PINNAL LIGHTING®

Project Name

Det ______Type ______

Key Features

- EDGE Evolution 1" fixture enclosed by sound dampening acoustic panels
- Architectural frame ensures acoustic panels are mechanically secured
- Specify color for panels and frame for an exclusive design
- Room-side maintenance for LED System
 5-year limited warranty covers LED driver accession
- 5-year limited warranty covers LED, driver, acoustic panel and fixture
 Maximum weight is 22 lbs. for a standard 4' fixture
- Maximum weight is 22 lbs. for a si
 Buy American Act compliant
- Apparent Noise Reduction Coefficient (NRC) is up to 1.85



Example Part #: EX1AS-12-HE-N-830HO-6'-AC48G1-U-OL2-1-0-GR-P12

EX1AS	-	-	- N	-	-	-	-	-	-		-	-
HOUSING	FIXTURE HEIGHT	DIRECT SHIELDING	INDIRECT SHIELDING	CRI, CCT & OUTPUT	LENGTH	MOUNTING	VOLTAGE	DRIVER	CIRCUITING	BATTERY & EMERGENCY	FRAME FINISH	ACOUSTIC FINISH

1-1/2" (38.1mm) 3" (76.2mm)

		N	
HEIGHT	DIRECT SHIELDING	INDIRECT SHIELDING	SOURCE
_ S pecify nominal height of fixture (specify either 8″, 12″ or 16″ height) Height pg. 2	 A - Satine Lens HE - High Efficiency Lens HED - Descent Lens P - Parabolic Louver WHE - Asymmetric High Efficiency BW - Batwing Direct Shielding pg. 2 	N - None Indirect Shielding pg. 2	_27 2700K _30 3000K _35 3500K _40 4000K CL Custom Lumens CW Custom Watts MOD - Mod options available <i>CRI, CCT, Output pg. 2-3</i>
		_	
LENGTH ²	MOUNTING ³	VOLTAGE	DRIVER
Individual Fixture <i>Length pg.</i> 3	ACG AC to Grid ACJB - AC to J Box ACST - AC to Structure AC5G 5" Non-Power Canopy AC5JB - 5" Non-Power Canopy SQG 5" Square Canopy SQJB - 5" Square Canopy Mounting pg. 3	U - Universal (120 thru 277V) 1 - 120V 2 - 277V 3 - 347V <i>Voltage pg.</i> 3	FSD - Factory Select Driver (1%, 0-10v) PL2 - Advance Xitanium (1%, 0-10v) OL2 - eldoLED Optotronic (1%, 0-10v) OL4 - eldoLED Optotronic 347v (1%, 0-10v) EE1 - eldoLED ECOdrive (1%, 0-10v) ES1 - eldoLED SOLOdrive (0.1%, 0-10v) LH1- Lutron Hi-lume (1%, EcoSystem) PS1 - Advance Xitanium (50%/100%) Driver pg. 3
_			
CIRCUITING	BATTERY & EMERGENCY ⁴	FRAME FINISH	ACOUSTIC FINISH ⁵
 1 - Single Circuit M - Multi Circuit E - Emergency (entire fixture) N - Night Light (entire fixture) Circuiting pg. 4 	 0 - None FSB - Factory Select Battery FSG - Factory Select ALCR GI - lota ETS DR GB - Bodine GTD PLL - Bodine 10W E - Emergency (section of fixture) N - Night Light (section of fixture) L - Life Safety Section Battery & Emergency pg. 4 	W - White S - Metallic Silver BL - Textured Black BR - Bronze GR - Graphite CC - Custom Color Frame Finish pg. 4	A Acoustic Panel Color PCC - Custom Color Panel (use 2 digit code to specify color) Acoustic Finish pg. 5

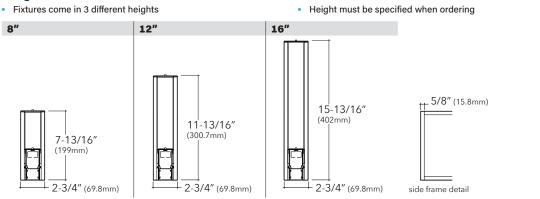
¹When specifying CRI, CCT & OUTPUT the first _ is for specifying either **8** - 80CRI or **9** - 90CRI. The ending _ _ are for specifying output, example **HO** - High Output. See output charts for more information. ²Individual fixtures come in 2', 3', 4', 5', 6', 7', & 8' lengths. ³Specify AC length standard AC is 48"; Specify grid: G1=15/16", G9=9/16", GS=Screw Slot. Example: AC48G1 ⁴Enter quantity for Battery and Emergency, Example 2PL. ⁵For PCC option minimum order quantity required. Consult factory for more information.

