

Type:

Ordering Code:

Job Name:

Notes:

### GENESIS

| GEN-C                                   | GEN-F                                   | Wall Mount (WM)          |
|---|---|--------------------------|
| <p>*length is based on light-engine</p> | <p>*length is based on light-engine</p> |                          |
| <p>EPA: 1.81 sq. ft.</p>                | <p>EPA: 1.81 sq. ft.</p>                | <h4>Yoke Mount (YM)</h4> |

#### ORDERING EXAMPLE: GEN-C / 36G-90 / T2 / UNV / LSC / SF2 / MT

| model | engine-watts   | optics                         | voltage             | electrical options                       | mounting                      | color                       |
|-------|----------------|--------------------------------|---------------------|--|-------------------------------|-----------------------------|
| GEN-C | <b>24G-30</b>  | <b>T2</b> type II              | <b>UNV</b> 120-277V | <b>PEC</b> photocell                     | <b>SF2</b> 2-3/8" slip fitter | <b>BB</b> black             |
| GEN-F | <b>24G-60</b>  | <b>T3</b> type III             | <b>347V</b>         | <b>1PF</b> single power feed             | <b>PK2</b> adjustable knuckle | <b>BZ</b> bronze            |
|       | <b>36G-90</b>  | <b>T4</b> type IV              | <b>480V</b>         | <b>2PF</b> dual power feed               | (fits over 2-3/8" OD pole)    | <b>BW</b> white             |
|       | <b>60G-150</b> | <b>T5R</b> type V, rectangular | <b>12VDC *</b>      | <b>LSC</b> LifeShield™ thermal regulator | <b>WM</b> wall mount          | <b>BG</b> green             |
|       | (see chart)    | <b>T5S</b> type V, square      |                     | <b>DD</b> 0-10V dimming drivers          | <b>YM</b> yoke mount          | <b>BY</b> gray              |
|       |                | <b>T5W</b> type V wide round   |                     |  |                               | <b>MB</b> metallic bronze   |
|       |                |                                |                     |  |                               | <b>MT</b> metallic titanium |
|       |                |                                |                     |  |                               | ___ RAL                     |
|       |                |                                |                     |  |                               | ___ other                   |

\* consult factory for **12VDC**

Amber LEDs available (consult factory for watts and lumens)

Rated lifetime is based on an exponential decay model, using lamp manufacturers' data points from LM80 testing. This philosophy has been used by other manufacturers, as well as the Department of Energy. Lifetime rating may be revised to comply with TM-21 once that Standard is released.

#### Power/Lumens & Distributions

| Engine  | T5-70 Lumens | T5-50 Lumens | T2/T3 Lumens | T4 Lumens | # of LEDs | CCT LED Type | L70 Life Hrs |
|---------|--------------|--------------|--------------|-----------|-----------|--------------|--------------|
| 24G-30  | 2432         | 2583         | 2253         | 2233      | 24        | 4500K        | 170,000h     |
| 24G-60  | 4224         | 4493         | 3918         | 3881      | 24        | 4500K        | 150,000h     |
| 36G-90  | 6670         | 7094         | 6187         | 6128      | 36        | 4500K        | 150,000h     |
| 60G-150 | 11116        | 11823        | 10311        | 10214     | 60        | 4500K        | 150,000h     |

**GENERAL:** Each Beacon Genesis luminaire is available with 2" slip fitter mounting or optional adjustable knuckle mount with field replaceable LED engine & optical bezel systems. Housing are adaptable in length to accept single or twin LED bezel systems UP TO 300 watts available in a variety of optical distribution lenses. Internal components are totally enclosed in rain-tight, dust-tight and corrosion-resistant extruded aluminum housing. Luminaires are suitable for wet locations.

**BEZEL OPTICAL SYSTEM:** Each Genesis luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and die cast aluminum bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. Two-piece silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the Genesis luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the extruded housing with fasteners and a heat pad to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assemble is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

**HOUSING AND LED THERMAL MANAGEMENT:** The Genesis' monolithic housing design creates over 6.9ft<sup>2</sup> of heat-sinking surface area per linear ft through the use of its patent-pending horizontally-opposed fin design. As environmental conditions become more demanding, the Genesis' scalable housing may be increased in length to provide additional surface area and decrease component temperatures. Downward sloping fins prevent sediment and moisture buildup on critical heat sinking surfaces without the need for grates, screens or other debris control tactics. A specially designed thermal pad accelerates the heat transfer to the housing where primary heat dissipation occurs. (Liquids and thermal grease, which is more susceptible to contamination, are not used on the Genesis luminaire.)

**ACCESSIBILITY:** Although the Genesis luminaire is designed to operate for many years without maintenance, accessibility is a key component in its design. When the tool less end cap is hinged open, the pullout component tray is revealed and may be simply removed without the use of tools. The twin bezel systems have the drivers located on top of the fixture housing. The drivers are field replaceable using quick disconnects.

**PRINTED CIRCUIT BOARD (PCB):** Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

**LIFESHIELD™ CIRCUIT: (OPTIONAL)** Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components.

A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum wattages than would be permissible on an unregulated luminaire (if some variation in light output is

permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

**ELECTRICAL:** Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. 15A rating applies to primary (AC) side only.

**SURGE PROTECTOR:** The onboard surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 10,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 320V and surge rating of 372J. The case shall be a high-temperature, flame resistant plastic enclosure.

**FASTENERS:** All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

**AGENCY CERTIFICATION:** The luminaire shall bear a CSA label and be marked suitable for wet locations.

**WARRANTY:** Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on [www.beaconproducts.com](http://www.beaconproducts.com) complete details and exclusions.