



Flight Light Inc.  
 2708 47th Ave.  
 Sacramento, California, U.S.A.  
 95822-3806

PH (916) 394-2800    FX (916) 394-2809  
 TF (800) 806-3548    EM info@flightlight.com

## Heliport Design and Lighting Packages

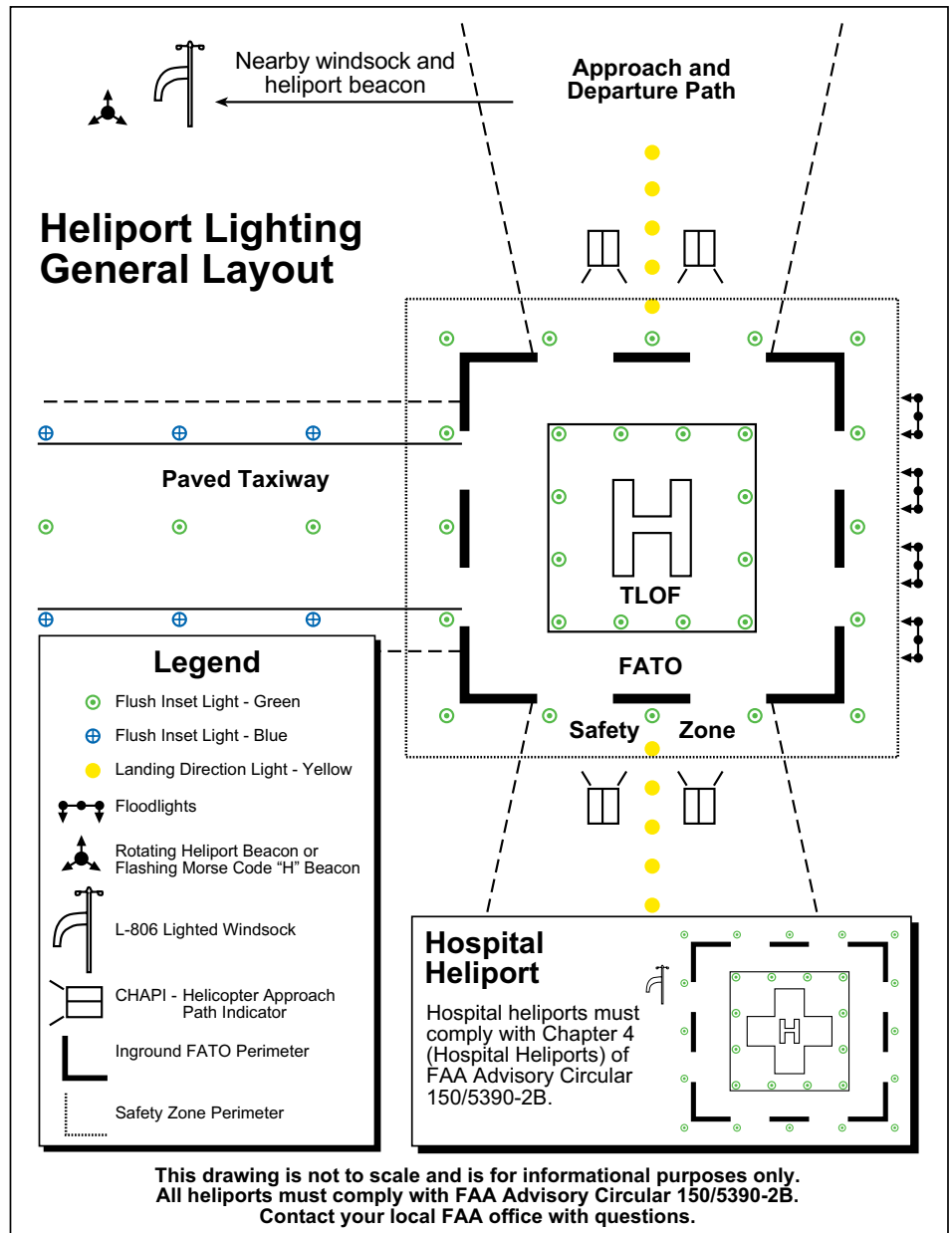
### Heliport Design

The following information is for the preliminary planning of a public use, general aviation heliport only. FAA recommendations and standards for heliport design are found in Advisory Circular 150/5390-2B. While the Advisory Circular (AC) provides general design guidance, the AC is advisory only and doesn't mandate required practices. Flight Light recommends that anyone constructing or modifying a heliport should determine all site-specific requirements and consult with a local FAA representative.

