

L-804 LED RUNWAY GUARD LIGHT - SAMPLE SPECIFICATION

Note: Modify the items in italics according to your specific job requirements.

ITEM L-150 INSTALLATION OF L-804 LED RUNWAY GUARD LIGHTS

DESCRIPTION

150-1.1 This item shall consist of furnishing and installing the L-804 LED Runway Guard Light fixtures in accordance with this specification and the applicable Advisory Circular. The fixtures shall be installed at the specified location and in accordance with the dimensions, design, and details shown in the plans.

This item shall include the furnishing of all equipment, materials, services and incidentals necessary to place the lights in operation as completed units to the satisfaction of the Engineer.

EQUIPMENT AND MATERIALS

150-2.1 L-804 LED RUNWAY GUARD LIGHT.

- a. **EQUIPMENT CONFORMANCE REQUIREMENTS.** The L-804 fixtures shall conform to the requirements of the FAA Advisory Circular 150/5345-46 (current edition) “Specification for Runway and Taxiway Light Fixtures” and the FAA LED “Engineering Brief No. 67” (current edition). The L-804 LED shall be ETL certified. *{The fixture shall comply with ICAO Annex 14, Vol. I, Section 5.3.23 & Appendix 2, Fig. A2-25.}* The L-804 LED fixtures shall be manufactured by Astronics DME or approved equal.
- b. **EQUIPMENT SUPPLIED.** The L-804 LED fixtures shall be supplied for the total quantity as shown on the plans. The manufacturer shall have a downloadable electronic version of the manual available on their web site.
- c. **LIGHT SOURCE.** The L-804 fixture light source shall be a Light Emitting Diode (LED) assembly. Each light head shall require no more than 14 individual Light Emitting Diodes (LEDs). The fixture shall have an alternating flash rate of 45-50 flashes per minute. The required aviation yellow beam color shall be obtained without the use of a color filter.

The L-804 optics shall be held by a single frangible column that allows the fixture to be easily aimed from 0° to 20° vertically and ±20° horizontally. The two fixture light sources shall be surrounded by a black face plate and independent visors to maximize the contrast during the ON/OFF cycle. Access to the electronic control device shall be achievable through a plate on the back of the unit to permit easy replacement of the driver board.

The fixture shall be fabricated from corrosion-resistant material and all exterior surfaces shall be painted aviation yellow *{ICAO yellow}* for additional protection and visibility. The elevated RGL fixture shall be mounted using a high-strength RGL base plate.

d. ELECTRICAL. *{The L-804 LED fixture shall be designed to operate in FAA Mode 1, series circuit operation. The L-804 LED shall operate on a 6.6A secondary, 50/60Hz isolation transformer. The fixture load shall be 60VA maximum and shall use a 6.6A/6.6A, 65W or a 20A/6.6A, 100W isolation transformer. Lamp intensity shall vary with current supplied to the fixture by the series circuit. The fixture light output shall match quartz/incandescent fixtures at all brightness levels on either a 3-step or a 5-step regulator. It shall be possible to install the lights on existing circuits in addition to, or in replacement of, conventional incandescent/halogen lights without having to change any other element (CCR, primary and secondary cabling, series transformer, etc.)}*

Or

{The LED L-804 fixture shall be designed to operate in FAA Mode 2, voltage driven operation. The light fixture shall operate from either a 120Vac \pm 10%, 50/60Hz or a 240Vac \pm 10%, 50/60Hz parallel lighting circuit and shall be equipped with a photocell to control lamp intensity. The photocell shall energize the fixture at full intensity during high light levels and then reduce intensity to 30% during low ambient light conditions. The fixture light output shall match quartz/incandescent fixtures at both intensity steps. It shall be possible to install the lights on existing circuits in addition to, or in replacement of, conventional incandescent/halogen lights without having to change existing power wiring.}

In addition, the electronics contained in this fixture shall not require the use of a transformer.

CONSTRUCTION METHODS

150-3.1 PLACING THE L-804 LED FIXTURES. The contractor shall furnish and install each LED L-804 fixture as specified in the applicable Advisory Circulars. The L-804 fixtures shall be mounted on a high-strength RGL base plate. The base plate shall then be mated to a standard FAA L-867 base can at the locations shown on the plans.

150-3.2 TESTS. All L-804 LED fixtures shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. *{For Mode 1 powered L-804s, the test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The L-804 shall illuminate properly and have the proper flash timing during each portion of the test.}* **Or** *{For Mode 2 powered L-804s, the test shall include operating the power source on and off not less than 10 times at the beginning and end of the 24-hour test. Proper operation of the photocell shall also be verified. The L-804 shall illuminate properly and have the proper flash timing during each portion of the test.}*

METHOD OF MEASUREMENT

150-4.1 MEASUREMENT. The quantity of lights to be paid for under this item shall be for the total quantity of L-804 LED fixtures installed and accepted as completed units, in place, ready for operation and accepted by the ENGINEER.

BASIS FOR PAYMENT

150-5.1 **PAYMENT.** Payment will be made at the contract unit price for the completed total quantity of L-804 LED fixtures installed, in place by the Contractor, and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item L-150-5.1	L-804 LED fixtures, in Place—per each
----------------	---------------------------------------

END OF ITEM L-150