

L-861, L-861E, L-861SE LED MEDIUM INTENSITY RUNWAY LIGHTS (MIRLS) - SAMPLE SPECIFICATION

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

ITEM L-150 INSTALLATION OF L-861, L-861E, L-861SE LED MEDIUM INTENSITY RUNWAY LIGHTS (MIRLS)

DESCRIPTION

150-1.1 This item shall consist of furnishing and installing the L-861, L-861E, and the L-861SE LED MIRLS in accordance with this specification and the applicable FAA 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-861, L-861E, L-861SE LED MEDIUM INTENSITY RUNWAY LIGHTS (MIRLS).

- a. **EQUIPMENT CONFORMANCE REQUIREMENTS.** The L-861, L-861E, and the L-861SE LED MIRLS shall conform to the requirements of FAA Advisory Circular 150/5345-46 (current edition) "Specification for Runway and Taxiway Light Fixtures" and FAA LED "Engineering Brief No. 67" (current edition). The L-861, L-861E, and the L-861SE LED MIRLS shall be ETL certified. *{The L-861, L-861E, and the L-861SE LED MIRLS shall comply with ICAO Annex 14, Vol. I, Section 5.3.23 & Appendix 2, Fig. A2-25.}* The L-861, L-861E, and the L-861SE LED MIRLS shall be manufactured by Astronics DME or approved equal.
- b. **EQUIPMENT SUPPLIED.** The L-861, L-861E, and the L-861SE LED MIRLS 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 REQUIREMENTS.** The L-861, L-861E, and the L-861SE LED MIRL light source shall be a Light Emitting Diode (LED) assembly. The lifetime of the LED shall be a minimum of 50,000 hours at full intensity. To insure high daytime visibility, the yellow side of an L-861 and the red or green side of an L-861E and the L-861SE shall use an outer-colored optical lens. For ease of lens replacement, a tool-less latch-style clamp band shall be used with no rubber-type materials that could be damaged by rodents, ants, etc.

No active electronic LED elements shall be placed in the base can. The fixture shall use robust, solid-state internal devices that withstand damage if the fixture is knocked over.

- d. **POWER REQUIREMENTS.** The L-861 and L-861SE LED MIRLS shall be designed to operate with a 20/25W, 6.6A (secondary) isolation transformer and the L-861E MIRL shall be designed to operate with a 10/15W, 6.6A (secondary) isolation transformer. The L-861 LED MIRL shall not require the use of an arctic/heater kit, the fixture shall meet the requirements of FAA Engineering Brief 67 (current edition) (2.13.1) and its surface temperature must rise a minimum of +15 degrees C after 30 minutes of operation after being stabilized for 4 hours at -20 °C (-4 °F).
- e. **OTHER REQUIREMENTS.** The exterior color of the base shall be Aviation Yellow. The fixture shall have a leveling mechanism that allows ±4° vertical adjustment in the field.

CONSTRUCTION METHODS

150-3.1 **PLACING THE L-861, L-861E, L-861SE LED MEDIUM INTENSITY RUNWAY LIGHTS (MIRLS).** The contractor shall furnish and install each L-861, L-861E and L-861SE LED fixture as specified in the proposal and shown in the plans. The L-861, L-861E and L-861SE fixtures shall be mounted on an industry standard 1.5-inch frangible coupling. The overall fixture height shall be 14 inches *{24 inches} {30 inches}*. The fixture shall then be mated to a standard FAA L-867 base at the locations shown on the plans.

150-3.2 **TESTS.** All L-861, L-861E and L-861SE LED fixtures shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. 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 fixtures shall illuminate properly 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-861, L-861E and L-861SE 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-861, L-861E and L-861SE 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-861, L-861E and L-861SE LED MIRLS, in Place—per each

END OF ITEM L-150