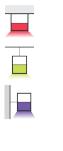
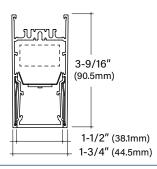
Project Name

Type \_









# 1" Suspended Direct Linear











# **Key Features**

- 6063-T5 Extruded aluminum housing
- Highly reflective die-formed white painted reflector
- Room-Side Maintenance for LED System Wiring access available through bottom of housing
- 5-year limited warranty covers LED, driver and fixture
- UL and cUL listed

**DIRECT SHIELDING** 

**HE** - High Efficiency Lens

BW - Batwing Insert

A - Satine Lens

Mounting pg. 4

Approved for dry/damp location unless otherwise noted

Ν

N - None

Shielding pg. 2

**INDIRECT SHIELDING** 

- Maximum weight is 10 lbs. for a standard 4' fixture
- Buy American Act compliant

Example Part #: EX1-HE-N-830HO-26'-AC48G1-U-OL2-1-0-W

**LENGTH OR PATTERN<sup>2</sup>** 

- Individual Fixture

- Continuous Row

**S\_-** Square

EX1	-	- N	-	-	-	-	-	-	-	-
	DIRECT SHIELDING	INDIRECT SHIELDING	CRI, CCT & OUTPUT	LENGTH OR PATTERN	MOUNTING	VOLTAGE	DRIVER	CIRCUITING	BATTERY & EMERGENCY	FINISH

WHE - Asymmetric Insert HED - Descent Lens P - Parabolic Louver Shielding pg. 2		353500K 404000K CL Custom Lumens CW Custom Watts MOD - Mod options available Lumen Output pg. 2	R_X Rectangle L_X L Shape U_X_X U-Shape T_X T-Shape X_X X-Shape MOD - Mod options available Length and Pattern pg. 3
	_		_
MOUNTING <sup>3</sup>	VOLTAGE	DRIVER	CIRCUITING
ACG AC to Grid ACJB - AC to J Box ACST - AC to Structure WA - Wall Mount S - Surface Mount AC5G 5" Non-Power Canopy AC5JB - 5" Square Canopy SQJB - 5" Square Canopy	<b>U -</b> Universal (120 thru 277V) <b>1 -</b> 120V <b>2 -</b> 277V <b>3 -</b> 347V Voltage pg. 4	FSD - Factory Select Driver (1%, 0-10v) PL2 - Advance Xitanium (1%, 0-10v) OL4 - Osram 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%) OL2 - Osram (1%, 0-10v) ND - Non-Dimming Driver pg. 4	1 - Single Circuit M - Multi Circuit E - Emergency (entire fixture) N - Night Light (entire fixture) Circuiting pg. 5

SOURCE1

**\_27**\_ **-** 2700K

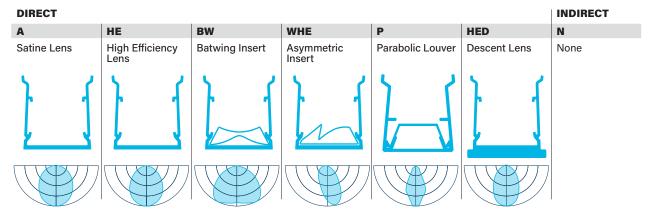
**30**\_ - 3000K

**35**\_ - 3500K

BATTERY & EMERGENCY⁴	FINISH	FIXTURE OPTIONS	CONTROLS
_GI - lota ETS DR _GB - Bodine GTD _PLL - Bodine 10W (low profile)		TC - Indirect Top Cover (ac mounting only) DSP - Customer supplied Batter/Driver/ Sensor	Pinnacle is able to accommodate different control solutions from different manufacturers. Consult Factory for more information.

When 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. 2 Individual fixtures come in 2, 3, 4, 5, 6, 7, & 8' lengths. Continuous row come in 1' increments. For Mod layouts Specify pattern shape and overall dimensions. Example: L6x4: L pattern that is 6'x4.' 3 Specify AC length standard AC is 48"; Specify grid: G1=15/16", G9=9/16", GS=Screw Slot. Example: AC48G1 "Enter quantity for Battery and Emergency, Example 2PL.

