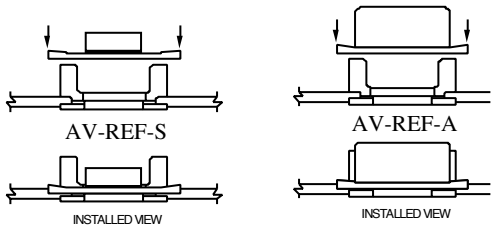
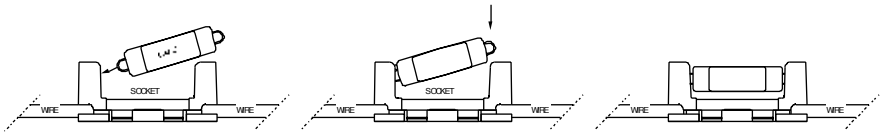
OPTIONAL REFLECTORS

Your fixtures may have been provided with optional reflectors (Part#'s AV-REF-A & AV-REF-S). Position reflector assembly over lamp socket and seat by applying pressure on ends of plastic base.



STEP 4/INSTALLING LAMPS

WARNING: To prevent the risk of injury, turn power off before inserting lamps.

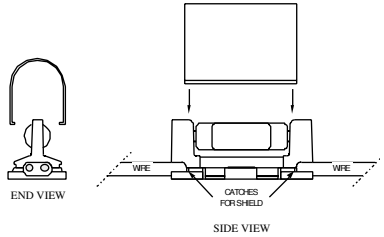


1) Push lamp into one side of socket at angle

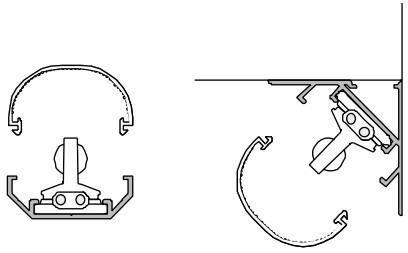
2) Push other side of lamp straight down

STEP 5/INSTALLING LENSES

Your fixtures may have been provided with optional clear lenses (Part# AV-LNS) to be placed over each socket. Push lens directly down over top of socket. When properly seated between the two catches, the lens will be securely fastened and not move from side to side.



Your fixtures may have been provided with an optional continuous lens (Part# AV-CV). Position the lens over the channel and push directly down. When snapped in the lens will be securely fastened.



LAMP REPLACEMENT

WARNING: To prevent the risk of injury, turn power off and allow lamps to cool before replacing.

1) Remove defective lamp from socket by pulling directly out (DO NOT TWIST.)

2) Replace lamp only with the same wattage and voltage of lamp marked on the fixture and lamp.

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TOKISTAR LIGHTING

TOKISTAR ADVANTAGE SERIES INSTALLATION INSTRUCTIONS

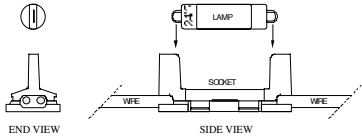
24 VOLT SYSTEM

CAUTIONS

1. Read all steps of instructions carefully before beginning installation.
2. Turn off electricity before beginning installation.
3. All wiring is to be performed by a qualified electrician.
4. Installation must comply with the Canadian Electrical Code, and all applicable local codes.
5. Turn main supply to transformer on only after all connections are made and tested.
6. Use only listed transformers suitable for the size and installation.

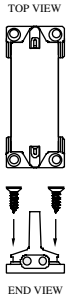
GENERAL DESCRIPTION

Tokistar's Advantage Series is a 24 Volt lighting system using rigid-loop xenon lamps. Lamps may be 3 watt, 5 watt or 8 1/2 watt. The voltage and wattage rating is etched into the glass at one end of the lamp. Each fixture is also labeled with operating voltage and lamp ratings.



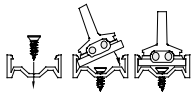
STEP 1/MOUNTING FIXTURES

WARNING! Fixtures must be securely mounted in place. Never position the fixture where the lamps may be in direct contact with any surface or object. Maintain at least 1" clearance from lamp to surface. This distance may need to be greater if the surfaces next to the lamp are heat sensitive.



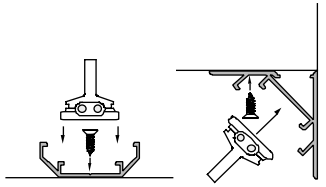
OPTION 1- DIRECT SCREW MOUNTING

Each lamp socket has four mounting holes designed to accept screws. Make certain the screws are securely installed to a surface in such a manner they are capable of supporting the weight and force of the sockets



OPTION 2- MOUNTING CHANNEL (PART# AV-MC)

An optional plastic mounting channel may have been provided with your materials. Screw the channel securely in place, then snap each socket into the channel.

