# INCH-POUND

MIL-DTL-5904E 28 May 2010 SUPERSEDING MIL-L-5904D 14 November 1978

## DETAIL SPECIFCATION

## LIGHT, RUNWAY MARKER, ELEVATED, TYPE C-1

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 <u>Scope</u>. This specification covers class I, II, and III of high-intensity elevated runway marker lights designated type C-1.

1.2 <u>Classification</u>. The runway marker lights are of the following classes as specified below (see 6.2).

1.2.1 <u>Class</u>. The classes of runway marker lights are as follows:

- Class I Prismatic lens, class B heat-resistant glass, compatible with 204 watt (W), 6.6 ampere (amp), incandescent lamp
- Class II External construction lens, colored dome filtration, compatible with 200 W, 6.6 amp, halogen lamp
- Class III External construction lens, colored dome filtration, compatible with 100 W, 6.6 amp, construction lamp

Comments, suggestions, or questions on this document should be addressed to Defense Supply Center Richmond, ATTN: DSCR-VEB, 8000 Jefferson Davis Highway, Richmond, VA 23297-5616, or e-mailed to <u>STDZNMGT@dla.mil</u>. Since contact information can change, you may want to verify the currency of this address information using the ASSIST database at <u>https://assist.daps.dla.mil/</u>.

1.3 <u>Part or identifying number (PIN)</u>. The PIN to be used for runway marker lights acquired to this specification is created as follows:



## 2. APPLICABLE DOCUMENTS

2.1 <u>General</u>. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of the documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 <u>Specification and standards</u>. The following specification and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATION

MIL-DTL-7989	- Covers, Light - Transmitting, for Aeronautical
	Lights, General Specification for

## DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-130	- Identification Marking of U.S. Military Property
MIL-STD-810	- Environmental Engineering Considerations and
	Laboratory Tests
MIL-STD-31000	- Technical Data Packages

(Copies of these documents are available online at <u>https://assist.daps.dla.mil/</u> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 <u>Other government drawings</u>. The following other government drawing forms a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation or contract.

DRAWING

### FEDERAL AVIATION ADMINISTRATION (FAA)

AC 150/5345-26 - FAA Specification for L-823 Plug and Receptacle, Cable Connectors

(Copies of this document are available online at <u>http://www.faa.gov/</u> or from the Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591.)

2.3 <u>Non-government publication</u>. The following document forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

SAE INTERNATIONAL

SAE AS25050 - Colors, Aeronautical Lights and Lighting Equipment, General Requirements for

(Copies of this document are available from <u>http://www.sae.org/</u> or from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

2.4 <u>Order of precedence</u>. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 <u>First article</u>. When specified (see 6.2), a sample shall be subjected to first article testing in accordance with 4.2 and 6.3. Production shall not be started until the contractor has furnished evidence that the sample has passed the first article tests.

	3.2	Components.	The light shall	consist of the following:
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Item no.	<b>Description</b>	See requirement
1	Lens	3.4.2
2	Filters	3.4.3
3	Lamp	3.4.4
4	Socket	3.4.5
5	Housing	3.4.6
6	Cord	3.4.7

### 3.3 Materials.

3.3.1 <u>Fungus-proof materials</u>. Materials that are nutrients for fungi shall not be used where it is practical to avoid them. Where used and not hermetically sealed, they shall be treated with a fungicidal agent acceptable to the procuring activity. However, if they will be used in a hermetically sealed enclosure, fungicidal treatment will not be necessary.

3.4 <u>Design and construction</u>. The light shall be so designed that it will operate satisfactorily under all weather conditions and so constructed that no parts will work loose in service. It shall be built to withstand the strains, jars, vibrations, and other conditions incident to shipping, storage, installation, and service. The light shall be so constructed that adjustments and repairs can be easily made by the personnel of operating units and overhaul bases with tools normally available commercially. The light shall be so designed that weight is held to the minimum consistent with the necessary strength and rigidity. The exact shape and design are optional provided all requirements specified herein are met.

3.4.1 <u>Focus</u>. The entire optical system shall be of the fixed prefocus type requiring no focusing at installation or in service.

