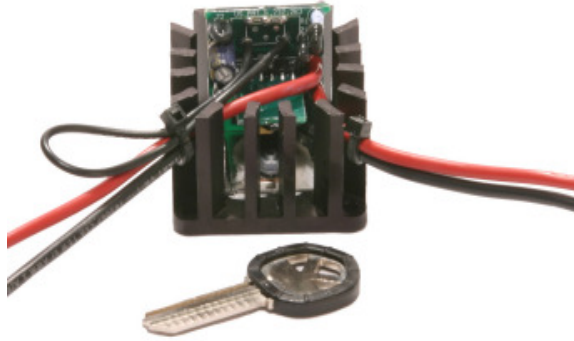


# Standard (four-wire) DC Beacon Flasher

For Continuous Duty in Environmental Extremes



## Reliability you can count on

This ZANE Standard (four-wire) DC Beacon Flasher for incandescent and LED is engineered for exceptionally heavy service under adverse conditions. Literally, continuous duty in environmental extremes ranging from tropical to arctic.

Reliability begins with open frame circuit construction. A heavy aluminum heat sink absorbs system-generated heat leaving electronic components cool for high reliability and long life. This sink also forms a protective circuit enclosure to shield delicate components from the shock and abrasion encountered in everyday use.

An extra-heavy MOSFET (the main stress-bearing electronic component) operates at a mere 6 percent of rated capacity as massive extra margin for meeting difficult conditions, delivering high efficiency (about 98 percent), and promoting long life. Electrical connections are 100 percent soldered for long-term reliability.

State-of-the art control circuitry maintains a constant flash rate over normal battery operating voltages, while low battery (below 11V) triggers a decreased rate as a visible indicator. A premium-cost tantalum timing

capacitor greatly enhances flash stability under the stress of temperature and age.

Installation is fast and sure with baseplate mounting holes, detailed installation instructions, and tagged power leads. In many instances the unit can even be left hanging in the loom for fast field installation and improved cooling. Leads can be reverse connected without damage.

The standard 60 flashes/minute rate is hand trimmed for extra accuracy, while all custom rates (such as 50, 55) are available. Adjustment is never needed or even possible.

Standard is a conformal coat of silicon seal for extra protection against moisture, corrosive fumes, and other contaminants. A remote activation wire for such purposes as radio controlled on/off for timed applications is also standard. Units for both 12V and 24V battery are available at the same price.

## Features

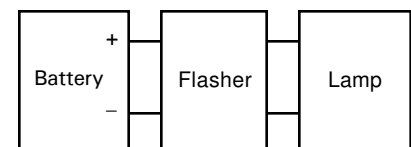
- Open frame circuit construction for long life and high reliability
- Accurate, stable flash rate -- standard 60 flashes/minute plus all customs
- No adjustment needed -- ever
- Drives incandescent and LED devices
- High conversion efficiency
- Silicone sealed
- Can be reverse connected without damage

## Applications

- Highway beacons
- Marine buoys
- Continuous-duty flasher for mobile applications
- Signage
- Towers

Protected under US Patent 5,237,263  
Pat Pend  
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web: [www.zaneinc.com](http://www.zaneinc.com)

## Wiring Diagram



# Technical Specifications

## Mode of Operation

Pulse width modulation, with 50%/50% flash duty cycle

## Flash Rate

Standard flash rate is 60 flashes/minute, with custom rates (such as 50, 55) available

## Flash Accuracy and Stability

Accuracy and stability are each about +/- 1 flash/minute typical

## Supply Voltage Range

*12V Battery Version:* 8 to 20 vdc working, up to 32 vdc momentary.

*24V Battery Version:* 18 to 30 vdc working, up to 40 vdc momentary

## Continuous Output Current

Full 4A rated current up to 125 F (52 C) ambient, 3A up to 150 F (66 C)

## Ambient Temperature Range

- 40 F (- 40 C) to 150 F (66 C) with restrictions noted

## DC-DC Conversion Efficiency

About 98% at full rated load, somewhat higher under partial loads

## Reverse Polarity Protection

Input leads can be reverse connected without damage. Fuse link on rear side of circuit board blows if battery voltage is reverse connected across negative leads

## Transient Protection

Double resistive/capacitive filtering, zener diode clamping, diode reverse-connection protection

## Size

About 1.8" (42 mm) cube

## Weight

About 3.5 oz (98 gm)

## Installation

Installs through 1/8" holes drilled in a 1 1/2" square pattern. In some cases flasher may be left hanging on the loom for fast field installation and improved cooling

## Power Dissipation of Drive Circuitry

Less than 0.038W

## Heat Sink

Heat sink is electrically isolated from voltage and serves as a protective, open frame circuit enclosure. Maximum temperature rise under load is about 15 F (8.5 C) above ambient

## Load Types

Incandescent and LED

## Accessories Included

Detailed installation instructions

## Warranty and Disclaimer:

Although Manufacturer warrants the goods, so far as the same are of its manufacturer, against defects in materials and workmanship under normal use and service for which they were designed for a period of 90 days after invoice date, Manufacturer's obligation under this warranty are limited, at its option, to the replacement of the part or parts determined to be defective or to the refund of the purchase price.

Claims made in this data sheet are based on extensive testing and are believed to be true. Manufacturer shall under no circumstances be liable for any special, indirect, incidental, or consequential damages owing to failure of the goods. Manufacturer makes no warranty of fitness for a particular purpose or merchantability or any other warranty, oral or written, expressed or implied, except as specifically set forth herein. Do not use ZANE products as critical components in life support devices or systems, aircraft, or other hazardous applications. Quotation, order acknowledgment, purchase, etc. does not grant or imply a license under any present or future patents owned by seller except to extent purchases are made from seller.

Any goods returned under warranty must be returned freight prepaid to ZANE International Inc., Minden, NV.

### Standard (four wire) DC Beacon Flasher

Part #	UPC Number	Input Voltage	Maximum Current
AFL-48R-TSFR-12V	08485	12V	4A
AFL-48R-TSFR-24V	08585	24V	4A