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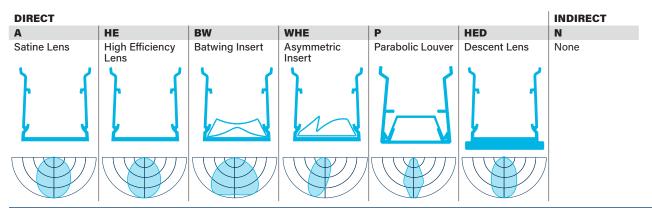
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Shielding



Output

Specify either 80 or 90 CRI

90 CRI = R9≥50

Longer lead-time may apply for 90 CRI. Consult factory. .

Custom Output - Lumens OR Wattage

Specify CRI, CCT and desired lumens (i.e. CL835500) CL Specify lumens between standard offering listed below. Lumens are specified per color temp __ Specify CRI, CCT and desired wattage (i.e. CW9407) Specify watts between standard offering listed below CW_

80 CRI

	Color	Output	Watts	Shieldin	g										
			per foot	Α	-	HE		BW		WHE		Р		HED	
				Satine Le	ens	High Effi	ciency	Batwing		Asymme	tric	Louver		Descent	
				Lumens/ft	LPW	Lumens/ft	LPW	Lumens/ft	LPW	Lumens/ft	LPW	Lumens/ft	LPW	Lumens/ft	LPW
330	3000K	Standard	4.5	347	77.1	412	91.6	327	72.7	365	81.1	273	60.7	377	83.8
830HO	3000K	High	8.6	641	74.5	761	88.5	604	70.2	676	78.6	504	58.6	698	81.2
835	3500K	Standard	4.5	357	79.3	424	94.2	336	74.7	376	83.6	281	62.4	388	86.2
835HO	3500K	High	8.6	658	76.6	782	90.9	621	72.2	695	80.8	519	60.3	717	83.4
840	4000K	Standard	4.5	365	81.0	432	96.0	343	76.2	383	85.1	286	63.6	396	88.0
840HO	4000K	High	8.6	670	77.8	797	92.7	633	73.6	708	82.3	529	61.5	731	85.0
90 CRI															
927	2700K	Standard	4.5	274	60.8	325	72.2	259	57.6	289	64.2	216	48.0	298	66.2
927HO	2700K	High	8.6	506	58.8	601	69.9	478	55.6	534	62.1	399	46.4	551	64.1
930	3000K	Standard	4.5	320	71.1	380	84.4	302	67.1	337	74.9	252	56.0	348	77.3
930HO	3000K	High	8.6	591	68.7	701	81.5	557	64.8	623	72.4	465	54.1	643	74.8
935	3500K	Standard	4.5	321	71.3	382	84.9	303	67.3	339	75.3	253	56.2	349	77.6
935HO	3500K	High	8.6	592	68.8	704	81.9	559	65.0	625	72.7	467	54.3	645	75.0
940	4000K	Standard	4.5	326	72.4	386	85.8	306	68.0	342	76.0	256	56.9	354	78.7
		High	8.6	598	69.5	711	82.7	565	65.7	632	73.5	472	54.9	653	75.9

Direct Source: MOD Options

Specify $\ensuremath{\textbf{MOD}}$ in the part number for any of the below options All **RGB_** Source Options will require specific driver and control

· Consult factory for MOD specification details, pricing, and lead-time information

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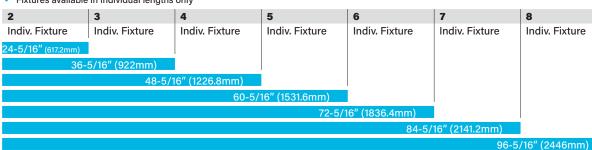
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Direct Source: MOD Options Cont.

MOD	TIR Optics

Length

· Fixtures available in individual lengths only

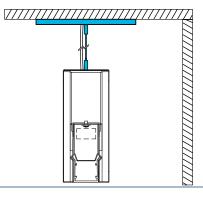


Mounting

- Specify cable length in ordering code (AC48G1)
- Standard adjustable cable. Specify 48", 120", 240", or 350"
- Aircraft cable (AC) mounts on 4' (1219.2mm) and 8' (2438.4mm) centers
- Aircraft Cable supplied with 5" (127mm) power and 2" (50.8mm)
- non-power canopies

- Canopies match frame finish, power cords are white, grey, or black depending on frame finish. See Frame Finish section for additional details.
- Approved for dry location unless otherwise noted
- Refer to installation instructions during installation at the job site
- Maximum fixture weight is 22 lbs for a standard 4' fixture

ACG1	Aircraft Cable 1" (15/16") T-Bar
ACG9	Aircraft Cable 9/16" T-Bar
ACGS	Aircraft Cable Screw Slot T-Bar
ACJB	Aircraft Cable Junction Box
ACST	Aircraft Cable Structure
AC5_G_	Aircraft Cable 5" (127mm) Non-Power Canopy
AC5_JB	Aircraft Cable 5" (127mm) Non-Power Canopy
SQG_	Aircraft Cable 5" (127mm) Square Canopy
SQJB	Aircraft Cable 5" (127mm) Square Canopy