3.4.2 <u>Lens</u>. The lens for class I light shall be in accordance with figure 1, of one piece construction, and shall utilize both internal and external prisms. The three indexing slots shown in figure 1 need not run completely through the mounting flange as shown, but may extend up into the flange a minimum of .219 inches from the bottom. The lenses for class II and III lights shall be in accordance with figure 2 of one piece construction and shall be smooth external construction. The lenses shall be marked with an arrow and the words RUNWAY SIDE as indicated. The glass shall be type I, aviation white, in accordance with SAE AS25050, and class B, heat-resistant, in accordance with MIL-DTL-7989.

3.4.2.1 <u>Shield</u>. If the design of the lens requires shielding in order to limit the light emitted on the runway side, a suitable shield shall be attached to the lens. A shield, when used, shall be considered a part of the lens and shall be securely fastened to the lens so that no adjustment or positioning of the shield is required when a lens is mounted upon any approved housing. The shield, when used, shall also serve as a reflector in order to improve the light distribution.

3.4.3 <u>Filters</u>. Class I light filters, when required, shall be of class B, heat-resistant glass, in accordance with MIL-DTL-7989, and shall be in accordance with figure 3. The corners on the mounting flange of each nominal 180° filter shall be cut at an angle of  $45^{\circ}$  in order that the filter may be indexed by lugs which are .188 inches wide by .156 inches high with a .094 inch radius at top. Filters shall be shipped separately and shall be of the color specified by the procuring activity. Two mounting clips in accordance with figure 3 and two number (no.) 8-32 x .375 machine screws of stainless steel shall be supplied with each filter. Unless otherwise specified, each filter shall cover 108 +0/-5° (see 6.2). The requirements for color beams in the class II and III light assemblies shall be accomplished by using colored domes in accordance with the configuration shown in figure 4 except that class III light is not intended for use with red/green lenses normally used in threshold light applications. These colored domes shall be of one piece construction. Aviation colors shall be in accordance with SAE AS25050. All glass shall be high-grade heat-resistant glass.

3.4.4 <u>Lamp</u>. The class I light assembly shall be designed to utilize a 204 W, 6.6 amp incandescent lamp. The class I lamp shall be equal to and interchangeable with General Electric Lighting (GE) 23300-6.6A/T14/2P. The class II light assembly shall be designed to utilize a 200 W, 6.6 amp halogen cycle lamp. The class III light assembly shall be designed to utilize a 100 W, 6.6 amp, C-6 filament construction lamp. The class III lamp shall be equal to and interchangeable with GE Q200T4/CL. All lamps shall have a minimum average life cycle of 500 hours. Unless otherwise specified (see 6.2), the lamp shall not be furnished with the light.

3.4.5 <u>Socket</u>. For class I light assemblies, the lamp socket shall be a ceramic, ventilated, medium-prefocus type having a rating of 1000 W, 250 volt (V), equal to and interchangeable with Amphenol Corporation PN 98-1. The socket shall accommodate lamps having base dimensions within the tolerances specified for the lamp. The class II and III light sockets shall accommodate lamps having base dimensions within the tolerances of lamps specified in 3.4.4.

3.4.6 Housing. The lens, filters, shield, and lamp shall be accurately and securely positioned by utilizing a lightweight aluminum housing. Four spring clips as shown on figure 5 shall be used to secure the lens to the housing. Indexing lugs shall be located on the housing to engage the slots in the mounting flanges of the lens and filters. The indexing lugs shall be of sufficient size to limit the rotation of the lens and filters to not more than 1°. The lugs which index the lens shall not extend up into the mounting flange slots more than .188 inches after the light is assembled. The housing shall support the lens, filters, shield and lamp so that they are tilted 4° downward toward the runway side after the light has been leveled. A .125 inch rubber or synthetic rubber gasket shall separate the housing and the lens. All gaskets and other materials shall be of a type which will not emit smoke or vapor during rated current operations within the specified temperature range. The design of the housing shall be such that no ventilation is required, condensation upon lens and filter is minimized, and drainage is provided to prevent the gradual accumulation of condensate. The upper portion of the housing shall contain the lens and filters and shall be readily separable from the lower portion for re-lamping by loosening one wing screw. Upper and lower portions of the housing shall be properly indexed to insure aiming within the required tolerances. The lens and filters shall be securely clamped in place but shall be readily removable for maintenance. Four bosses, containing four equally spaced holes with centers located on a circle 5.438 inches in diameter, shall be provide

