Sketch OL4 – Bill of Material

Sketch OL3: Typical flare stack LED red lighting system.

We do not warranty any of our lighting products on a flare stack as the operating temperature generally will exceed the FAA and UL rated maximum temperatures of the lights which is 55-deg C. That said, assuming there are platforms where the lights are installed, they should be mounted outside the platforms. The air space created is a very effective insulator and the temperature drops off rapidly with distance from the stack skin. These beacons are full of electronics. PL40139 rigid alumina fiber heat shields must be used for lights at the highest level, they should be positioned to protect from radiated heat and from the flame-lick of the flare. Placing a PL40139 rigid alumina fiber heat shield between the light and the stack’s radiated heat should effectively protect it. The shield should be placed at the outside of the platform between the light and the stack, but the light should not be touching the PL40139 heat shield. Metal so-called heat shields should not be used as they do not stop heat transmission. The PL40139 heat shield greatly reduces the percentage of heat transmitted. At the top there are chaotic heat and flame conditions from unpredictable directions and at lower levels the issue is radiated heat from the stack skin.

Point Lighting makes no claims regarding the appropriateness of these products for use in conditions known to exceed the certified limits. We present the technical data about the product and the customer bears full responsibility for its selection, mounting position and use. There is no warranty given or implied for these products used on a flare stack. We make no claims beyond the tested and certified temperature ratings. We do not warranty lights used at temperatures known to exceed the rating.

In addition to the heat shields properly positioned, the beacons must be located below the bottom of the flare-tip assembly; they must be on stand-offs or outside a platform to get them as far away from the stack skin as possible; same for the junction boxes and surge protector.

To avoid the use of data cable on a flare stack, we specify this system as a master/slave setup. One trigger wire will run from the master beacon to each slave beacon.  Each beacon has an alarm line which will run back to the controller as do the obstruction lights.

Note: We offer the same system as ICAO medium intensity Type B. The system below is not hazardous atmosphere rated but we offer Class I, Division 2 (Zone 2) and ATEX-IECEx zones 1 & 2.

 Description Quantity Product Download Catalog

FAA L-864 Red LED Flashing Beacon - Master 1 PFB-37002-R-1-F4-MA1M OL213PFBv2

AC power, 50/60 Hz; includes 3m cable

FAA L-864 Red LED Flashing Beacon - Secondary 2 PFB-37002-R-1-F4-MA1S OL213PFBv2

AC power, 50/60 Hz; includes 3m cable

Steel Mounting Bracket with beacon hardware 3 PL11217

For welding in place; includes hardware

Heat Shield with SS316L faces  3             PL40139 OL830HST

FAA L-810 Red LED Single Obstruction Light 230v 3 POL-21005-2F-R-10B-S2            OL190POLv5

FAA Photoelectric Control 1 PPC-40700-1-10T OL410PPC

Lighting System Controller 230v 1 POC-60301-38-2-LA OL302POC

Alarm monitoring

Includes lightning arrestor