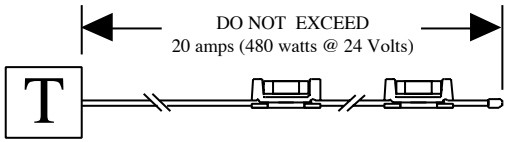


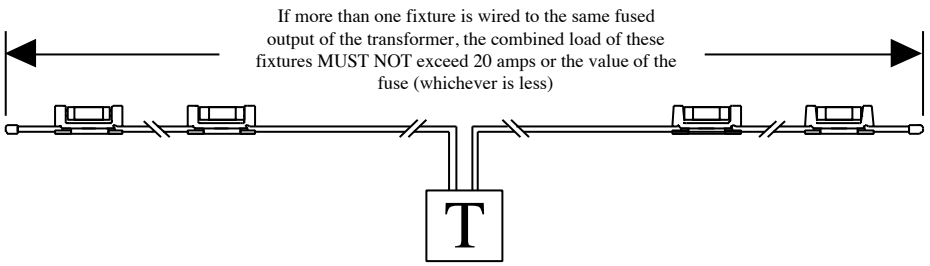
OPTION 3- MOUNTING ALUMINUM CHANNEL (PART#'S AV-CH & AV-LCH)

An optional aluminum channel may have been provided with your material. Screw the channel securely in place, then snap each socket into the channel.

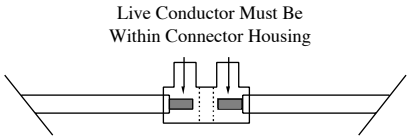
STEP 2/SECONDARY WIRING

CAUTION
The maximum load on any secondary circuit to the transformer must not exceed 20 amps (480 watts @ 24 Volts)

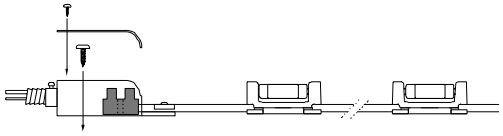




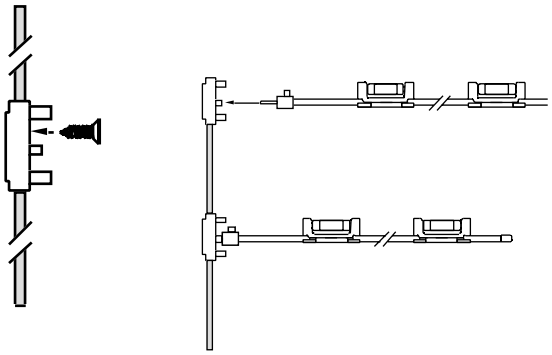
CONNECTIONS
Advantage fixtures may have been provided with wire terminal blocks (Part# AV-CONN). These terminals can be used with wire sizes 14-8 AWG. When attaching wire to terminals, make certain the insulation is stripped, and the connection is made in a manner so that no live conductors are exposed.



Depending on the routing of secondary wires and local code requirements, in some cases it may be necessary to have secondary circuit wires protected within conduit or other approved means. For such applications, a miniature junction box with a 1/2" Ø knockout (Part# AV-JBOX) is available. Within the junction box is a terminal block (Part# AV-CONN).



Your system may have been provided with a T-Connect Harness System (Part# AV-T-CONN). Firmly screw connector harness in place through holes in female receptacles. The male connector is attached to the end of the Advantage fixture, and plugs into the female receptacle on the harness



STEP 3/INSTALLING MAGNETIC TRANSFORMERS

Tokistar low-voltage transformers have been listed with our lighting fixtures under U.L. Standard 1598, and meet the requirements for N.E.C. Article 411. They include fuses to protect the secondary circuits. The maximum size fuse is 25 amps, but the circuit wired to this fuse MUST NOT exceed 20 amps. There are several size transformers available, and different size fuses installed in them. We suggest the secondary circuits are limited to approximately 90% of the fuse rating.

IMPORTANT NOTE: THIS IS AN AIR COOLED TRANSFORMER AND MUST HAVE UNRESTRICTED AIR FLOW FOR PROPER OPERATION.

1) RECEIVING
Upon receipt of shipment, examine transformer for any damage that may have been sustained in transit. File a claim with the transportation company if any damage has occurred.

2) PRECAUTIONS BEFORE INSTALLING
Check the label to be sure the transformer is the suitable voltage and wattage for the job. Check the wire markings to be sure they match the wiring diagrams provided with the transformer.

3) INSTALLATION
Select a suitable flat location that is strong enough to support the weight of the unit. Transformers are suitable for outdoor use, when mounted in an upright position. Proper operation requires the free flow of air in an ambient temperature not to exceed 40°C (104°F). The transformer must be installed in a well-ventilated area free from explosive gases, explosive vapors and dust, excessive dust and dirt. Transformer is to be installed in accordance to the Canadian Electrical Code, and all applicable local codes.

4) PROTECTION
The transformer must not be subjected to high voltage transients caused by lightning, switching surges or other sources unless it is protected by lightning arrestors & surge suppressors. The transformer must be grounded in accordance with the Canadian Electrical Code.

5) CONNECTION
Remove the bottom access plate of the transformer. With power off to the unit, connect the primary and be sure any unused leads are insulated. Turn power on, and check secondary voltage to be sure it is correct for the load. Turn off the power to unit, and connect one wire of the secondary circuit to the fuse terminal and the other to the neutral wire. Install the bottom plate and energize the transformer with the load connected.

6) MAINTENANCE
Turn power off to unit before removing bottom access plate. Check all connections for signs of looseness and deterioration and tighten, insulate or replace where necessary. Blow out dust, and remove any foreign objects. Replace bottom access plate before turning power on.

OPTIONAL ELECTRONIC TRANSFORMERS

Your system may have been supplied with an electronic transformer. Electronic transformers are suitable for indoor use only. Follow the same installation procedures shown above.

Note: You will not be able to check the secondary output voltage until the transformer has a load connected. Minimum load should be approximately 50 watts.