

AIRCRAFT ANTI-COLLISION LIGHTS

Issued 5-25-65
Revised

1. PURPOSE - The purpose of this standard is to specify minimum requirements for aircraft anti-collision lights.

2. SCOPE - This standard covers two types of aircraft anti-collision lights.

Type I - Provides full lighting coverage. For use where one light only is installed on the aircraft.

Type II - Provides lighting coverage in one hemisphere only. For use where two lights are installed per aircraft - one on top and one on the bottom of the aircraft.

3. GENERAL REQUIREMENTS

3.1 Materials and Workmanship

3.1.1 Materials - Materials shall be of a quality which experience and/or tests have demonstrated to be suitable and dependable for the purpose intended.

3.1.2 Choice of Materials - Choice and treatment of materials shall be such as to eliminate or minimize corrosion, fire hazard, and fungus growth.

3.1.3 Workmanship - Workmanship shall be consistent with high-grade aircraft electrical equipment practice.

3.2 Identification

3.2.1 Nameplate - The following information shall be permanently and legibly marked on the unit or attached thereto:

- a. Anti-Collision Light, Type _____
- b. SAE Specification AS _____
- c. Lamp Part Number
- d. Manufacturer's Part Number
- e. Manufacturer's Name and/or Trademark
- f. Weight to the Nearest Pound and Fraction thereof
- g. Serial Number and Date of Manufacture
- h. Rated Input Power (Voltage, Current, and Frequency)

3.3 Environmental Conditions - The complete unit shall operate under the following environmental conditions and shall meet the following performance requirements:

3.3.1 Temperature - When mounted in accordance with the manufacturer's recommendations, the unit shall function over the range of ambient temperature from -50 to +55 C. It shall not be adversely affected by exposure to temperature in the range of -65 to +70 C.

Section 8.3 of the SAE Technical Board rules provides that: "All technical reports, standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."

8/98

- 2 -

- 3.3.2 Humidity - The unit shall function and shall not be adversely affected by exposure to a relative humidity in the range of 5 to 90% throughout a temperature range of -35 to +55 C.
- 3.3.3 Altitude - The unit shall function and shall not be adversely affected when subjected to a pressure and temperature equivalent of sea level to 50,000 ft.
- 3.3.4 Vibration - The unit shall function and shall not be adversely affected when subjected to vibration having a double amplitude of .06 in. from 5 to 40 cps and 5 g acceleration from 40 to 500 cps, and with the direction of vibration applied in any of three mutually perpendicular axes.
- 3.3.5 Dust - The unit shall function and shall not be adversely affected when subjected to severe sand and dust conditions.
- 3.3.6 Salt Spray - The unit shall function and shall not be adversely affected when subjected to a salt spray for a period of 100 hours.
- 3.3.7 Dielectric - The unit shall have an insulation resistance of not less than 200 megohms between mutually insulated circuits and between circuits and frame. The unit shall withstand without damage a dielectric withstanding voltage of 1000 v rms, 60 cps, plus two times rated rms operating voltage, but not less than 1500 v rms, 60 cps, between mutually insulated circuits and between the circuits and frame.
- 3.3.8 Life - The unit shall operate 500 hours with no adjustment or replacement of parts other than replacement of lamp or any other maintenance parts as specified by the manufacturer.
- 3.3.9 Radio Interference - The design of the unit will be such that it will not be a source of radio interference.

4. DETAIL REQUIREMENTS

4.1 Field of Coverage

- 4.1.1 Type I - For the Type I unit, the field of coverage shall extend in all directions within 30 deg above and 30 deg below the mounting surface.
- 4.1.2 Type II - For the Type II unit, the field of coverage shall extend in all directions within 30 deg above to a horizontal plane through the mounting surface.
- 4.2 Flashing Characteristics - The unit shall produce a flashing rate of not more than 100 nor less than 40 flashes per minute when operating with rated input power.