The heliport should include at least one touchdown and lift-off area (TLOF) centered in a final approach and takeoff area (FATO), a peripheral safety area and two or more approach and departure paths. The TLOF must be at least as long and wide as the rotor diameter of the largest helicopter to use the heliport. The FATO must be at least 1.5 times the overall length of the helicopter. The width of the safety area must be at least 0.33 times the rotor diameter, but not less than 20 feet (6 m). At least two approach/departure paths, with one aligned in the direction of the predominant wind, are required.

### Lighting

For night operations, the TLOF, FATO, taxiways, taxi routes, and windsock should be lighted. Other useful visual aids include: floodlights, taxiway lights, landing direction lights, a heliport identification beacon and a heliport approach path indicator (CHAPI). The recommended CHAPI power system is single phase 120/240 volts for VFR and 6.6 ampere series circuits for IFR. Obstruction lights must be installed where required to mark objects in close proximity to the approach/departure path.



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## Heliport Design and Lighting Packages

### FATO and TLOF Lights

A minimum of four flush or raised green light fixtures is recommended per side of a rectangular FATO and TLOF. A light is located at each corner with additional lights uniformly spaced between the corner lights with a maximum interval of 25 feet (7.5 m) between lights. Please note: since the FAA AC does not contain intensity standards, perimeter lights can't be FAA certified or deemed compliant.

### Lighted Wind Indicator

An FAA L807 Size 1 (about 22 ft overall height with an 8 ft, international orange windsock) is recommended, or the L806 (10 ft tall) may be substituted. The L807 has a hinged pole and a rigid base, the L806 has a frangible base. The L807 must be outside the safety zone and away from flight paths.

### Heliport Identification Beacon

Located within 1/4 mi of the heliport, three sealed beam lights rotate at 10 to 15 rpm to produce 30 to 45 fpm in white, green and yellow. A beacon using Morse code signals is also available.

### Landing Direction Lights

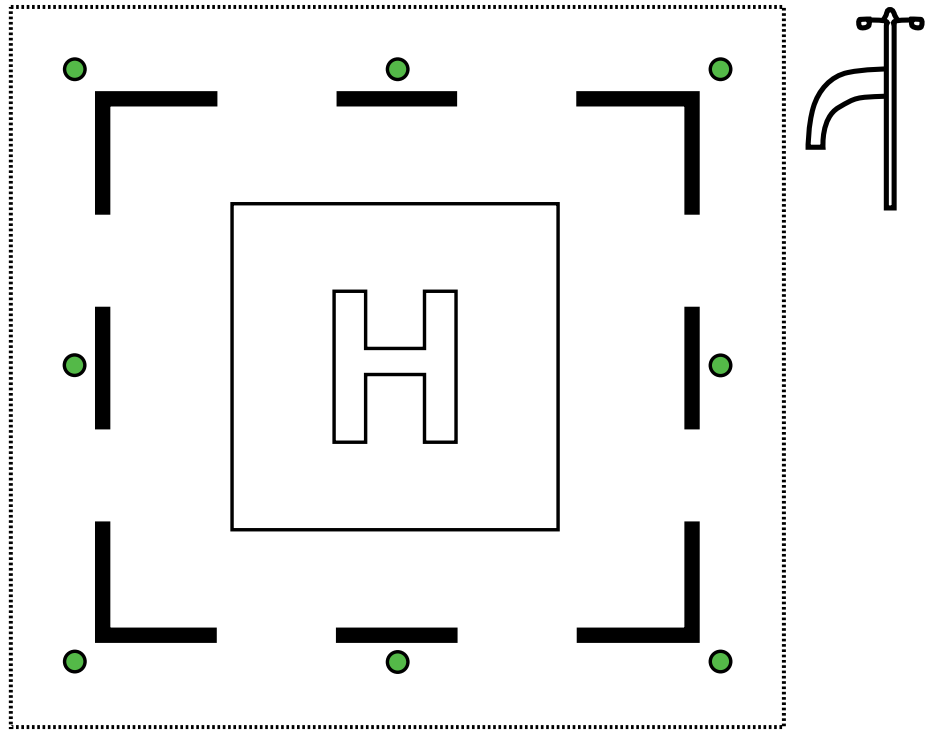
To identify alignment of the approach route, a line of five L860 or L861 lights with omnidirectional yellow lenses are spaced at 15 ft (4.5 m) intervals.

