80	PF: ≥ 0.90			PF: ≥ 0.90	≥ 0.90	≥ 0.80
T Ambient: -20 to +40°C			T Ambient: -20 to +40°C			T Ambient: -20 to +40°C			T Ambient: -20 to +40°C		
T Plenum: +65°C Max.			T Plenum: +65°C Max.			T Plenum: +65°C Max.			T Plenum: +65°C Max.		
Sound Rating: Class A			Sound Rating: Class A			Sound Rating: Class A			Sound Rating: Class A		

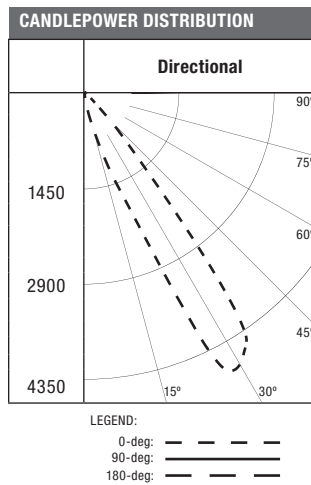
PHOTOMETRICS

P3LED E3PINL

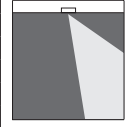
CANDLEPOWER DISTRIBUTION			30° HORIZONTAL PLANE					30° VERTICAL PLANE				
Directional			MH	FC	L	W	CB	D	FC	L	W	CB
180			5.5'	35.2	3.6	2.2	3.2	5.5'	114.6	2	1.6	9.5
3600			7'	21.7	4.7	2.8	4	7'	70.8	2.5	2	12.1
5400			8'	16.6	5.4	3.2	4.6	8'	54.2	2.9	2.4	13.9
			9'	13.1	6.1	3.6	5.2	9'	42.8	3.3	2.8	15.6
			10'	10.6	6.8	4.2	5.8	10'	34.7	3.7	3	17.3
			12'	7.4	8	5	6.9	12'	24.1	4.4	3.6	20.8
ZONAL LUMEN SUMMARY			SINGLE UNIT FOOTCANDLES									
Zone	Lumens	%Fixture	3' FROM WALL (Distance From Fixture Along Wall)									
0-30	301	53.4	DD	●	1'	2'	3'	4'	5'	6'		
0-40	502	89.3	1'	0.1	0	0.6	0.2	0.1	0.1	0		
0-60	550	97.7	2'	0.9	0.1	0.1	0	0.2	0.1	0		
0-90	563	100	3'	11.7	6.1	1.3	0	0	0	0		
90-180	0	0	4'	61.4	12.2	2.7	0.1	0	0	0		
0-180	563	100	5'	72.5	24.4	4.5	0.7	0.1	0	0		
			6'	58.4	22.2	6.1	0.7	0.3	0.1	0		
			7'	31.2	13.9	5.3	0.7	0.3	0.1	0		
			8'	13.9	8	3.7	0.5	0.3	0.1	0		
			9'	6.3	4.3	2.4	0.5	0.3	0.1	0		
			10'	3	2.2	1.5	0.4	0.2	0.1	0		

PHOTOMETRICS

P3LED E3PINL



Test Number	P106890
Platform	P3LED09830E
Element	E3PINL RG50NSP10
Lumens	488 Lm
Efficacy	34.1 Lm/W



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	235	51.7
0-40	433	95.5
0-60	453	99.8
0-90	454	100
90-180	0	0
0-180	454	100

30° HORIZONTAL PLANE						30° VERTICAL PLANE					
	MH	FC	L	W	CB		D	FC	L	W	CB
5.5'	26.6	4.7	2.4	3.2		5.5'	108.6	1.7	1.6	9.5	
7'	16.4	6	3	4		7'	67	2.2	2	12.1	
8'	12.6	6.9	3.4	4.6		8'	51.3	2.4	2.2	13.9	
9'	9.9	7.8	3.8	5.2		9'	40.6	2.7	2.6	15.6	
10'	8	8.6	4.2	5.8		10'	32.9	3.1	2.8	17.3	
12'	5.6	10.3	5.2	6.9		12'	22.8	3.7	3.4	20.8	

