

680-4. Lighting.

(a) The provisions of this Section apply to lighting fixtures installed below the pool surface.

(b) No lighting fixture shall be installed for operation at more than 12 volts between conductors.

(c) Lighting fixtures mounted in walls shall be installed with the top of the fixture lens at least 18 inches below the normal water level of the pool. A lighting fixture facing upward shall have the lens adequately guarded to prevent contact by any person.

(d) All exposed noncurrent-carrying metal parts of lighting fixtures shall be grounded. The fixture shall be secured and grounded to the forming shell by a positive locking device which will assure a low resistance contact and which will require a tool to remove the fixture from the forming shell. Definition. A "forming shell" is a metal housing designed to contain a lighting fixture assembly for mounting into a swimming pool structure. The forming shell provides a bond between the raceway and the noncurrent-carrying metal parts of the fixture.

(e) Fixtures approved for the purpose may be installed outside the walls of the pool in closed recesses which are adequately drained and accessible for maintenance.

(f) Approved metal forming shells shall be installed for the mounting of all wet niche underwater fixtures and shall be equipped with provisions for threaded conduit entries. A rigid conduit of brass or other approved corrosion-resistant metal shall extend from the forming shell to a suitable junction box located as provided in Section 680-5. Metal parts of the fixture and forming shell in contact with the pool water shall be of brass or other approved corrosion-resistant metal.

(g) Underwater lighting fixtures supplied either directly from a branch circuit or by a transformer meeting the requirements of Section 680-4 (h) shall perform reliably under any likely combination of fault conditions so that there is no shock hazard. Compliance with this requirement shall be assured by one of the following:

1. The design and construction of the fixtures; or

2. The use of a ground-fault circuit-interrupter. Definition. A "ground-fault circuit-interrupter" is a device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.