# **Shielding**



# Output

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory.

**Custom Output - Lumens OR Wattage** 

• 80 CRI = R9≥19 and 90 CRI = R9≥61

CL	Specify	CRI, CCT and	d desired l	lumens (i.e.	. CL8355	500)	Specify lumens between standard offering listed below. Lumens are specified per color temp								
CW	_ Specify	07)	Specify watts between standard offering listed below												
80 CRI															
			ut   Watts   Shielding   A   Satine Lens		HE			<b>BW</b>		WHE Asymmetric			HED Descent		
				Lumens/ft	LPW	Lumens/ft	LPW	Batwing Lumens/ft	LPW	Lumens/ft	LPW	Louver Lumens/ft	LPW	Lumens/ft	LPW
830	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	359	79.8	302	67.1	337	74.9	252	56.0	348	77.3
930HO	3000K	High	8.6	591	68.7	661	76.9	557	64.8	623	72.4	465	54.1	643	74.8
935	3500K	Standard	4.5	321	71.3	366	81.3	303	67.3	339	75.3	253	56.2	349	77.6
935HO	3500K	High	8.6	592	68.8	675	78.5	559	65.0	625	72.7	467	54.3	645	75.0
940	4000K	Standard	4.5	326	72.4	364	80.9	306	68.0	342	76.0	256	56.9	354	78.7
940HO	4000K	High	8.6	598	69.5	670	77.9	565	65.7	632	73.5	472	54.9	653	75.9

# **Direct Source: MOD Options**

Specify MOD in the part number for any of the below options

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

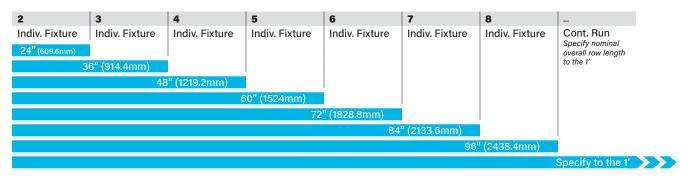
MOD TIR Optics

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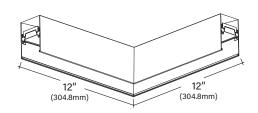
EX1\_LED\_SPEC\_OCT2022 pg. 2

# Length

- All individual units cannot be joined, end plates are factory installed and cannot be removed
- For Continuous Runs, add 1/4" (6.4mm) for each end plate or 1/2" (12.7mm) to the overall length of the row
- For patterns, refer to Pattern section on next page

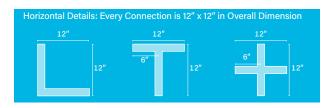


### Pattern



- Specify pattern shape and overall dimensions (includes corner dimensions)
- Refer to dimensions table below for available standard lengths
- All connectors are direct only
- 90 degree horizontal corners are 12"x12" (overall, outside dimension)
- Angles and shapes not shown require Mod Pattern; consult factory

<b>S</b> _	R_x_	U_x_x_	L_x_	T_x_	X_x_
Square Provide A dimen- sion Example: <b>S4'</b> Minimum Length- 4'x4'	Rectangle Provide AxB dimensions Example: <b>R4'x4'</b> Minimum Length- 4'x4'	U-Shape Provide AxBxC dimensions Example: U3'x4'x3' Minimum Length- 3'x4'x3'	L-Shape Provide AxB dimensions Example: <b>L3'x3'</b> Minimum Length- 3'x3'	T-Shape Provide AxB dimensions Example: <b>T3'x5'</b> Minimum Length- 3'x5'	X-Shape Provide AxB dimensions Example: <b>X5'x5'</b> Minimum Length- 5'x5'
				В	
A	A	C	A	A	A



# Length or Pattern: MOD Options

- Specify MOD in the part number for any of the below options
- Consult factory for MOD specification details, pricing, and lead-time information

	Specify MOD for patterns, lengths or angles not shown above
MOD	45- 180 degree angles
	Single-piece welded housings up to 4' x 4

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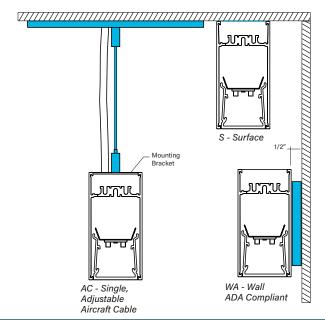
# Mounting