for attachment of color filters. The holes shall be tapped to a depth of at least .375 inches for no. 8-32 screws. After installation, the lower surface of the lens flange shall be approximately .094 inches below the upper surface of the bosses, and the lower surface of the color filter flange shall be approximately .250 inches below the upper surface of the bosses. All above apply to the class II and III light assemblies with exceptions that the lens is secured with a band clamp, it is not necessary to tilt the light assembly 4° towards the runway, re-lamping is accomplished by removing the band clamp, and the four bosses do not apply to class II and III light assemblies.

3.4.6.1 <u>Mounting</u>. The housing shall be designed so that it may be mounted upon an unthreaded mounting tube having an external diameter of  $2.375 \pm .035$  inches. Two or three 1/4-20 round or fillet head, stainless steel set screws shall be installed in the housing for clamping the housing on the tube. When mounted upon the tube, the tube shall extend  $2.125 \pm .125$  inches into the light. The class II and III light assemblies shall have the frangible coupling as part of the light base. The bottom of the light base shall be a 2.0 inch tapered pipe thread designed to fit into standard United States Air Force and FAA airport base plates and mounting stakes.

3.4.6.2 <u>Horizontal adjustment</u>. Horizontal adjustment of the light to any desired azimuth shall be obtained by rotating the housing on the mounting tube.

3.4.6.3 <u>Leveling adjustment</u>. The lower portion of the housing shall be designed to provide leveling of the light from any position not exceeding 4° for the vertical. The leveling device shall be of the pivot type, adjustable by means of 3 or 4 screws. The screws shall be stainless steel size no. 8 or larger. The leveling device shall be independent of the horizontal adjustment.

3.4.6.4 <u>Aiming</u>. The housing shall provide a means for leveling and sighting, designed to insure aiming of the light with sufficient accuracy so that the direction of the light beams will be in accordance with the requirements specified in 3.5.1. The leveling device may be an accurately formed surface upon which a carpenter's level may be placed in two positions at right angles during installation. The sight may be any device or marks placed upon the light in such a manner as to provide accurate aiming by sighting at the next light in the row of runway lights. Removal of the lens and filters form the upper portion of the housing shall not be required during the leveling and aiming procedure.

3.4.7 <u>Cord</u>. A length of two-conductor, no. 16 American Wire Gauge (AWG), type SJ or OSJ rubber or synthetic rubber cord shall be connected to the bottom of the socket, and no portion of the cord shall extend up beside the socket where it would be exposed to excessive temperatures. A 2-pole, 600 V, 20 amp plug in accordance with style 1 of FAA AC 150/5345-26 shall be molded on the lower end of the cord. The length of the cord shall be such that, when hanging freely, the distance between the bottom of the assembly and the face of the plug shall be 7.00  $\pm$ .50 inches. The socket mounting bracket shall be cut away on at least two sides, so that a screw driver blade may be used to push slack cord down into the mounting tube during installation. A suitable fiberglass sleeve at least 2.0 inches long shall be applied to each of the two conductors from which the cable sheath has been stripped in order to protect the installation of the conductors from the high temperatures existing at the bottom and sides of the socket. The

electrical plug and cord for the class II and III lights shall be Teflon coated wire with integral molded plug in accordance with FAA AC 150/5345-26. The cord set shall be rated for 302  $^{\circ}$ F (150  $^{\circ}$ C) operation.

## 3.5 Performance.

3.5.1 <u>Photometric</u>. The light distribution shall be asymmetrical with front and rear beams having an elevation of  $4.5^{\circ}$  and a toe-in of  $3.5^{\circ}$ . (The corresponding horizontal angles are  $86.5^{\circ}$  and  $273.5^{\circ}$ . The 90° to 270° horizontal line is parallel to the runway centerline and the 0° horizontal direction is toward and perpendicular to the runway centerline.) The light distribution, when the light is equipped with the specified lamp operating at, or corrected to, rated lumens and after all parts of the light reach normal operating temperatures shall be in accordance with the following requirements:

3.5.1.1 <u>Clear (white) lights</u>. White lights shall be designed to comply with the following design goals as closely as possible and all lights shall comply with the following production requirements:

