



**COMMON APPLICATIONS:**

Infrared Imaging

Thermal Imaging

CCD Cameras

Ophthalmology

Spectrometers

Laser Based Equipment

Fiber Optics



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**DACO** Instruments  
SHUTTERS • SOLENOIDS • INSTRUMENTATION

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**DACO** Optical Shutter Devices



Daco is a Leading  
Manufacturer of Customized  
Advanced Optical Shutters,  
Rotary Solenoids and  
Aircraft Instrumentation.

**WE SERVE THE**

- Aerospace
- Automotive
- Manufacturing
- Medical
- Homeland Security and Defense

**INDUSTRIES**



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**Instruments**  
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For over 75 years Daco Instruments has been recognized as a leading provider of value-added products. Founded in 1929, the company started as a manufacturer of aircraft gearing systems. We design and manufacture, **advanced optical shutter systems, rotary solenoid devices and aircraft instrumentation.** Daco offers customized and comprehensive design and production support to develop application specific solutions to meet all our customer's exacting requirements.

Daco Instruments is part of the **Alinabal Group of Companies.** Alinabal is a broadly diversified manufacturer with history reaching as far back as 1913 when it supplied laminated materials for the Ford Model T.



Today, Daco is best known for our advanced optical shutters powered by two distinct electro-mechanical rotary solenoids:

#### Bi-Stable Shutters

Pulse-driven shutter devices that move and stay at their on/off positions until they receive the reverse pulse to move to the other position.

#### Spring Shutters

Power-driven shutter devices that only move when power is applied. No power returns the device to the off position.

Both bi-stable and spring optical shutters can be designed to accommodate different performance and mechanical parameters such as angle of rotation, direction of rotation, mounting position, power consumption, voltage and operating temperature requirements. Whatever the requirement, Daco will provide a solution uniquely tailored to your operational needs.

### TYPICAL SPECIFICATIONS

Spring	
Diameter	0.38" & 0.44"
Length	0.38", 0.45", 0.57" & 0.82"
Power Input Range	DC: 0.5 to 1.3 watt @ 25°C AC: 0.7 to 1.8 watt @ 25°C
Operating Voltage	DC: 3 to 45 volts AC: 23 & 115 volts, 400 Hz
Rotation	Up to 60° CW or CCW when energized
Lifecycle	1-5 million cycles
Response Time	20-100 msec when energized 30-200 msec when de-energized

Bi-Stable	
Diameter	0.38" & 050"
Length	0.40", 0.57" & 0.80"
Power Input Range	DC: 0.4 to 1.3 watt @ 25°C
Operating Voltage	DC: 3 to 24 volts
Rotation	30° to 65° CW or CCW when energized
Lifecycle	1-5 million cycles
Response Time	20-150 msec when energized

