

Fluorescent Slide Dimmer

Cat. No. IP710-DL (Lighted)
1200VA-120VAC, 60Hz
1500VA-277VAC, 60Hz

For use with Advance Transformer Mark 7™ 0-10V, OSRAM Sylvania Quicktronic Helios or equivalent dimmable ballasts.

INSTALLATION INSTRUCTIONS

WARNINGS AND CAUTIONS:

- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult a qualified electrician.
- To avoid overheating and possible damage to this device and other equipment, use only with the appropriate Advance Transformer 120/277V Mark 7™ 0-10V or OSRAM Sylvania Quicktronic Helios electronic ballasts for controlling the specific fluorescent lamps.

WARNINGS AND CAUTIONS:

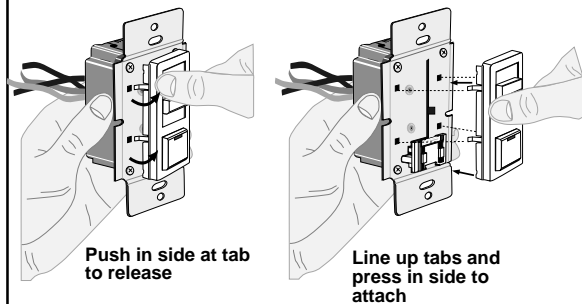
- Use only one (1) dimmer in a 3- or 4-way circuit. The switch(es) will turn the light on at the brightness level selected at the dimmer.
- Lighting fixture and dimmer must be grounded.
- Disconnect power at circuit breaker or fuse when servicing fixture.
- Use this device only with copper or copper clad wire. With aluminum wire use only devices marked CO/ALR or CU/AL.

Tools needed to install your Dimmer:

- Slotted/Philips Screwdriver
- Pliers
- Cutters
- Electrical Tape
- Pencil
- Ruler

Changing the color of your Dimmer:

Your Dimmer includes two color options. The Dimmer ships with the White frame attached. To change color of frame, proceed as follows:



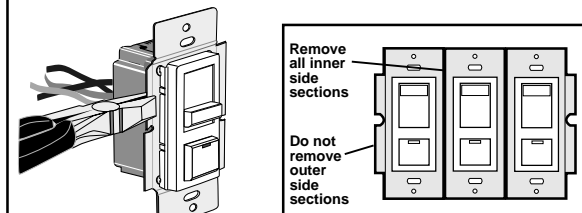
Move the slider up or down one full cycle to automatically engage the slider control mechanism.

Installing Dimmer by itself or with other devices:

If installing Dimmer in a single device application, proceed with the **INSTALLING YOUR DIMMER** section. If installing Dimmer in a multi-device application, proceed as follows:

MULTI-DEVICE APPLICATION:

NOTE: You only need to remove side sections if installing with other dimmers or if it does not fit in wall box – not when installing with mechanical switches.



Bend back and forth to remove side section

When installing more than one dimmer in the same location, the side sections of the mounting strap must be removed. Use pliers to carefully bend side sections back and forth until they break off.

No derating is required in this multi-device installation as referenced in the following chart.

MAXIMUM LOAD PER DIMMER FOR MULTI-DEVICE				
Cat. No.	Volts	Single	Two Gang	More than 2 Devices
IP710-DL	120	1200VA	1200VA	1200VA
IP710-DL	277	1500VA	1500VA	1500VA

MAXIMUM BULB WATTAGE:

0-10VDC ballasts are rated in Volt-Amps (VA). The maximum number of ballast per dimmer is based on the load VA rating (see Maximum Load per Dimmer table) or 50 ballast maximum, which ever is less. The maximum bulb wattage is determined by the efficiency of the ballast. The tables on the next page show the maximum number of ballasts that can be connected to a single dimmer for different 0-10VDC ballasts.

For direct load application configurations (Wiring Diagrams 1 and 3), refer to Table 1 and Table 2 for ballast information.

NOTE: For additional switching capacity (up to 50 ballast), use dimmers in conjunction with a Leviton ODP 120/277V Power Pack.