3.5.1.1.1 <u>Design goals</u>. The design goal minimum for each beam shall be of rectangular cross-section having dimensions of 6° horizontal and 6° vertical at 20,000 candlepower (cp) and 11° horizontal and 10° vertical at 5,000 cp. The design goal minimum for circling guidance light shall be 500 cp from 92° to 268° horizontal at elevations of 4.5° to 12.5° vertical. The design goal minimum shall be 20 cp in all directions above the horizontal for which other maximums are not specified. The design goal maximum for on-runway light shall be 100 cp from 320° to 40° horizontal at elevation of 0° to 15° vertical. The design goal maximum for the beams shall be 50,000 cp.

3.5.1.1.2 <u>Production requirements</u>. It is recognized that mold wear and manufacturing tolerances will make the design goal requirements difficult to hold on production item lights. Lights shall be considered satisfactory if they comply with design goals when the following tolerances are applied.

3.5.1.1.2.1 <u>Beam axes</u>. The beam axes shall be within  $1.5^{\circ}$  of the specified  $4.5^{\circ}$  elevation and  $3.5^{\circ}$  toe-in angles when the light has been properly leveled and correctly aimed by means of the built-in sight.

3.5.1.1.2.2 <u>Rectangular beam</u>. The dimensions to the rectangular beams may be reduced to 5° horizontal and 4° vertical with rounded corners of 2° radii at 20,000 cp and 10° horizontal and 9° vertical with rounded corners of 4° radii at 5,000 cp.

3.5.1.1.2.3 <u>Circling guidance</u>. The 500 cp minimum for circling guidance light may be reduced to 400 cp. Two dips down to a minimum of 250 cp will be permitted if each dip does not cover more than 5° horizontal at 400 cp and the two dips are separated by at least 50° horizontal at 400 cp.

3.5.1.2 <u>Colored lights</u>. Unless otherwise specified, the light emitted from all assemblies shall comply with the requirements of SAE AS25050 for type I (aviation) colors. When filters are installed, all the requirements for white lights shall apply except that the minimum cp values shall be multiplied by the transmission ratios specified in table I (see 6.2).

Color	Ratio
White	1.00
Green	0.15
Red	0.13

TABLE I. Minimum cp multiplier.

3.5.1.2.1 <u>Light filters</u>. Colored lights shall be obtained by adding 180° (nominal) color filters to white lights. The design shall be such that when two filters are installed, all light emitted shall be of the specified color. The color division shall be as sharp as practicable, but the color requirements of SAE AS25050 shall not apply within a 5° transition zone on each side of the dividing plane passing through the 0 to 180° line.

3.5.2 <u>Environmental</u>. The light shall be capable of operating satisfactorily when subjected to the following environmental conditions:

a. Temperatures ranging for -129.2 to +131 °F (-54 to +55 °C).

b. A relative humidity up to 100 percent with condensation.

c. Rainfall as encountered in any locale.

3.6 <u>Interchangeability</u>. All parts having the same manufacturer's part number shall be functionally and dimensionally interchangeable. The drawing number requirements of MIL-STD-31000 shall govern changes in the manufacturer's part numbers.

3.7 <u>Dimensions</u>. The overall height of the light shall not be more than 13.0 inches. The length or width shall not be more than 8.50 inches.

3.8 <u>Weight</u>. The weight of the light with the filters installed shall not be more than 8.50 pounds.

3.9 <u>Finishes and protective coatings</u>. Unless fabricated from corrosion-resistant metal, all metal parts shall be suitably protected against corrosion. The outside of the light shall be finished with a high-grade yellow finish. All paint and finishes used shall be suitable for the high-operating temperatures involved, and shall not cause parts of the light to stick together.

3.10 <u>Identification of product</u>. Equipment, assemblies, and parts shall be marked for identification in accordance with MIL-STD-130. Manufacturer's serial numbers are not required.

## 3.11 Workmanship.

3.11.1 <u>General</u>. All details of workmanship and finish shall be in accordance with the best practice for high quality runway marker lights consistent with the requirements of this specification. Particular attention shall be given to cleanness of appearance and preciseness exhibited in soldering, wiring, marking of parts and assemblies, welding and brazing, painting, riveting, machine-screw assemblies, and freedom of parts from having any burrs and sharp edges.