### Floodlights

Mounted on buildings or poles, elevated floodlights should illuminate all of the operational area and should be hooded to prevent upward glare that would hinder the vision of approaching pilots.

### Taxiway Lights

Taxiway center lines are defined with semi-flush L852A and L852B bi-directional or unidirectional green lights spaced at 50 ft (15 m) intervals. Blue lights set at the same intervals are used to define the edges of the taxi route.



*Typical System Layout*

### Obstruction Lights

Difficult-to-see objects shall be marked with a red FAA approved obstruction light. Contact the local FAA office with additional questions.

### Visual Glide Path Indicator

The heliport approach path indicator (CHAPI) provides pilots with visual course and descent cues. The optimum location of a CHAPI is on the extended center line of the approach path at a distance that brings the helicopter to a hover 3 to 8 feet (0.9 to 2.5 m) above the TLOF center.

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## Heliport Design and Lighting Packages

### Basic Heliport Lighting System Packages

Basic packages may be customized and expanded to fit your needs. Call to discuss your requirements.

#### Package 1: Elevated 120 VAC Incandescent System

- Easy installation
- Easy maintenance
- Economical: uses off-the-shelf lamps

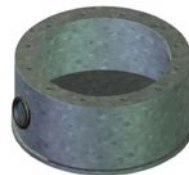
Qty:	Item #:	Description:
8	FL-860-G-69A-14	L860: green, 69W, 14" height, A21 lamp, 1.5" frangible coupling, 120 VAC operation
8	35-1935AA-25	Base plate for L868AA base: 8.5" diameter, 7.25" bolt circle
8	35-868AA.5-5	L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC
1	L806-S1-EX-120-ON-N	Externally lit (halogen), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth), 120 VAC operation



FL-860



Base Plate



Base



Wind Cone

#### Package 2: Elevated 120 VAC LED System

- Easy installation
- Lowered maintenance: LED life expectancy exceeds 50K hours
- Lowered operating costs: low power LED technology

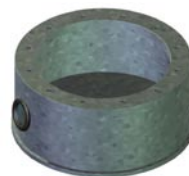
Qty:	Item #:	Description:
8	HL-860-GL-120-14	Elevated LED (5 watt) green perimeter light and 1.5" frangible coupling, 120V operation
8	35-1935AA-25	Base plate for L868AA base: 8.5" diameter, 7.25" bolt circle
8	35-868AA.5-5	L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC
1	L806-S1-EX-120-ON-5	Externally lit (LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 120 VAC operation



HL-860



Base Plate



Base



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## Heliport Design and Lighting Packages

### Package 3: Elevated Low Voltage LED System

- Improved safety: low voltage DC operation
- Easy installation
- Lowered maintenance: LED life expectancy exceeds 50K hours
- Lowered operating costs: low power LED technology

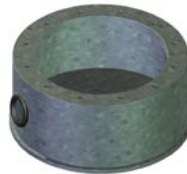
Qty:	Item #:	Description:
8	HL-860-GL-12-14	Elevated LED (5 watt) green perimeter light and 1.5" frangible coupling, 12 VDC operation
8	35-1935AA-25	Base plate for L868AA base: 8.5" diameter, 7.25" bolt circle
8	35-868AA.5-5	L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC
1	HL-HSC	Low Voltage System Controller with 12 VDC output, on/off switch, 150 watt power output capability (Solar power option available)
1	L806-S1-EX-12-ON-5	Externally lit (low voltage LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 12 VDC operation



HL-860



Base Plate



Base



Controller

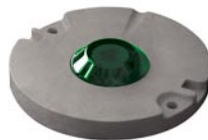


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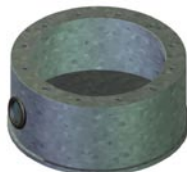
### Package 4: 8" Inset 120 VAC Halogen System

- Knockdown proof: low profile, used in high traffic areas
- Easy installation
- Easy maintenance
- Economical: uses off-the-shelf lamps

Qty:	Item #:	Description:
8	HL-ZA292A-G50	Green omni-directional inset light: anodized aluminum construction, 8" diameter, 7.25" bolt circle, 50W, 120 VAC operation
8	35-868AA.5-5	L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC
1	L806-S1-EX-120-ON-N	Externally lit (halogen), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth), 120 VAC operation



HL-ZA292A



Base



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## Heliport Design and Lighting Packages

