**Purchase Specifications for an LED Lighthouse Insert**

**Overview**

This specification is for an LED insert to replace an existing incandescent bulb mounted in a Fresnel (Classical) Lens.

The LED insert will be powered by a separate controller unit, which must be capable of being programmed via an external programmer.

**1.0 Light Characteristics**

The LED insert will be made up of either 24 or 36 LEDs.

The LED insert will have a maximum power of 10 W per LED.

The LED insert will be available in Red, Green, White, and Yellow, compliant to IALA Recommendation R0201.

The LED insert shall have a luminous intensity (in white) of at least:

 24 LED Variant: 3,300 cd

 36 LED Variant: 3,400 cd

The LED insert shall be mounted on a heat-sink designed to transfer heat from the LEDs to the atmosphere.

The LED insert shall be mounted on a base that can be adjusted horizontally to centre the insert within the Fresnel lens.

The LED insert mounting pedestal shall have a height adjustment function that can be adjusted with hand tools, to ensure the LED insert is centred vertically in the lens.

The LED insert shall have a focusing tool that can be used to centre the base before final installation.

**2.0 Electrical Characteristics**

The LED insert controller shall have two options, to be powered either by 24VDC or 110-264VAC.

The LED insert controller shall connect to the LED insert using mil-spec connectors.

The LED insert controller shall have polarity protected circuit protection.

The LED insert controller shall have external alarm contacts.

The LED insert controller shall weigh no more than 11 kg.

The LED insert controller shall have a maximum height of 111mm.

The LED insert controller shall have a maximum width of 400 mm.

The LED insert controller shall have a maximum depth of 230 mm.

The LED insert controller shall have an option for an external photocontroller

The LED insert controller shall have an option for GPS synchronization.

The LED insert controller shall be capable of producing 310 flash settings, as well as custom flash settings.

The LED insert controller shall be capable of varying the intensity of the LED insert using a configuration program.