3.11.2 <u>Dimensions and tolerances</u>. Dimensions and tolerances shall be as specified. Where dimensions and tolerances may affect the interchangeability, operation, or performance of the light, the dimensions and tolerances depicted shall be held or limited accordingly.

3.11.3 <u>Screw assemblies</u>. Assembly screws and bolts shall be tight. The word "tight" means that the screw or bolt cannot be appreciable tightened further without damage or injury to the screw, bolt or threads.

3.11.4 <u>Riveting</u>. Riveting operations shall be carefully performed to insure that the rivets are tight and satisfactorily headed.

3.11.5 <u>Cleaning</u> The light shall be thoroughly cleaned of loose, spattered, or excess solder, metal chips, and any other foreign material, after final assembly. Burrs and sharp edges, as well as resin flash that may crumble, shall be removed.

3.12 <u>Recycled, recovered, or environmentally preferable materials</u>. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

# 4. VERIFICATION

4.1 <u>Classification of tests</u>. The testing requirements of the light shall be classified as follows:

a. First article testing (see 4.2).

b. Acceptance testing (see 4.3).

4.2 First article testing.

4.2.1 <u>First article test samples</u>. The first article test samples shall consist of one complete white light, two 180° red filters, two 180° green filters, and engineering data describing optical performance tests to be performed (see 6.3). They shall be tested at a laboratory designated by the procuring activity or, when so stated in the contract at the contractor's plant under the supervision of the procuring activity.

4.2.2 <u>First article tests</u>. The first article tests shall consist of all tests described under 4.4.

4.3 <u>Acceptance testing</u>. Acceptance testing shall consist of the following:

a. Individual tests.

b. Sampling plan and tests.

4.3.1 <u>Individual tests</u>. Each light shall be subjected to the following tests as described under 4.4:

a. Examination of product.

b. Operation.

- c. Optical performance.
- d. Socket.

4.3.2 Sampling plan and tests.

4.3.2.1 Lot. A lot shall consist of lights manufactured under essentially the same conditions and submitted for inspection at substantially the same time.

4.3.2.2 <u>Sampling plan</u>. One light shall be selected at random from each lot of one hundred or fraction thereof produced in a lot and subjected to the photometric tests (see 4.4.4).

4.3.2.2.1 <u>Rejection and retest</u>. When one or more lights from a lot fail to meet the specification, acceptance of all lights in the lot shall be withheld until the extent and cause of failure is determined. After corrections have been made, all necessary tests shall be repeated.

4.3.2.2.2 <u>Individual tests may continue</u>. For production reasons, individual tests may be continued pending the investigation of a sampling test failure. Final acceptance of the entire lot shall not be made until it is determined that the lot meets all the requirements of the specification.

4.3.3 <u>Defects in lights already accepted</u>. The investigation of a test failure could indicate that defects may exist in lights already accepted. If so, the contractor shall fully advise the procuring activity of all defects likely to be found and methods of correcting them.

4.4 Test methods.

4.4.1 <u>Examination of product</u>. The light shall be inspected to determine compliance with the requirements specified herein with respect to material and workmanship.

4.4.2 <u>Operation</u>. The light shall be completely assembled and operated. It shall be inspected to determine proper operation.

4.4.3 <u>Optical performance</u>. The candlepower and direction of the main beams emitted by each light shall be determined by the method which has been approved by the procuring activity. Insufficient candlepower or deviation of over 2°, either horizontal or vertical from the direction indicated by the aiming device, shall be cause for rejection. (See 6.2.)

4.4.4 <u>Photometric</u>. Photometric tests shall be conducted to determine compliance with light distribution and color requirements of 3.5.1. All parts shall reach normal operating temperatures before any readings are taken.

4.4.5 <u>Environmental</u>. Unless otherwise specified, environmental tests shall be conducted in accordance with the specified procedures of MIL-STD-810 to determine proper operation and lack of damage.

4.4.5.1 <u>High temperature</u>. The light shall be subjected to high temperature in accordance with MIL-STD-810, method 501, procedure I, except at a temperature of  $131 \pm 3.6 \,^{\circ}\text{F} \,(55 \pm 2 \,^{\circ}\text{C})$  and for a period of 7.0 hours, with lamp operating at rated current. Abnormal bulb blackening, blistering, smoking, or other evidence of heat damage to any part shall be cause for rejection.

