

## Anti-Collision and Position Light Requirements, Locations and Distribution Patterns

All aircraft must have an anti-collision light and position light system for nighttime operations. The position lights consist of an Aviation Red light on the left side, an Aviation Green light on the right and an Aviation White taillight (**FAR 23.1389**). The anti-collision lighting system is required under **FAR 91.205(c)**

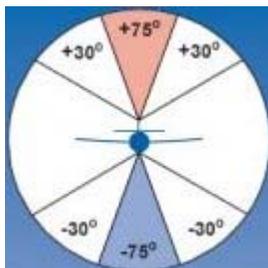
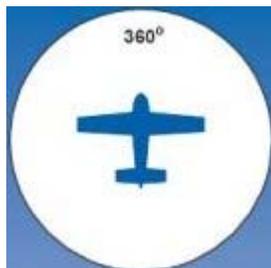
There are different requirements affecting different aircraft. Experimental aircraft are determined by the date of issuance of the Experimental Operating Limitations. The different categories are as follows:

**Aircraft for which type certificate was applied for after April 1, 1957 to August 10, 1971:** These anti-collision systems must produce a minimum of 100 effective candela in Aviation Red or White (**FAR 23.1397**), 360° around the aircraft's vertical axis, 30° above and below the horizontal plane (**FAR 23.1401**).

**Aircraft for which type certificate was applied for after August 11, 1971 to July 18, 1977:** These anti-collision systems must produce a minimum of 400 effective candela in Aviation Red or White (**FAR 23.1397**), 360° around the aircraft's vertical axis, 30° above and below the horizontal plane (**FAR 23.1401**).

**Aircraft for which type certificate was applied for after July 18, 1977:** These anti-collision systems must produce a minimum of 400 effective candela in Aviation Red or White (**FAR 23.1397**), 360° around the aircraft's vertical axis, 75° above and below the horizontal plane (**FAR 23.1401**).

### Anti-Collision and Position Light Distribution Pattern Requirements



An anti-collision strobe light system must project light 360° around the aircraft's vertical axis. One or more strobe lights can be used.

An anti-collision strobe light system must project light + or - 30° above and below the horizontal plane of the aircraft. One or more strobe lights can be used. The + or - 75° projected light is required since July 18, 1977.

The anti-collision wing tip mounted lights must converge within 1200 feet directly in front and rear of the aircraft on center line. If the wing tip strobe light convergence is greater than 1200 ft. in back of the aircraft, a 3rd light is necessary.

### Locations on the aircraft for anti-collision lights to comply with the light pattern requirements



**WING TIP:** Two wing tip strobe lights that protrude beyond the wing tip, their light converging in front and back of the aircraft within 1200 ft.



**ENCLOSED WING TIP:** Enclosed wing tip anti-collision strobe lights, require a third strobe light on the tail or vertical fin, to fill in the required light envelope.



**FUSELAGE:** In a fuselage mounted anti-collision strobe light system, a minimum of two strobe lights are necessary to get the required vertical coverage.



**VERTICAL FIN:** One anti-collision strobe light mounted on the vertical fin will meet the minimum requirements on most aircraft. A half red and half white lens is recommended.