**PURCHASE SPECIFICATIONS FOR A SOLAR UPGRADE FOR SP-401 PORTABLE LIGHTING UNIT**

**General Overview**

Solar upgrade is designed to convert SP-401 portable lighting unit to a solar-powered lighting unit for permanent applications.

Solar upgrade shall consist of:

* 20 Watt Solar panel with cable and connector,
* Mounting plates,
* Frangible coupling.

SP-401 lighting unit equipped with Solar Upgrade and fully assembled shall be tested against jet blast and wind load of minimum speed of 480 kph. Compliance report shall be provided.

Maximum height of the SP-401 lighting unit (excl. antenna) equipped with Solar Upgrade shall not exceed 360 mm.

1. **Solar Panel**

* Shall face one geographical direction for optimal energy collection,
* Shall be mounted at circa 33 degrees tilt,
* Shall have minimum nominal power output of 20 Watts,
* Shall be of polycrystalline type (optional: monocrystalline),
* Shall be installed separately from SP-401 lighting unit,
* Shall be firmly fixed on the mounting,
* Shall have a lifespan of minimum 15 years.

**2.0 Mounting**

* Shall allow for replacing entire solar panel in case of breakage,
* Shall be made of galvanized steel (optional: marine grade stainless steel),
* Shall be corrosion-resistant and UV-resistant,
* Shall have mounting plate applicable for permanent applications (with screws) or of quick release type (with latches).

**3.0 Frangible Coupling**

* Shall be made of aluminum (tested by accredited laboratory),
* Shall be tested on frangibility in accordance with international aviation standards. Compliance report shall be provided.