4.4.5.2 <u>Low temperature</u>. The light shall be subjected to low temperature in accordance with MIL-STD-810, method 502, procedure I, for a 48-hour period, followed immediately by operation and examination of the light. Any evidence of damage shall be cause for rejection.

4.4.5.3 <u>Humidity</u>. The light shall be subjected to humidity in accordance with MIL-STD-810, method 507, procedure I, except with the humidity ranging from saturation at tropical sea level at  $104 \pm 3.6$  °F ( $40 \pm 2$  °C) to saturation at 10,000 feet altitude. Any evidence of damage revealed by subsequent operation and examination of the light shall be cause for rejection.

4.4.5.4 <u>Rain</u>. The light shall be subjected to rain in accordance with MIL-STD-810, method 506, procedure I, except that the light shall be operated in the rain chamber for at least 6.0 hours with alternate periods of 30 minutes ON and 30 minutes OFF. During the ON periods, the lamp shall be operated at rated current. The light shall show no signs of breaking or cracking when subjected to this test even when equipped with two green filters.

4.4.6 <u>Thermal shock</u>. The light, with two red filters and the specified lamp installed, shall be operated on rated current at room temperature for a period of 3.0 hours, after which the light shall immediately be inverted and immersed in water at 50 °C (10 °C) to a depth sufficient to cover the lens. Any breakage or cracking shall be cause for rejection.

4.4.7 <u>Socket</u>. The socket shall be checked with dummy lamp gages or lamps to determine that lamps having the maximum and minimum allowable base dimensions can be satisfactorily installed in the socket.

# 5. PACKAGING

5.1 <u>Packaging</u>. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

## 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 <u>Intended use</u>. The type C-1 lights (classes I, II, and III) covered by this specification are intended for use as an elevated runway marker light for outlining runways not over 300.0 feet in width under all weather conditions. The 100 W class III light is not intended for use with red/green lenses normally used in threshold light applications.

## 6.2 Ordering data.

6.2 <u>Acquisition requirements</u>. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Class required (see 1.2).
- c. When first article is required (see 3.1).

d. Color of filters desired and if filters should be provided with the lights (see 3.4.3 and .1.2).

3.5.1.2).

e. Whether lamps should be furnished (see 3.4.4).

f. Engineering data describing optical performance tests to be used by the contractor (see 4.2.1 and 4.4.3).

g. Packaging requirements (see 5.1).

6.3 <u>First article test samples</u>. One complete white light, two 180° red filters and two 180° green filters will be required as first article samples to be subjected to the first article tests to determine compliance with the requirements of this specification. The point of inspection for these tests will be specified.

# 6.4 Subject term (key word) listing.

Airfield lighting Colored filters Construction lamps Directional lighting Halogen lamps Illumination Incandescent lamps Lens Sockets

6.5 <u>Changes from previous issue</u>. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.





#### NOTES:

- 1. All dimensions are in inches.
- 2. Unless otherwise specified, tolerances are  $\pm$ .063.

FIGURE 1. Lens for class I light.





### NOTES:

- 1. All dimensions are in inches.
- 2. Unless otherwise specified, tolerances are  $\pm .063$ .

FIGURE 2. Lens for class II and III lights.



### NOTES:

- 1. All dimensions are in inches.
- 2. Unless otherwise specified, tolerances are  $\pm$ .063.

FIGURE 2. Lens for class II and III lights - Continued.





NOTES:

- 1. All dimensions are in inches.
- 2. Unless otherwise specified, tolerances are  $\pm$ .063.

FIGURE 3. Filter assembly.







#### NOTES:

- 1. All dimensions are in inches.
- 2. Unless otherwise specified, tolerances are  $\pm .031$ .
- 3. Material is stainless steel AISI type 414.

FIGURE 5. Spring clip

Custodians: Army - AV Navy - AS Air Force - 99 DLA - GS Preparing Activity: DLA - GS2

(Project 6210-2010-001)

Review Activities: Navy - YD Air Force - 11

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST database at <u>https://assist.daps.dla.mil/</u>.