

FLASHER, POSITION LIGHT

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Revised

1. PURPOSE: To specify minimum requirements for aircraft position light flashers, the operation of which may subject the flasher to the environmental conditions specified in Section 3.3.
2. SCOPE: This specification covers two types of position light flashers:

Type I - For nominal 24 volt d.c. systems.

Type II- For nominal 12 volt d.c. systems.
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:
 1. Corrosion
 2. Fire Hazard
 3. 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 legibly and permanently marked on the unit or attached thereto:

a. Name of unit (Position Light Flasher)	e. Flasher contact capacity - amps
b. SAE Specification AS211	f. Manufacturer's part number
c. Voltage	g. Manufacturer's serial number - (date of manufacture, optional)
d. Normal motor current - amps.	h. Manufacturer's name and/or trademark
 - 3.2.2. Wiring Diagram: A diagram of the internal wiring of the flasher shall be legibly marked on the unit or attached thereto.
 - 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 -35°C to +55°C. It shall not be adversely affected by exposure to temperatures in the range of -65°C to +70°C.
 - 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°C to +55°C.



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-2-

- 3.3.3 Altitude: The unit shall function and shall not be adversely affected when subjected to a pressure and temperature range equivalent to -1000 feet to +25,000 feet standard altitude.
- 3.3.4. Vibration: The unit shall function and shall not be adversely affected when subjected to vibration of 0.060 inch double amplitude at from 600 to 3300 cycles per minute when tested complete with its bracket and/or shock mounts and with the direction of vibration perpendicular to its normal mounting surface.
- 3.3.5. Dust: The instrument shall function and shall not be adversely affected when subjected to severe sand and dust conditions.
- 3.3.6. Salt Spray: The instrument shall function and shall not be adversely affected when subjected to a salt spray for a period of 100 hours.

3.4. Radio Interference:

- 3.4.1. Radio Interference: The flasher motor shall not be the source of objectionable interference under operating conditions, at any frequencies used on the aircraft, either by radiation or feed back, in radio sets installed in the same aircraft as the flasher. The flasher case shall be electrically continuous and shall be grounded to the aircraft structure.
- 3.4.2. Interference Suppression: The motor circuit shall be provided with the necessary radio interference suppression features to suppress its radio interference to the limits set forth herein for conducted and radiated radio interference. In particular, these features shall include adequate filters and inclosing case construction which will prevent interference leakage through it or through joints, seams, and mating surfaces. The volume and weight of filtering equipment required shall be minimized by the application of proper electrical and mechanical design and construction.
- 3.4.3. Conducted Radio Interference Limits: The conducted radio interference voltage produced by operation of the equipment on wiring connected to or associated with the equipment, when measured between each terminal and the ground plane, shall not exceed 200 microvolts over the frequency range of 0.15 to 0.2 of a megacycle and 50 microvolts over the frequency range 0.2 to 20 megacycles.
- 3.4.4. Radiated Radio Interference: The radio interference field produced by operation of the equipment when measured with the rod or dipole antenna of the measuring instrument placed in various positions one foot from the equipment and interconnecting cable assemblies, shall not exceed the microvolt values shown in the following table:

Frequency Band Mcs.	Microvolts
0.15 - 65.0	2.5
65.0 - 100.0	5.0
100.0 - 150.0	10.0