For applications using Leviton's ODP (Wiring Diagrams 2 & 4 and Tables 3 & 4), ODP switch ratings are as follows (refer to ODP Instruction Sheet for additional information):

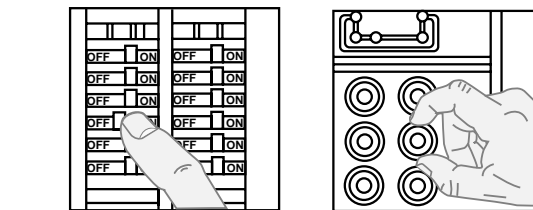
ODP SWITCH RATINGS:

20 Amps for 120 and 277 VAC Ballast

INSTALLING YOUR DIMMER

NOTE: Use check boxes when Steps are completed.

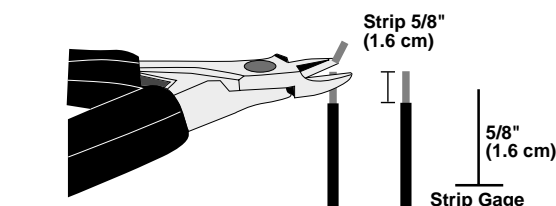
Step 1 WARNING: To avoid fire, shock, or death; **TURN OFF POWER** at circuit breaker or fuse and test that power is off before wiring!



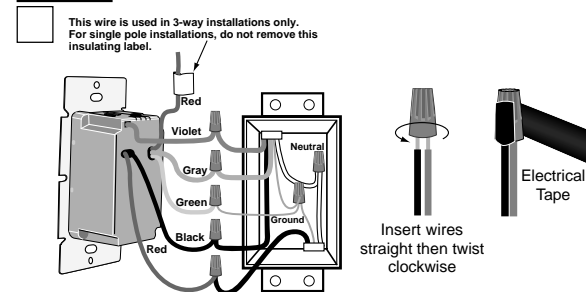
Step 2 Preparing wires:

NOTE: Ensure that low-voltage wiring (for Gray and Violet connection of dimmer) is installed at wall box that will house the IP710 Dimmer.

- Pull off pre-cut insulation from Dimmer leads.
- Make sure that the ends of the wires from the wall box are **straight (cut if necessary)**.
- Remove 5/8" (1.6 cm) of insulation from each wire in the wall box (shown).
- For Single-Pole Application, go to Step 3A.
- For 3-Way Application, go to Step 3B.



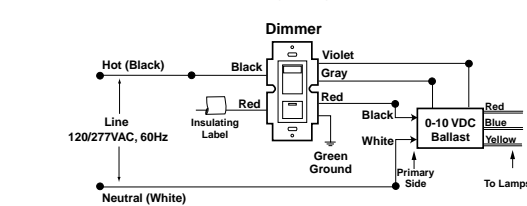
Step 3a Single-Pole Wiring Application:



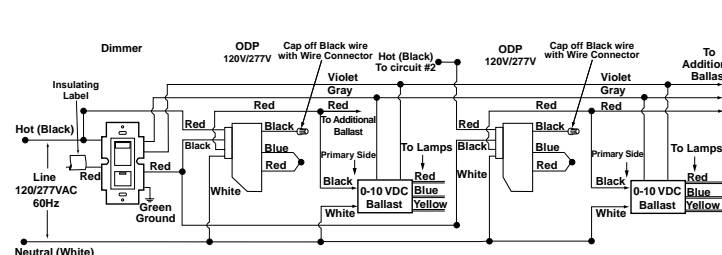
Connect wires per WIRING DIAGRAM as follows: Screw wire nuts on clockwise making sure no bare conductors show below the wire connectors. Secure each connector with electrical tape.

- Green dimmer Ground lead to Green or bare copper wire in wall box.
- Black dimmer lead to Line Hot wall box wire.
- Red dimmer lead without insulating label to Load wall box wire.
- Remaining Red dimmer lead should have Red insulation label affixed.
- NOTE:** If insulating label is not affixed to Red lead, use a small wire nut or electrical tape to cap off.
- Violet dimmer lead to (+) Violet connection on ballast.
- Gray dimmer lead to (-) Gray connection on ballast.
- Proceed to Step 4.