- Specify cable length in ordering code (AC48G1) Standard adjustable cable. Specify 48", 120", 240", or 350" End plates and power cord attached at factory

- 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

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
AC5G_	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
WA	Wall Mount
S	Surface Mount

- Canopies and pendants match fixture finish, power cords are white, grey, or black depending on fixture finish. See Finish section for additional details. Approved for dry/damp location unless otherwise noted Refer to installation instructions during installation at the job site Maximum fixture weight is 10 lbs for a standard 4' fixture Top Cover is optional on AC mounting fixtures, Top Cover is standard on others



# 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 = FSD
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more driver options, see Pinnacle Resource Guide

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	Osram Optotronic, 1%, 0-10v
OL4	Osram 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 ECOdrive .1%, DALI (logarithmic)
ES3	eldoLED SOLOdrive .1%, DALI (logarithmic)
OD1	Osram Optotronic 1%, DEXAL
OD2	Osram Optotronic 1%, DALI 2 Channel
<b>Lutron Drivers</b>	
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
LH4	Lutron Hi-Lume 1%, 2-wire, Lutron-LTEA2W, 120v only
<b>Alternate Driv</b>	ers
PS1	Signify Advance Xitanium Step Dimming 50%/100%

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

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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 only
N	Night Light Circuit only



- 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 direct fixture is on battery for 6', 7' or 8' housing lengths
- For more battery options available, see Pinnacle Resource Guide

0	No Battery
_ILL	lota 10w Integral Lithium, Self Testing
_IRH	lota 20w Remote
_PLL	Bodine 10w Integral Lithium, Self Testing
PRH	Bodine 20w Remote

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

## **Emergency**

- Select emergency section type if required, indicate total QTY. Example 1E
- Combine battery and emergency section ordering codes if both options are selected

_FSG	Factory Select ALCR, Automatic Load Control Relay
_GI	Iota ETS DR, Emergency Lighting Control Device
_GB	Bodine GTD, Emergency Lighting Control Device
_E	Emergency circuit section
_N	Night Light circuit section
L	Life Safety circuit section NO THROUGH WIRE

# **Battery OR Emergency Ordering Examples**

- Single circuit, 10w Integral Battery
- Emergency only, 10w Integral Battery
- Single circuit, GTD required

Ordering Code: 1-1PL Ordering Code: E-1PL

Ordering Code: 1-1G

### **Combination Section Ordering Examples**

- Single circuit, (1) 10w battery, (1) emergency section
- Multi circuit, (2) 10w battery, (2) emergency sections
- Single circuit, (1) night light section

Ordering Code: 1-1PL1E Ordering Code: M-2PL2E

Ordering Code: 1-1N

#### 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 fixture 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)		

# **Fixture Options**

· Additional options to enhance the fixture and finish of the product

TC	Indirect Top Cover (ac mounting only)			
DSP	Customer supplied Battery/Driver/Sensor			

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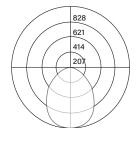
#### Controls

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 Watts 19.9 W Efficacy 87 LPW



#### Candela 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-ltq.com. Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions

### **Applications & Certificates**

Construction: 6063-T5 Extruded aluminum housing. Highly reflective die-formed white painted reflector.

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

Mounting: Aircraft cable, wall and surface mount available. The 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. Canopies are painted white unless otherwise specified. 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. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. L70 = 124,900 hours and L90 = 37,200 hours. MacAdam 3-Step Ellipses. Not all products are Lighting Facts listed. For all available IES files, please visit our website at pinnacle-ltg.com.

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. 80 CRI = R9≥19 and 90 CRI = R9≥61.

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. 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.

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 white unless specified differently in the options section of the part number. Contact factory for additional custom color and finish options.

Controls: Consult factory.

Labels: UL and cUL Listed. Standard and HO lumen packages are approved for dry/damp location unless otherwise noted.

Fixture Weight: Maximum fixture weight is 10 lbs for a standard 4' fixture.

# **Buy American Act Compliant**

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

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