Voltage

Some EX1 configurations will not accommodate all voltage options; consult with factory

U	Universal
1	120 volt
2	277 volt
3	347 volt

Driver

- Standard Driver Option = PL2
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more driver options, see Pinnacle Resource Guide
- Some EX1 configurations will not accommodate all driver options; consult with factory

0-10V Drivers	
FSD	Factory Select Driver 1%, 0-10v
PL2	Signify Advance Xitanium 1%, 0-10v
PL4	Advance Xitanium 347v 1%, 0-10v, requires 347v
OL2	eldoLED Optotronic, 1%, 0-10v
OL4	eldoLED Optotronic 347v, 1% 0-10v, requires 347v option
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE2	eldoLED ECOdrive 1%, 0-10v Linear
ES1	eldoLED SOLOdrive 0-10v, 0.1% Logarithmic
ES2	eldoLED SOLOdrive 0-10v, 0% Linear
DALI Drivers	
EE3	eldoLED SOLOdrive .1%, DALI (logarithmic)
EE4	eldoLED SOLOdrive .1%, DALI (linear)
OD1	eldoLED Optotronic 1%, DEXAL
OD2	eldoLED Optotronic 1%, DALI 2 Channel
Lutron Driver	S
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
LH4	Lutron Hi-Lume 1%, 2-wire, Lutron-LTEA2W, 120v only
Alternate Driv	<i>i</i> ers
PS1	Signify Advance Xitanium Step Dimming 50%/100%

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How to specify Circuiting, Battery and Emergency



Select fixture circuiting from options below

Some EX1 configurations will not accommodate all circuiting options, consult with factory

Circuiting

1	Single Circuit
M	Multi Circuit
E	Emergency Circuit (whole fixture)
N	Night Light Circuit (whole fixture)

Battery and emergency section options are available in addition to fixture circuit

- Select battery and emergency section options below; factory shop drawing required
 - Some EX1 configurations will not accommodate all circuiting options, consult with factory

Battery and/or Emergency If Required



No battery or specific emergency section required

Battery

- Select battery section type if required, indicate total QTY. Example 2PL
- 90 minute battery runtime; test button is remote to fixture and requires an additional drop
- Battery not available for lengths under 4'
- Entire direct fixture housing is on battery for lengths up to 5' Half of fixture is on battery for 6, 7' or 8' housing lengths
- For more battery options available, see Pinnacle Resource Guide

0	No Battery
_FSB	Factory Select Battery (10w option)
_FSBST	Factory Select Battery (10w, Self Testing)
_ILL	lota 10w Integral Lithium, Self Testing
_IRH	lota 20w Remote
_PRH	Bodine 20w Remote
DU	Deding 10 w Integral Lithium, Calf Testing

_PLL Bodine 10w Integral Lithium, Self Testing

Emergency

FSG GI GB E N п

- Select emerger
- Combine batte
- Circuiting secti

For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 92.3 (LPW) x 10 (watts) = 923 battery lumen output

y		
ency section type if required, indicate total QTY. <i>Example 1E</i> tery and emergency section ordering codes if both options are selected ctions only avalble on 6' fixture lenghts and longer Factory Select Automatic Load Control Relay (ALCR), UNV	Battery OR Emergency Ordering Examples• Single circuit, 10w Integral BatteryOrdering Code: 1-1• Emergency only, 10w Integral BatteryOrdering Code: E-1• Single circuit, GTD requiredOrdering Code: 1-1	1PL
Emergency Transfer Switch (ETS) DR Emergency Control Device, UNV	Combination Section Ordering Examples	
Bodine GTD, Generator Transfer Device, 120v or 277v	Single circuit, (1) 10w battery, (1) emergency section Ordering Code: 1-1PL	1E
Emergency circuit section	 Multi circuit, (2) 10w battery, (1) emergency sections Ordering Code: M-2F Ordering Code: M-2F 	
Night Light circuit section	Single circuit, (1) night light section Ordering Code: 1-1N	
Life Safety circuit section NO THROUGH WIRE		

Frame Finish

- Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes
- Selecting a frame finish other than white may impact lumen output; consult factory for more information

W	White (white cord/white canopy)
S	Metallic Silver (grey cord/silver canopy)
BL	Textured Black (black cord/black canopy)
BR	Bronze (white cord/bronze canopy)
GR	Graphite (white cord/graphite canopy)
CC	Custom Color (white cord/color match canopy)