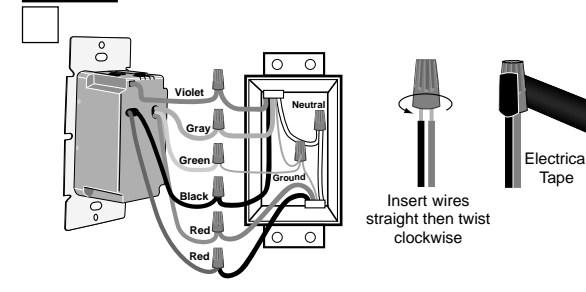
Wiring Diagram 1



Wiring Diagram 2 Single Location Control with ODP Power Pack Application



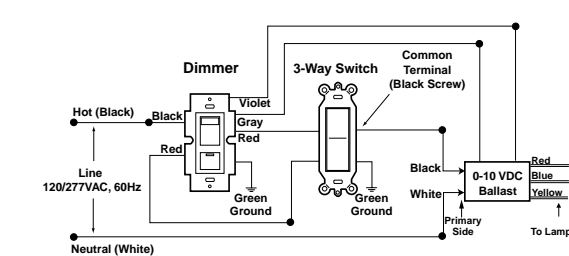
Step 3b 3-Way Wiring Application:



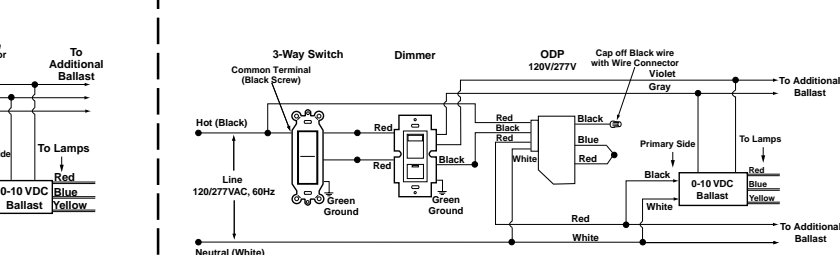
Connect wires per WIRING DIAGRAM as follows: Screw wire nuts on clockwise making sure no bare conductors show below the wire connectors. Secure each connector with electrical tape.

- Green dimmer Ground lead to Green or bare copper wire in wall box.
- Black dimmer lead to tagged (common) wall box wire identified.
- Remove Red insulating label from Red lead.
- Any Red dimmer lead to Line Hot wall box wire.
- Remaining Red dimmer lead to the Load Hot wall box wire.
- Violet dimmer lead to (+) Violet connection on ballast.
- Gray dimmer lead to (-) Gray connection on ballast.

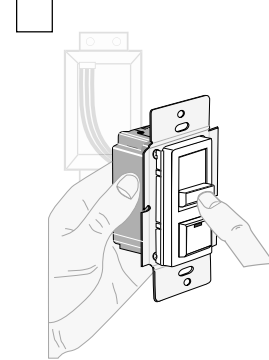
Wiring Diagram 3



Wiring Diagram 4 Two Location Control with ODP Power Pack Application

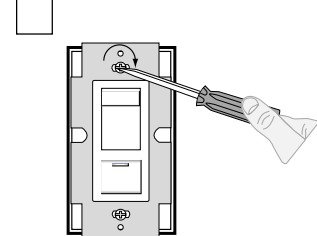


Step 4 Testing your Dimmer prior to mounting in wall box:



- Restore power at circuit breaker or fuse.
 - Carefully holding Dimmer as shown, move slider control lever to highest position. Lights should turn ON to brightest level. If lights do not turn ON, depress push-button switch once. Lights should turn ON to brightest level.
- If lights still do not turn ON, refer to the TROUBLESHOOTING section.

Step 5 Dimmer Mounting: TURN OFF POWER AT CIRCUIT BREAKER OR FUSE.



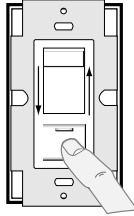
Installation may now be completed by carefully positioning all wires to provide room in wall box for dimmer. Mount dimmer into box with mounting screws supplied. Attach wallplate.

Step 6 Restore Power: Restore power at circuit breaker or fuse. Installation is complete.

OPERATION

NOTE: The indicator light will illuminate when the Load is OFF to facilitate access in the dark.

NOTE: If using the dimmer in a 3-way application, the lights will turn ON at brightness set on dimmer's slide control lever. The lights can be controlled from either the dimmer or the switch location.