SINGLE UNIT FOOTCANDLES

3' FROM WALL
(Distance From Fixture Along Wall)

DD	●	1'	2'	3'	4'	5'	6'
1'	0.1	0.1	0	0	0	0	0
2'	0.1	0	0	0	0	0	0
3'	3.9	0.3	0	0	0	0	0
4'	60.6	16.2	0.7	0	0	0	0
5'	72.6	22.6	5	0	0	0	0
6'	18.8	17.8	5.4	0	0	0	0
7'	18.8	10.7	4.4	0	0	0	0
8'	8.4	6.6	3.2	0.1	0	0	0
9'	4.8	4	2.2	0.2	0	0	0
10'	2.8	2.3	1.4	0.2	0.1	0	0

LIGHTING FACTS

LED lighting facts®
A Program of the U.S. DOE

Light Output (Lumens) **447**
 Watts **14.4**
 Lumens per Watt (Efficacy) **30**

Color Accuracy
Color Rendering Index (CRI) **90**

Light Color
Correlated Color Temperature (CCT) **3000 (Bright White)**

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008. Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-V275RD (9/16/2013)
 Model Number: P3LED09SP15927E E3PINL [D7' 18"]
 Type: Luminaire - Downlight

LED lighting facts®
A Program of the U.S. DOE

Light Output (Lumens) **394**
 Watts **14.5**
 Lumens per Watt (Efficacy) **27**

Color Accuracy
Color Rendering Index (CRI) **90**

Light Color
Correlated Color Temperature (CCT) **2700 (Warm White)**

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008. Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-SECBLS (9/16/2013)
 Model Number: P3LED09SP15927E E3PINL [D7' 18"]
 Type: Luminaire - Downlight

LED lighting facts®
A Program of the U.S. DOE

Light Output (Lumens) **652**
 Watts **14.5**
 Lumens per Watt (Efficacy) **45**

Color Accuracy
Color Rendering Index (CRI) **80**

Light Color
Correlated Color Temperature (CCT) **4000 (Bright White)**

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008. Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-YCERDT (8/15/2013)
 Model Number: P3LED09SP15840E E3PINL [D7' 18"]
 Type: Luminaire - Downlight

LED lighting facts®
A Program of the U.S. DOE

Light Output (Lumens) **588**
 Watts **14.4**
 Lumens per Watt (Efficacy) **40**

Color Accuracy
Color Rendering Index (CRI) **80**

Light Color
Correlated Color Temperature (CCT) **3500 (Bright White)**

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

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Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-V4VNT2 (9/23/2013)
 Model Number: P3LED09SP15830E E3PINL [D7' 18"]
 Type: Luminaire - Downlight

LED lighting facts®
A Program of the U.S. DOE

Light Output (Lumens) **559**
 Watts **14.4**
 Lumens per Watt (Efficacy) **38**

Color Accuracy
Color Rendering Index (CRI) **80**

Light Color
Correlated Color Temperature (CCT) **3000 (Bright White)**

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008. Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-4DEGMC (9/9/2013)
 Model Number: P3LED09SP15830E E3PINL [D7' 18"]
 Type: Luminaire - Downlight

LED lighting facts®
A Program of the U.S. DOE

Light Output (Lumens) **525**
 Watts **14.4**
 Lumens per Watt (Efficacy) **36**

Color Accuracy
Color Rendering Index (CRI) **80**

Light Color
Correlated Color Temperature (CCT) **2700 (Warm White)**

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008. Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-X68TJ1 (9/6/2013)
 Model Number: P3LED09SP15827E E3PINL [D7' 18"]
 Type: Luminaire - Downlight

Please see LightingFacts.com for a complete listing of products.