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pg. 4



Acoustic Panel Color

contact factory for sample

- 12mm PET Polyester Fiber acoustic panel
- Recyclable and contains up-to 90% post-consumer content Colors below are for representation purposes, color may vary from photograph,
- Specify the color of the Acoustic panel with the numeric code below in the Acoustic Finish portion of the part number. For example, specify A08 for Nickel
- A01 Charcoal A02 - Black A03 - Azure **A04 -** Ruby A05 - Commander A06 - Coffee Bean A08 - Nickel A10 - Slate A07 - Almond A09 - Stone A11 - Pear A12 - Teal A13 - Warm White A14 - Nighttime Blue A15 - Tiger A16 - Cool Grey A18 - Dune A17 - Grey Granite A21 - Gingerbread A19 - Bone A22 - Raven PCC - Custom Color A20 - Bumblebee A23 - Oregano A24 - Mushroom Please note there is a minimum order quantity for custom matching. Consult factory for order quantity, price and leadtime.

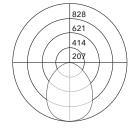
Controls

Pinnacle is able to accommodate different control solutions from different manufacturers. Consult Factory for more information.

Photometrics

High Efficiency Lens

Test # ITL86985 Catalog # EX1HE-840-4 Lumens 1726 Lm 19.9 W Watts Efficacy 87 LPW



Candela I	Distribution
-----------	--------------

Vert Angle	Horizontal Angle					
	0	22.5	45	67.5	90	
0	828	828	828	828	828	
5	823	824	823	822	821	
10	810	808	804	799	796	
15	787	779	769	757	751	
20	753	739	722	699	690	
25	710	689	662	629	614	
30	657	632	595	554	537	
35	596	569	524	477	459	
40	528	499	449	404	387	
45	457	429	379	336	323	
50	385	361	315	277	266	
55	317	296	256	225	216	
60	253	234	203	179	172	
65	194	180	156	140	135	
70	142	132	116	103	100	
75	97	90	79	72	70	
80	58	54	48	44	44	
85	26	24	21	20	20	
90	0	0	0	0	0	

Luminance Data (cd/sq.m)

Angle In	Average	Average	Average
Degrees	0-Deg	45-Deg	90-Deg
45	14181	11775	10034
55	12136	9795	8273
65	10063	8103	6991
75	8216	6745	5967
85	6677	5393	5136

For all available IES files, please visit our website at pinnacle-Ita.com. Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions

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Applications & Certificates

Construction: Frame is made of formed cold rolled steel. Highly reflective die-formed white painted reflector.

Shielding: Diffuse snap-in acrylic lens with matte finish, removable for maintenance.

Mounting: Aircraft cable that mounts on 4'-0" (1219.2mm) and 8'-0" (2438.4mm) centers. Aircraft Cable supplied with 5" (127mm) power and 2" (50.8mm) non-power canopies. Refer to installation instructions for appropriate ceiling detail. Maximum fixture weight is 10 lbs for a standard 4' fixture.

LED: 25°C test environment. Lumen output/wattage has a margin of +/- 5%; 2' or 3' lengths may have a greater wattage deviation. Luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES tested in a

CRI, CCT & Output: Two lumen packages available. Standard and High (HO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 90 CRI = R9 \geq 50.

Voltage: Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL4 in Driver section when 347 volt (3) is selected. Some EX configurations will not accommodate all voltage options; consult with factory.

Driver: Standard Driver option is Advance Xitanium 0-10V, 1% = PL2. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 107°F/42°C. When ND is specified, a spec grade driver will be provided. For more driver options, see Pinnacle Resource Guide. Some EX configurations will not accommodate all driver options.

Circuiting: Select from single circuit (1), Multi circuit (M), Emergency circuit (E) or Night

Light circuit (N). For emergency circuiting situations that require no through wire or circuit separation, Life Safety Circuit should be selected. This will provide a separate power feed and only the Life Safety Circuit in that section. Some EX configurations will not accommodate all circuiting options; consult with factory.

Battery & Emergency: Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is remote to fixture. For more Battery options, see Pinnacle Resource Guide.

Frame Finish: Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes. Canopies painted to match specified frame finish. Contact factory for additional custom color and finish options.

Acoustics: Acoustic panel material is a 9mm PET Polyester Fiber acoustic panel, containing up to 90% post-consumer content, made by others. Acoustic testing was completed by Riverbank Acoustic. For specific reports, contact Pinnacle directly. Acoustic material is extremely durable and requires little attention as far as maintenance. Light dusting is recommended. For disinfection, spray lightly with preferred disinfectant solution and let air dry. Do not wipe after being sprayed for optimal disinfection.

Controls: Consult factory.

Labels: UL and cUL 1598 listed. Standard and HO lumen packages are approved for dry location unless otherwise noted.

Fixture Weight: Maximum fixture weight is 22 lbs for a standard 4' fixture.

Buy American Act Compliant

Warranty: EX LED offered with a 5-year limited warranty. Covers LED, driver, acoustic panel and fixture.