ON/OFF:
Depress push-button switch to ON position - Lights will turn ON.

Depress push-button switch to OFF position - Lights will turn OFF.

BRIGHTEN & DIM:
Move slider control lever - Lights will BRIGHTEN or DIM.

TROUBLESHOOTING

- Lights Flickering
 - Lamp has a bad connection.
 - Wires not secured firmly with wire connectors.
- Light does not turn ON and ON/OFF LED does not turn ON
 - Circuit breaker or fuse has tripped.
 - Lamp is burned out.
 - Lamp Neutral connection is not wired.

NOTE: If further information is needed in identifying the HOT wire in a 3-Way application, go to *Leviton's website* at www.leviton.com.

For non-standard wiring applications, refer to Wire Nut and Connector Size Chart

WIRE CONNECTOR / # OF COND. COMBINATION CHART

- 1- #12 w/ 1 to 3 #14, #16 or #18
- 2- #12 w/ 1 or 2 #16 or #18
- 1- #14 w/ 1 to 4 #16 or #18
- 2- #14 w/ 1 to 3 #16 or #18

MAXIMUM NUMBER OF BALLASTS THAT CAN BE CONNECTED TO A SINGLE DIMMER

Table 1
Cat. No. IP710, 120/277V, For use with Advance Transformer 120/277V Mark 7™ Electronic Ballasts

Advance Mark 7™ Part No.	Lamp	Max. # Ballasts/Dimmer for Multi-gang		
		Voltage	1200VA@ 120V	1500VA@ 277V
RZT-132	F25T8	120	47	N/A
RZT-2S32	F25T8	120	23	N/A
RZT-3S32	F25T8	120	15	N/A
RZT-132	F32T8	120	35	N/A
RZT-2S32	F32T8	120	18	N/A
RZT-3S32	F32T8	120	12	N/A
RZT-1TTS40	FT40W/2G11	120	31	N/A
VZT-4S32	F17T8	277	N/A	21
VZT-132	F25T8	277	N/A	50
VDC-2S32-TP	F25T8	277	N/A	31
VZT-2S32	F25T8	277	N/A	30
VZT-3S32	F25T8	277	N/A	19
VZT-4S32	F25T8	277	N/A	15
VZT-132	F32T8	277	N/A	45
VDC-2S32-TP	F32T8	277	N/A	24
VZT-2S32	F32T8	277	N/A	22
VZT-3S32	F32T8	277	N/A	15
VZT-4S32	F32T8	277	N/A	12
Izt-1T42-M2-BS@120	CFM26W/GX24Q	120-277	40	N/A
Izt-1T42-M2-BS@277	CFM26W/GX24Q	120-277	N/A	49
Izt-1T42-M2-LD@120	CFM26W/GX24Q	120-277	40	N/A
Izt-1T42-M2-LD@277	CFM26W/GX24Q	120-277	N/A	49
Izt-2Q26-M2-BS@120	CFM26W/GX24Q	120-277	20	N/A
Izt-2Q26-M2-BS@277	CFM26W/GX24Q	120-277	N/A	25
Izt-2Q26-M2-LD@120	CFM26W/GX24Q	120-277	20	N/A
Izt-2Q26-M2-LD@277	CFM26W/GX24Q	120-277	N/A	25
Izt-1T42-M2-BS@120	CFM32W/GX24Q	120-277	30	N/A
Izt-1T42-M2-BS@277	CFM32W/GX24Q	120-277	N/A	38
Izt-1T42-M2-LD@120	CFM32W/GX24Q	120-277	30	N/A
Izt-1T42-M2-LD@277	CFM32W/GX24Q	120-277	N/A	38
Izt-2T42-M3-BS@120	CFM32W/GX24Q	120-277	15	N/A
Izt-2T42-M3-BS@277	CFM32W/GX24Q	120-277	N/A	20
Izt-2T42-M3-LD@120	CFM32W/GX24Q	120-277	15	N/A
Izt-2T42-M3-LD@277	CFM32W/GX24Q	120-277	N/A	20
Izt-1T42-M2-BS@120	CFM42W/GX24Q	120-277	23	N/A
Izt-1T42-M2-BS@277	CFM42W/GX24Q	120-277	N/A	30
Izt-1T42-M2-LD@120	CFM42W/GX24Q	120-277	23	N/A
Izt-1T42-M2-LD@277	CFM42W/GX24Q	120-277	N/A	30
Izt-2T42-M3-BS@120	CFM42W/GX24Q	120-277	12	N/A
Izt-2T42-M3-BS@277	CFM42W/GX24Q	120-277	N/A	15
Izt-2T42-M3-LD@120	CFM42W/GX24Q	120-277	12	N/A
Izt-2T42-M3-LD@277	CFM42W/GX24Q	120-277	N/A	15
Izt-1T42-M2-BS@120	CFQ26W/G24Q	120-277	40	N/A