### Package 5: 8" Inset 120 VAC LED System

- Knockdown proof: low profile, used in high traffic areas
- Easy installation
- Low maintenance: LED life expectancy exceeds 50K hours
- Low operating costs: low power LED technology

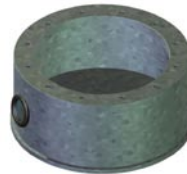
Qty:	Item #:	Description:
8	HL-ZA292A-GLP or HL-392-GLP	Green omni-directional LED (8 watt) inset light: anodized aluminum construction, 8" diameter, 7.25" bolt circle, 120V/240V operation
8	35-868AA.5-5	L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC
1	L806-S1-EX-120-ON-5	Externally lit (LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 120 VAC operation



HL-ZA292A



HL-392



Base



Wind Cone

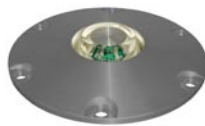
### Package 6: 8" Inset Low Voltage LED System

- Safety: low voltage DC operation
- Knockdown proof: low profile, used in high traffic areas
- Easy installation
- Low maintenance: LED life expectancy exceeds 50K hours
- Low operating costs: low power LED technology

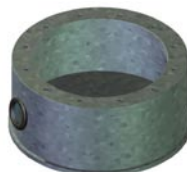
Qty:	Item #:	Description:
8	HL-ZA292A-GLV or HL-392-GLV	Green omni-directional LED (8 watt) inset light: anodized aluminum construction, 8" diameter, 7.25" bolt circle, 12 VDC operation
8	35-868AA.5-5	L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC
1	HL-HSC	Low Voltage System Controller with 12 VDC output, on/off switch, 150 watt power output capability (Solar power option available)
1	L806-S1-EX-12-ON-5	Externally lit (low voltage LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 12 VDC operation



HL-ZA292A



HL-392



Base



Controller



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## Heliport Design and Lighting Packages

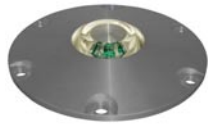
### Package 7: 8" Inset Low Voltage Dimming LED System

- Safety: low voltage DC operation
- Knockdown proof: low profile, used in high traffic areas
- Dim lights at night to reduce glare - select from three brightness levels
- Low maintenance: LED life expectancy exceeds 50K hours
- Low operating costs: low power LED technology

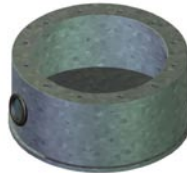
Qty:	Item #:	Description:
8	HL-ZA292A-GLVD or HL-392-GLVD	Green omni-directional dimming LED (8 watt) inset light: anodized aluminum construction, 8" diameter, 7.25" bolt circle, 12 VDC operation
8	35-868AA.5-5	L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC
1	HL-HSC-D	Low Voltage Dimming System Controller with 12 VDC output, on/off switch, dimming option, 150 watt power output capability (Solar power option available)
1	L806-S1-EX-12-ON-5	Externally lit (low voltage LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 12 VDC operation



HL-ZA292A



HL-392



Base



Controller



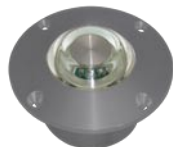
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### Package 8: 6" Inset Low Voltage LED System\*

- Safety: low voltage DC operation
- 6" recessed, semi-flush mounted fixture
- Knockdown proof: low profile, used in high traffic areas
- Easy installation
- Low maintenance: LED life expectancy exceeds 50K hours
- Low operating costs: low power LED technology

Qty:	Item #:	Description:
8	HL-492-GLV	Green omni-directional LED (8 watt) inset light: anodized aluminum construction, 6" diameter, 5.25" bolt circle, 12 VDC operation
1	HL-HSC	Low Voltage System Controller with 12 VDC output, on/off switch, 150 watt power output capability (Solar power option available)
1	L806-S1-EX-12-ON-5	Externally lit (low voltage LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 12 VDC operation

\* The HL-492 is also available in 120 VAC LED and Low Voltage Dimming LED packages. Pavement installations may require an optional 6" base.



HL-492



Controller



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## Heliport Design and Lighting Packages

### Package 9: Elevated Solar System

- Solar powered, no AC power required.
- For fast, permanent and temporary installations.

Qty:	Item #:	Description:
8	AV70-G	Green, omni-directional, LED, solar elevated light
1	L806-S1-EX-12-ON-5 Solar Power Supply	Externally lit (low voltage LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 12 VDC operation with Solar Power Supply



AV70



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