Table 2
Cat. No. IP710, 120/277V, For use with 120/277V OSRAM Sylvania Quicktronic Helios Electronic Ballasts

OSRAM Sylvania Quicktronic Helios Part No.	Lamp	Max. # Ballasts/Dimmer for Multi-gang		
		Voltage	1200VA@ 120V	1500VA@ 277V
QTP1x32T8/120 Dim5-B	F17T8	120	50	N/A
QTP1x32T8/120 Dim5-B	FBO16T8	120	50	N/A
QTP1x32T8/120 Dim5-B	F25T8	120	43	N/A
QTP1x32T8/120 Dim5-B	FBO24T8	120	45	N/A
QTP1x32T8/120 Dim5-B	F32T8	120	37	N/A
QTP1x32T8/120 Dim5-B	FBO32T8/U/6	120	37	N/A
QTP1x32T8/120 Dim5-B	FBO31T8/U	120	38	N/A
QTP2x32T8/120 Dim5-B	F32T8	120	17	N/A
QTP2x32T8/120 Dim5-B	FBO32T8/U/6	120	17	N/A
QTP2x32T8/120 Dim5-B	FBO31T8/U	120	18	N/A
QTP3x32T8/120 Dim5-Q	F32T8	120	12	N/A
QTP3x32T8/120 Dim5-Q	FBO32T8/U/6	120	12	N/A
QTP3x32T8/120 Dim5-Q	FBO31T8/U	120	13	N/A
QTP4x32T8/120 Dim10-B	F32T8	120	9	N/A
QTP4x32T8/120 Dim10-B	FBO32T8/U/6	120	9	N/A
QTP4x32T8/120 Dim10-B	FBO31T8/U	120	9	N/A
QTP1x32T8/277 Dim5-B	F17T8	277	N/A	50
QTP1x32T8/277 Dim5-B	FBO16T8	277	N/A	50
QTP1x32T8/277 Dim5-B	F25T8	277	N/A	50
QTP1x32T8/277 Dim5-B	FBO24T8	277	N/A	50
QTP1x32T8/277 Dim5-B	F32T8	277	N/A	45
QTP1x32T8/277 Dim5-B	FBO32T8/U/6	277	N/A	45
QTP1x32T8/277 Dim5-B	FBO31T8/U	277	N/A	45
QTP2x32T8/277 Dim5-B	F32T8	277	N/A	21
QTP2x32T8/277 Dim5-B	FBO32T8/U/6	277	N/A	22
QTP2x32T8/277 Dim5-B	FBO31T8/U	277	N/A	21
QTP3x32T8/277 Dim5-Q	F32T8	277	N/A	15
QTP3x32T8/277 Dim5-Q	FBO32T8/U/6	277	N/A	15
QTP3x32T8/277 Dim5-Q	FBO31T8/U	277	N/A	16
QTP4x32T8/277 Dim10-B	F32T8	277	N/A	9
QTP4x32T8/277 Dim10-B	FBO32T8/U/6	277	N/A	9
QTP4x32T8/277 Dim10-B	FBO31T8/U	277	N/A	10
QT1x54/120PHO-Dim	FP54T5HO	120	18	N/A
QT2x54/120PHO-Dim	FP54T5HO	120	9	N/A
QT1x54/120PHO-Dim	FT55DL	120	19	N/A
QT2x54/120PHO-Dim	FT55DL	120	10	N/A
QT1x54/120PHO-Dim	FPC55	120	19	N/A
QT2x54/120PHO-Dim	FPC55	120	10	N/A
QT1x54/277PHO-Dim	FP54T5HO	277	N/A	23
QT2x54/277PHO-Dim	FP54T5HO	277	N/A	12
QT1x54/277PHO-Dim	FT55DL	277	N/A	24
QT2x54/277PHO-Dim	FT55DL	277	N/A	12
QT1x54/277PHO-Dim	FPC55	277	N/A	24
QT2x54/277PHO-Dim	FPC55	277	N/A	12

Table 3
Cat. No. IP710, 120/277V, For use with Advance Transformer 120/277V Mark 7™ Electronic Ballasts and ODP Power Pack

Advance Mark 7™ Part No.	Lamp	Max. # Ballasts/Dimmer for Multi-gang		
		Voltage	1200VA@ 120V	1500VA@ 277V
RZT-132	F25T8	120	50	N/A
RZT-2S32	F25T8	120	41	N/A
RZT-3S32	F25T8	120	28	N/A
RZT-132	F32T8	120	50	N/A
RZT-2S32	F32T8	120	36	N/A
RZT-3S32	F32T8	120	24	N/A
RZT-1TTS40	FT40W/2G11	120	50	N/A
VZT-4S32	F17T8	277	N/A	50
VZT-132	F25T8	277	N/A	50
VDC-2S32-TP	F25T8	277	N/A	50
VZT-2S32	F25T8	277	N/A	50
VZT-3S32	F25T8	277	N/A	50
VZT-4S32	F25T8	277	N/A	45
VZT-132	F32T8	277	N/A	50
VDC-2S32-TP	F32T8	277	N/A	50
VZT-2S32	F32T8	277	N/A	50
VZT-3S32	F32T8	277	N/A	45
VZT-4S32	F32T8	277	N/A	26
Izt-1T42-M2-BS@120	CFM26W/GX24Q	120-277	50	N/A
Izt-1T42-M2-BS@277	CFM26W/GX24Q	120-277	N/A	50
Izt-1T42-M2-LD@120	CFM26W/GX24Q	120-277	50	N/A
Izt-1T42-M2-LD@277	CFM26W/GX24Q	120-277	N/A	50
Izt-2Q26-M2-BS@120	CFM26W/GX24Q	120-277	40	N/A
Izt-2Q26-M2-BS@277	CFM26W/GX24Q	120-277	N/A	50
Izt-2Q26-M2-LD@120	CFM26W/GX24Q	120-277	40	N/A
Izt-2Q26-M2-LD@277	CFM26W/GX24Q	120-277	N/A	50
Izt-1T42-M2-BS@120	CFM32W/GX24Q	120-277	50	N/A
Izt-1T42-M2-BS@277	CFM32W/GX24Q	120-277	N/A	50
Izt-1T42-M2-LD@120	CFM32W/GX24Q	120-277	50	N/A
Izt-1T42-M2-LD@277	CFM32W/GX24Q	120-277	N/A	50
Izt-2T42-M3-BS@120	CFM32W/GX24Q	120-277	20	N/A
Izt-2T42-M3-BS@277	CFM32W/GX24Q	120-277	N/A	50
Izt-2T42-M3-LD@120	CFM32W/GX24Q	120-277	20	N/A
Izt-2T42-M3-LD@277	CFM32W/GX24Q	120-277	N/A	50
Izt-1T42-M2-BS@120	CFM42W/GX24Q	120-277	46	N/A
Izt-1T42-M2-BS@277	CFM42W/GX24Q	120-277	N/A	50
Izt-1T42-M2-LD@120	CFM42W/GX24Q	120-277	46	N/A
Izt-1T42-M2-LD@277	CFM42W/GX24Q	120-277	N/A	50
Izt-2T42-M3-BS@120	CFM42W/GX24Q	120-277	24	N/A
Izt-2T42-M3-BS@277	CFM42W/GX24Q	120-277	N/A	45
Izt-2T42-M3-LD@120	CFM42W/GX24Q	120-277	24	N/A
Izt-2T42-M3-LD@277	CFM42W/GX24Q	120-277	N/A	45
Izt-1T42-M2-BS@120	CFQ26W/G24Q	120-277	50	N/A

Table 4
Cat. No. IP710, 120/277V, For use with 120/277V OSRAM Sylvania Quicktronic Helios Electronic Ballasts and ODP Power Pack

OSRAM Sylvania Quicktronic Helios Part No.	Lamp	Max. # Ballasts/Dimmer for Multi-gang		
		Voltage	1200VA@ 120V	1500VA@ 277V
QTP1x32T8/120 Dim5-B	F17T8	120	50	N/A
QTP1x32T8/120 Dim5-B	FBO16T8	120	50	N/A
QTP1x32T8/120 Dim5-B	F25T8	120	50	N/A
QTP1x32T8/120 Dim5-B	FBO24T8	120	50	N/A
QTP1x32T8/120 Dim5-B	F32T8	120	50	N/A
QTP1x32T8/120 Dim5-B	FBO32T8/U/6	120	50	N/A
QTP1x32T8/120 Dim5-B	FBO31T8/U	120	50	N/A
QTP2x32T8/120 Dim5-B	F32T8	120	34	N/A
QTP2x32T8/120 Dim5-B	FBO32T8/U/6	120	34	N/A
QTP2x32T8/120 Dim5-B	FBO31T8/U	120	36	N/A
QTP3x32T8/120 Dim5-Q	F32T8	120	24	N/A
QTP3x32T8/120 Dim5-Q	FBO32T8/U/6	120	24	N/A
QTP3x32T8/120 Dim5-Q	FBO31T8/U	120	26	N/A
QTP4x32T8/120 Dim10-B	F32T8	120	18	N/A
QTP4x32T8/120 Dim10-B	FBO32T8/U/6	120	18	N/A
QTP4x32T8/120 Dim10-B	FBO31T8/U	120	18	N/A
QTP1x32T8/277 Dim5-B	F17T8	277	N/A	50
QTP1x32T8/277 Dim5-B	FBO16T8	277	N/A	50
QTP1x32T8/277 Dim5-B	F25T8	277	N/A	50
QTP1x32T8/277 Dim5-B	FBO24T8	277	N/A	50
QTP1x32T8/277 Dim5-B	F32T8	277	N/A	50
QTP1x32T8/277 Dim5-B	FBO32T8/U/6	277	N/A	50
QTP1x32T8/277 Dim5-B	FBO31T8/U	277	N/A	50
QTP2x32T8/277 Dim5-B	F32T8	277	N/A	21
QTP2x32T8/277 Dim5-B	FBO32T8/U/6	277	N/A	21
QTP2x32T8/277 Dim5-B	FBO31T8/U	277	N/A	22
QTP3x32T8/277 Dim5-Q	F32T8	277	N/A	15
QTP3x32T8/277 Dim5-Q	FBO32T8/U/6	277	N/A	15
QTP3x32T8/277 Dim5-Q	FBO31T8/U	277	N/A	16
QTP4x32T8/277 Dim10-B	F32T8	277	N/A	9
QTP4x32T8/277 Dim10-B	FBO32T8/U/6	277	N/A	9
QTP4x32T8/277 Dim10-B	FBO31T8/U	277	N/A	10
QT1x54/120PHO-Dim	FP54T5HO	120	36	N/A
QT2x54/120PHO-Dim	FP54T5HO	120	18	N/A
QT1x54/120PHO-Dim	FT55DL	120	38	N/A
QT2x54/120PHO-Dim	FT55DL	120	20	N/A
QT1x54/120PHO-Dim	FPC55	120	38	N/A
QT2x54/120PHO-Dim	FPC55	120	20	N/A
QT1x54/277PHO-Dim	FP54T5HO	277	N/A	50
QT2x54/277PHO-Dim	FP54T5HO	277	N/A	12
QT1x54/277PHO-Dim	FT55DL	277	N/A	50
QT2x54/277PHO-Dim	FT55DL	277	N/A	12
QT1x54/277PHO-Dim	FPC55	277	N/A	50
QT2x54/277PHO-Dim	FPC55	277	N/A	12

LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for five years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option, if within such five year period the product is returned prepaid, with proof of purchase date, and a description of the problem to **Leviton Manufacturing Co., Inc., Att: Quality Assurance Department, 59-25 Little Neck Parkway, Little Neck, New York 11362-2591**. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability