### Our Promise

Infratech has been a pioneer and leader in Infrared technology for more than 50 years. We offer a wide range of products for comfort heat, automotive curing and industrial commercial heat applications.

Infratech uses the latest in manufacturing technologies to offer you the most efficient infrared systems for the lowest cost in the industry. If you are heating a backyard patio or a complex mega resort, Infratech can provide the design, engineering, controls and infrared equipment your property or facility requires.

Infratech is committed to providing high quality, innovative products that exceed our customers' expectations. We have the technology and we have the people to achieve our promise of quality, delivery and price. We look forward to keeping that promise with you.

- JOHN A. MAZZOTTA, PRESIDENT



### What is Infrared Heat?

A heated quartz element emits a safe, clean wavelength of light that is only absorbed by solid objects, transferring heat directly to a person, table or floor rather than heating the air.

For this reason, infrared heat can be distributed very evenly, and will not simply "blow away" in windy or drafty conditions. Infratech medium wave quartz element heaters emit a barely discernible, pleasing glow that will not affect the ambience of your gathering – unlike competitive short-wave or halogen electric heaters that produce a very harsh glare or bright-colored light.

## The Infratech Advantage

No matter what space you are heating, Infratech will work with you to create a complete solution. We are the experts with the experience and capabilities to help design your project.

- Two Year Warranty
- UL-listed for indoor and outdoor use
- Proudly Made in USA
- Versatility

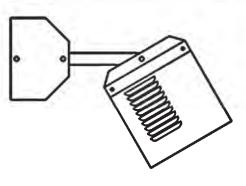
- Infinite Control capabilities
- Made from recyclable materials and operate with zero greenhouse emissions, odors or ultraviolet light
- Our unwavering commitment customer's total satisfaction!

### **Infratech Heaters**

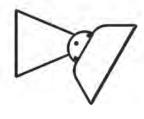
Infratech has been the leader in the use of infrared heating technology for more than 50 years. We apply this expertise to our heating systems for personal, commercial, and industrial applications.

We offer you a wide variety of sizes, wattages, voltages, and color options. No matter what your heating goal is, we have the solution!

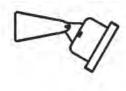
Infratech heaters have a smaller, sleeker profile than typical gas infrared heaters



Typical Gas Infrared Heater



Infratech W-Series & WD-Series Heaters



Infratech SL-Series Slimline Heater

## W-Series Single Element Heaters

- W-Series single element heaters provide the coverage and intensity of heat necessary for optimum comfort.
- Minimal clearance requirements, recessed mounting options, short standoffs and mounting heights up to 11'.
- Fixtures are available in lengths of 39" and 61 ¼".

- W-Series heaters are available in 2000, 2500, 3000, and 4000 watt models.
- Compatible with Solid State Controls for larger-scale residential or commercial use.
- Choose from brushed stainless steel, our standard colors, or select a custom color of your choice.



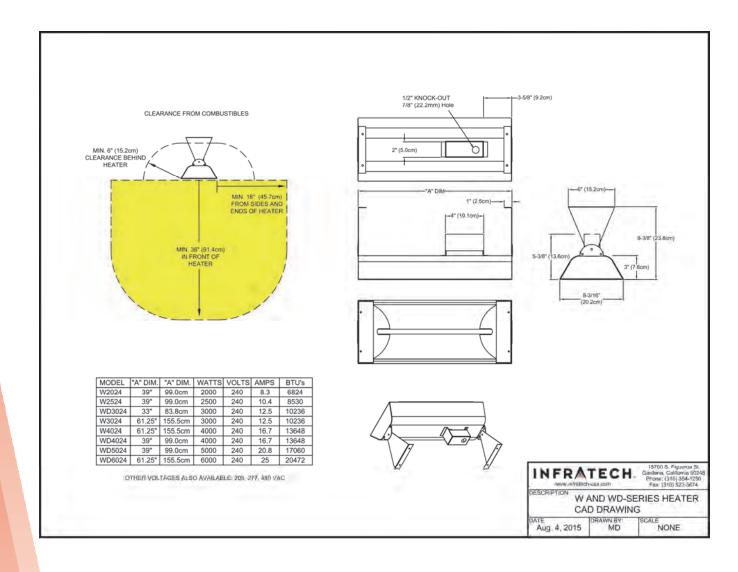
## W-Series Single Element Heaters

Part Number	Model	Length	Watts	Volts	Amps
21-1055	W-2024 SS	39"	2000	240	8.3
21-1060	W-2028 SS	39"	2000	208	10
21-1065	W-2048 SS	39"	2000	480	4
21-1075	W-2027 SS	39"	2000	277	7
21-1080	W-2524 SS	39"	2500	240	10.4
21-1085	W-2528 SS	39"	2500	208	12
21-1090	W-2548 SS	39"	2500	480	5
21-1095	W-2527 SS	39"	2500	277	9
21-1100	W-3024 SS	61-1/4"	3000	240	12.5
21-1105	W-3027 SS	61-1/4"	3000	277	11
21-1110	W-3028 SS	61-1/4"	3000	208	14
21-1115	W-3048 SS	61-1⁄4"	3000	480	6
21-1125	W-4024 SS	61-1/4"	4000	240	16.7
21-1130	W-4027 SS	61-1/4"	4000	277	14
21-1135	W-4028 SS	61-1/4"	4000	208	19
21-1140	W-4048 SS	61-1⁄4"	4000	480	8.3

# W-Series Replacement Elements

Part Number	Model	Length	Watts	Volt	Fits
10-1085	E-2024	36"	2000	220	W-2024
10-1090	E-2027	36"	2000	277	W-2027
10-1095	E-2028	36"	2000	208	W-2028
10-2000	E-2048	36"	2000	480	W-2048
10-2010	E-2524	36"	2500	220	W-2524
10-2015	E-2527	36"	2500	277	W-2527
10-2020	E-2528	36"	2500	208	W-2528
10-2025	E-2548	36"	2500	480	W-2548
10-2030	E-3024	58"	3000	220	W-3024
10-2035	E-3027	58	3000	277	W-3027
10-2040	E-3028	58	3000	208	W-3028
10-2045	E-3048	58"	3000	480	W-3048
10-2055	E-4024	58"	4000	220	W-4024
10-2060	E-4027	58"	4000	277	W-4027
10-2065	E-4028	58"	4000	208	W-4028
10-2070	E-4048	58"	4000	480	W-4048

## W-Series Heater Clearance and Dimensions

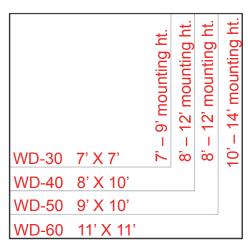


### **WD-Series Dual Element Heaters**

- WD-Series dual element fixtures produce more intense heat and can be mounted up to 14'.
- Typically installed with solid state controls, to vary the electric load for comfortable heat in a wide range of conditions.
- Fixtures available in lengths of 33", 39", and 61 ¼".

- Dual element heaters are available in 3000, 4000, 5000, and 6000 watt models.
- May also be installed with Duplex/Stack Switches for a half power/ full power option.
- Choose from brushed stainless steel, our standard colors, or select a custom color of your choice.





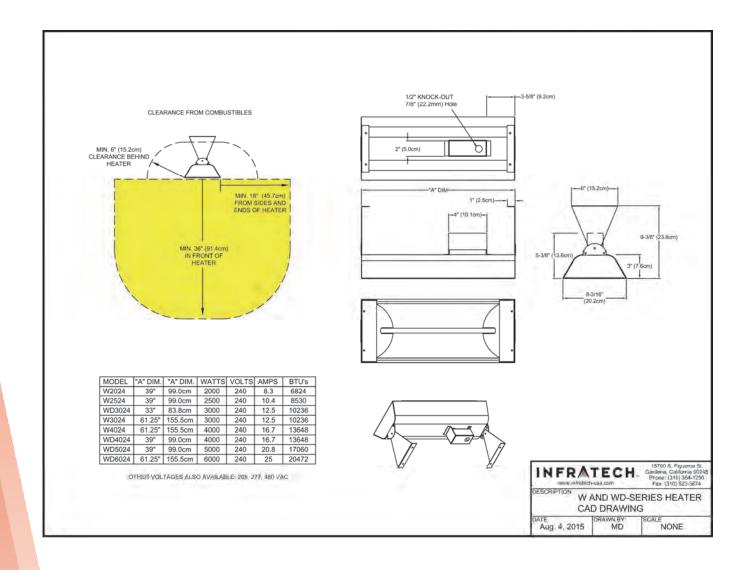
## **WD-Series Dual Element Heaters**

Part Number	Model	Length	Watts	Volts	Amps
21-2000	WD-3024 SS	33"	3000	240	12.5
21-2010	WD-3028 SS	33"	3000	208	14
21-2020	WD-3048 SS	33"	3000	480	6
21-2030	WD-3027 SS	33"	3000	277	11
21-2100	WD-4024 SS	39"	4000	240	16.7
21-2110	WD-4028 SS	39"	4000	208	19
21-2120	WD-4048 SS	39"	4000	480	8.3
21-2130	WD-4027 SS	39"	4000	277	14
21-2200	WD-5024 SS	39"	5000	240	20.8
21-2210	WD-5028 SS	39"	5000	208	24
21-2220	WD-5048 SS	39"	5000	480	10.4
21-2230	WD-5027 SS	39"	5000	277	18
21-2300	WD-6024 SS	61-1/4"	6000	240	25
21-2310	WD-6028 SS	61-1/4"	6000	208	28.8
21-2320	WD-6048 SS	61-1/4"	6000	480	12.5
21-2330	WD-6027 SS	61-1/4"	6000	277	21.7

# WD-Series Replacement Elements

Part Number	Model	Length	Watts	Volt	Fits
10-1055	E-1424	30"	1500	240	WD-3024
10-1060	E-1428	30"	1500	208	WD-3028
10-1085	E-2024	36"	2000	220	WD-4024
10-1090	E-2027	36"	2000	277	WD-4027
10-1095	E-2028	36"	2000	208	WD-4028
10-2000	E-2048	36"	2000	480	WD-4048
10-2010	E-2524	36"	2500	220	WD-5024
10-2015	E-2527	36"	2500	277	WD-5027
10-2020	E-2528	36"	2500	208	WD-5028
10-2025	E-2548	36"	2500	480	WD-5048
10-2030	E-3024	58"	3000	220	WD-6024
10-2035	E-3027	58"	3000	277	WD-6027
10-2040	E-3028	58"	3000	208	WD-6028
10-2045	E-3048	58"	3000	480	WD-6048

## WD-Series Heater Clearance and Dimensions



# SL- Slimline Series Single Element Heaters

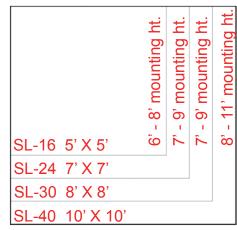
- Infratech's SL-Series is designed with a low profile that is suitable for both indoor and outdoor surface mount applications up to 11'.
- Fixtures are available in lengths of 29.5", 42.5", and 63.5".
- SL-Series are available in 1600, 2400, 3000, and 4000 watt models.

- Features include; narrow profile, and a T-slot for flexible mounting options.
- The SL-Series housing body and mounting brackets come with a stainless hue anodized aluminum finish, are also available in Bronze, and our All Black Slimline Shadow™.





T-Slot on back of the Slimline SL-Series allows the mounting bracket to slide for flexible mounting options.



Average Coverage Area

# SL-Slimline Series Single Element Heaters

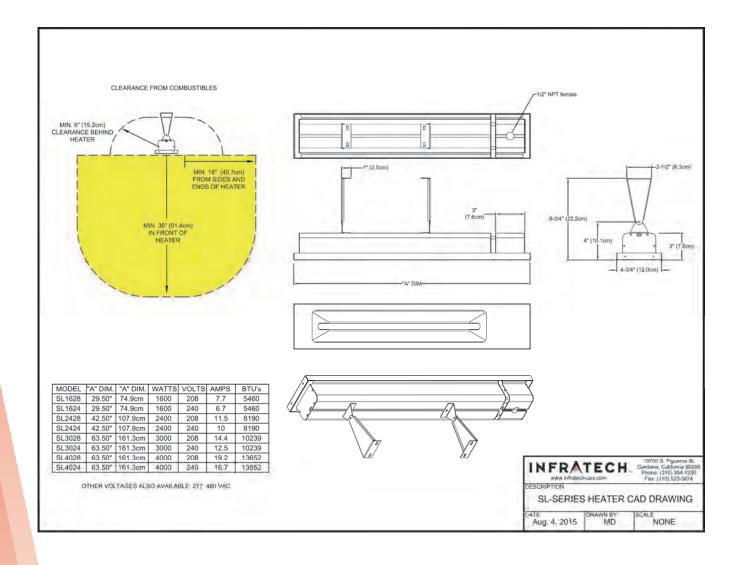
Part Number	Model	Length	Watts	Volts	Amps
21-4995	SL-1624	29.5"	1600	240	6.7
21-4997	SL-1628	29.5"	1600	208	7.7
21-5000	SL-2424	42.5"	2400	240	10.0
21-5010	SL-2428	42.5"	2400	208	11.5
21-5040	SL-3024	63.5"	3000	240	12.5
21-5050	SL-3028	63.5"	3000	208	14.4
21-5080	SL-4024	63.5"	4000	240	16.7
21-5090	SL-4028	63.5"	4000	208	19.2
*Also available in 277 and 480 volts					

- Part Numbers listed above are for Infratech's Standard Stainless Steel SL-Slimline Series.
- For Bronze Body with Stainless Steel Trim add "BR" to part number above.
- For the All Black Slimline Shadow™ add "BL" to the above part number.

# SL-Slimline Series Replacement Elements

Part Number	Model	Length	Watts	Volts	Fits
10-7030	E-1624-SL	22-3/8"	1600	240	SL-1624
10-7032	E-1628-SL	22-3/8"	1600	208	SL-1628
10-7035	E-2424-SL	35-3/8"	2400	240	SL-2424
10-7040	E-2428-SL	35-3/8"	2400	208	SL-2428
10-7055	E-3024-SL	56-3/8"	3000	240	SL-3024
10-7060	E-3028-SL	56-3/8"	3000	208	SL-3028
10-7075	E-4024-SL	56-3/8"	4000	240	SL-4024
10-7080	E-4028-SL	56-3/8"	4000	208	SL-4028
*Also available in 277 and 480 volts					

# SL-Series Slimline Heater Clearance and Dimensions



## **Mounting Options**

Infratech's heaters can be flush mounted, ceiling mounted, wall mounted, or pole mounted with minimal clearance requirements. UL Listed for as low as 6 feet (minimum 7' suggested) and CUL Listed for as low as 8 feet.



### Flush Mount Installation

#### Applicable for the W-Series and WD-Series

- Can be installed with the edges exposed, or can be covered by a drywall, plaster, stucco or tongue-and-groove ceiling treatment.
- Frames are compatible with the W-Series and WD-Series heaters fitting 33", 39", or 61-1/4" fixtures.
- Select an area with a flat ceiling and minimum 2" x 8" studs, where the heater can face straight down when recessed.
- Requires a 5-sided 5/8" drywall lined pocket with a (1) hour fire rating.
- Must have a ½" clearance from ventilation holes when using a decorative trim covering flange.
- Heater/Frame must be permanently installed and hard wired by a licensed electrician.
- All electrical connections must be in compliance with the National Electric Code (NEC).

#### **Installation Examples**



Stucco Over Frame



Tongue and Groove Over Colored Frame



Matching Colored Frame Over Finished Ceiling

### Flush Mount Frames

Applicable for the W-Series and WD-Series Only



Part# 18-2305 W-61 Flush Mount Frame



Part# 18-2300 W-39 Flush Mount Frame



Part# 18-2295 W-33 Flush Mount Frame

Models	Heater Length	Flush Mount Frame
W-30	61-1/4"	W-61
W-40	61-1⁄4"	W-61
WD-60	61-1⁄4"	W-61
W-20	39"	W-39
W-25	39"	W-39
WD-40	39"	W-39
WD-50	39"	W-39
WD-30	33"	W-33

Note: Frames supplied with Hi-Temp Fixture Whip and High Temp Wire Nuts.

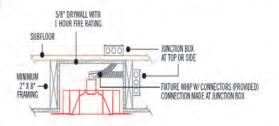
## **Proper Flush Mount Installation**

### Flush mount your heater in four simple steps

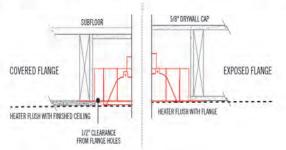
Frame the pocket that will house the heater with a one hour-rated fire containment box.

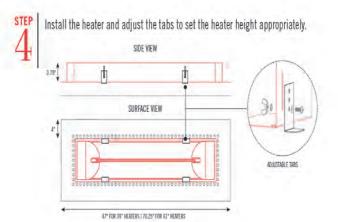


Mount the junction box outside of the pocket. You can choose to mount the junction box in a variety of locations, depending upon where you'll be accessing it.



Install the frame into the finished pocket. You may choose to leave all four inches of the trim exposed, or partially cover it (ventilation holes exposed) with a decorative ceiling.



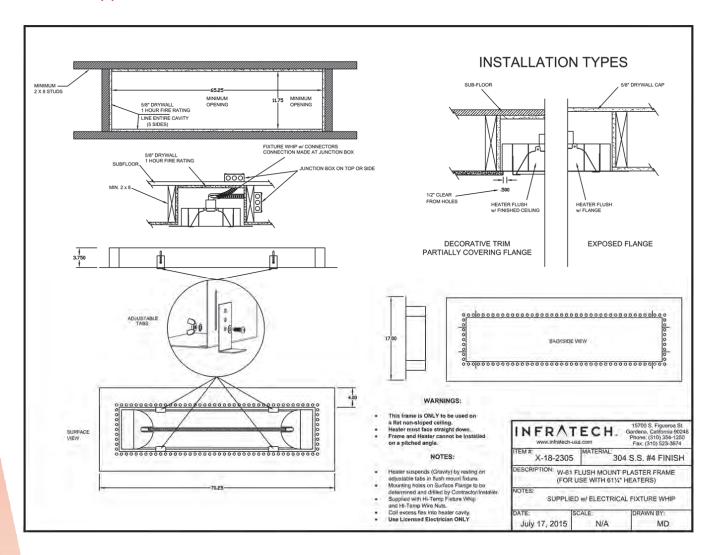






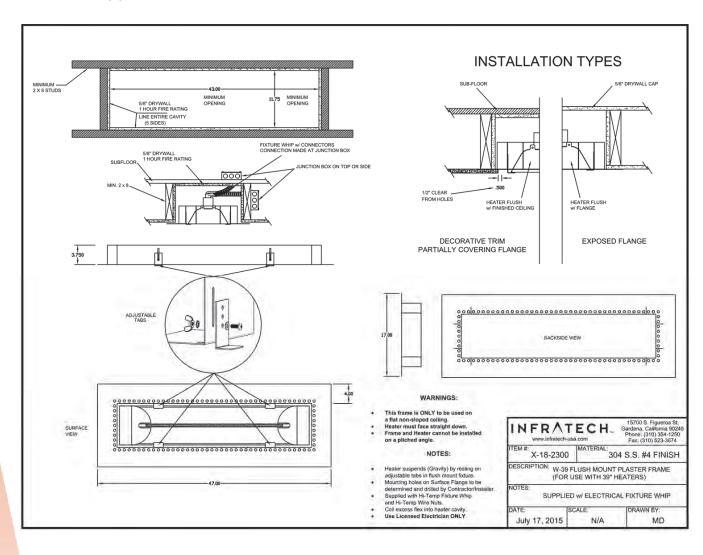
# W-61 Flush Mount Frame Installation Diagram

Applicable for Infratech's W-Series and WD-Series 61-1/4" Heaters



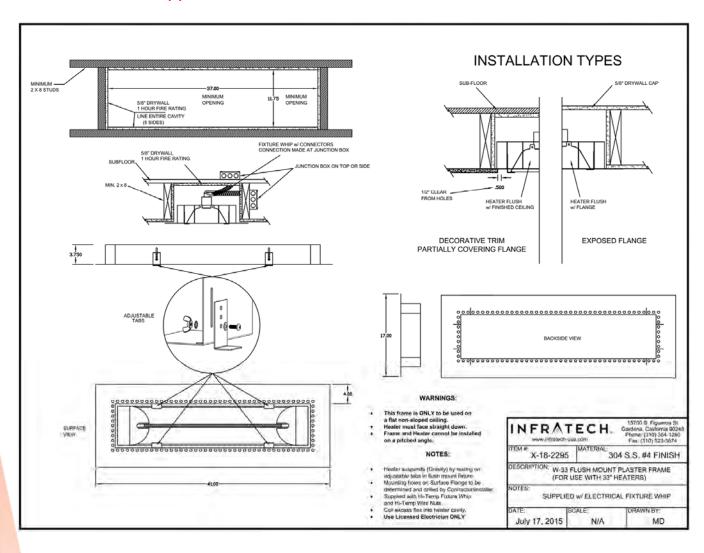
# W-39 Flush Mount Frame Installation Diagram

Applicable for Infratech's W-Series and WD-Series 39" Heaters



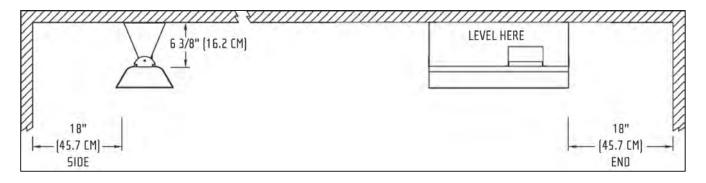
# W-33 Flush Mount Frame Installation Diagram

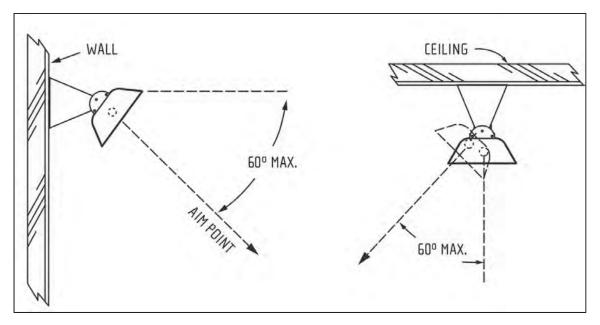
#### Applicable for Infratech's WD-Series 33" Heaters



# Ceiling and Wall Mount Applications for W-Series and WD-Series Heaters

Our low profile heaters are suitable for indoor and outdoor installations, and offer a pleasing, streamlined look due to low clearance requirements.







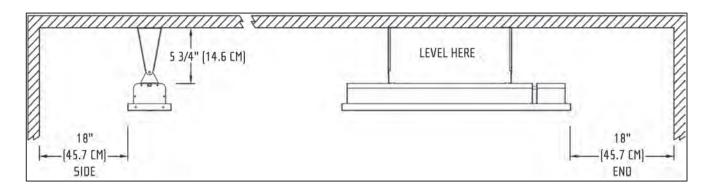


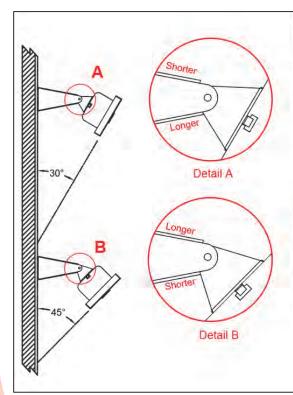


**Ceiling Mount** 

# Ceiling and Wall Mount Applications for SL-Series Slimline Heaters

The SL-Series Brackets are designed for two positive stop positions.





#### **Shallow Angle**

For a Shallow Angle Installation (30° off the wall) mount both brackets with the "longer length stop" positioned on the bottom.

#### Steeper Angle

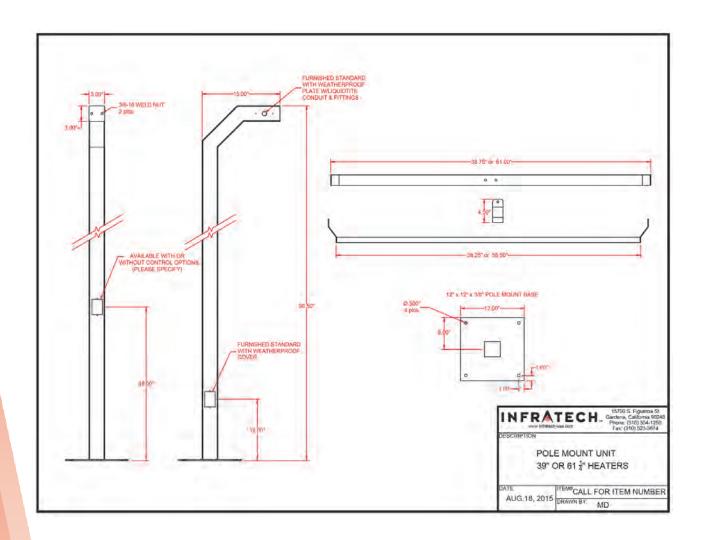
For a Steeper Angle Installation (45° off the wall) mount both brackets with the "shorter length stop" positioned on the bottom.





### Pole Mount Installation

8' Pole with 12" X 12" Base. Includes both Pole Mount and Cross Bar. Available with or without Cutout Switch for Control Options.



Part# 22-1250 W-39 Pole Mount - White

Part# 22-1255 W-61 Pole Mount - White

Also available in custom sizes and custom colors. Please contact customer service for details.

### **Infratech Control Options**

Infratech is a UL 508 Listed Control Manufacturer with a proven track record in engineering, design, and manufacturing.

- Duplex/Stack Switches are designed for all dual element heaters (max 20 amps per switch).
- The INF Input Regulators are designed for single element heaters (max 15 amps).
- Solid State Relay Control Packages include a Solid State Relay Panel used in tandem with our Zone Analog Controllers.
- Home Management Relay Panel offers the ability to integrate Infratech's heaters directly into your home management system, so you can get the most automation control out of your living space.

### **Duplex/Stack Switch**

- Low cost control option for all dual element heaters.
- All assemblies are available in different configurations, including In-Wall or Surface Mount options with or without weatherproof covers.
- The Duplex/Stack Switch offers the ability to turn on and off each element independently, providing half power/ full power capabilities.
- Range 120/277 VAC (20 amps max per switch).



Part# 14-4300 Single SS Wall Plate w/Gang Box



Part# 14-4310
Single Flush Mount
w/Weatherproof Cover



Part# 14-4320
Single Surface Mount
w/Weatherproof Box



Part# 14-4305
Dual SS Wall Plate
w/Gang Box



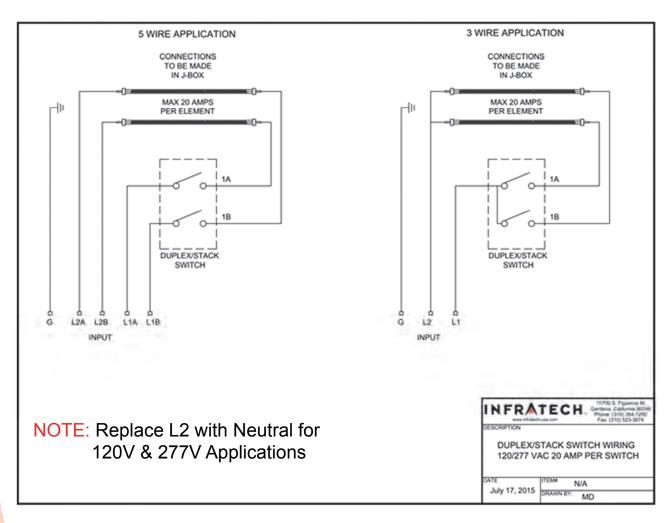
Part# 14-4315
Dual Flush Mount
w/Weatherproof Cover



Part# 14-4325
Dual Surface Mount
w/Weatherproof Box

# Duplex/Stack Switch Sample Wiring Diagram

Range: 120/277 VAC / 20 AMPS per Switch



## **INF Input Regulator**

- Low cost control option for single element heaters up to 3000 watts (maximum 15 amps).
- Not a dimmer the INF gently cycles the heater on and off at regular intervals when not on full power.
- Each heater must have its own INF Input Regulator.
- All assemblies are available in different configurations, including In-Wall or Surface Mount options with or without weatherproof covers.



Part# 14-4200 Single SS Wall Plate w/Deep Gang Box



Part# 14-4210
Single Flush Mount
w/Weatherproof Cover



Part# 14-4220
Single Surface Mount
w/Weatherproof Box



Part# 14-4205
Dual SS Wall Plate
w/Deep Gang Box



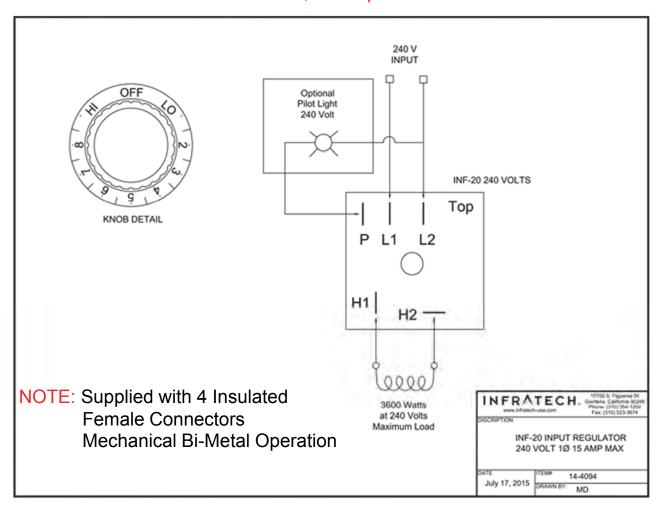
Part# 14-4215
Dual Flush Mount
w/Weatherproof Cover



Part# 14-4225
Dual Surface Mount
w/Weatherproof Box

# INF Input Regulator Sample Wiring Diagram

#### 240 VAC, 15 Amps Max



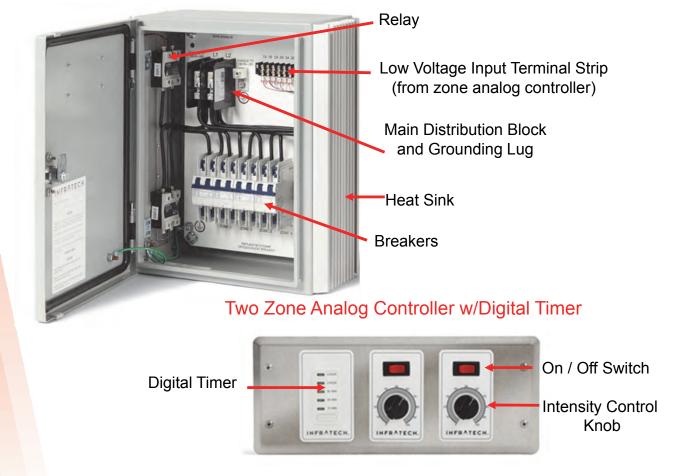
## Solid State Relay Control Package

#### Consists of a Solid State Relay Panel and Zone Analog Controllers

- Infratech's Solid State Controls are engineered for your individual project and suitable for commercial or residential installations of any size.
- Multiple zoning capabilities.
- Allows for the option to adjust the intensity of heat of one or more heaters in a specified target area.
- Available with optional timers.

- Controls are built to UL 508 listing, which is a higher safety standard than the National Electric Code (NEC).
- Heaters are hard wired directly to the Solid State Relay Panel.
- Tested before leaving the factory, and provided with wiring diagrams for each installation.

#### Solid State Relay Panel



## Solid State Relay Panel

#### For use in conjunction with Zone Analog Controllers

- Infratech's Solid State Panels are UL/CUL Listed and are engineered for your individual project and suitable for commercial or residential installations of any size.
- The Solid State Relay Panel will be fed from the facility's main panel at 125% (includes safety factor) of the full amperage of all heaters.
- There is a maximum of 9000 watts at 240V (max. of 8000 watts at 208V per each Relay in the Panel (50 amps max).
- INFRATECH

  WARNING
  DISCONCET POWER
  BEFORE SERVICING
- 5,000 watt and 6,000 watt heaters must be on their own relay.
- Multiple heaters on a single relay are required to be the same wattage.
- Solid State Relay Panels can be built to accept Single Phase or Three Phase power.
- Solid State Relay Panels are designed project specific, tested before leaving the factory, and assigned a UL/CUL Listed Job Number.
- Electrical wiring diagrams are provided for each installation.

## Solid State Relay Panel

Surface Mount Relay Panels





Part#	Description	Exterior Dims.
30-4051	1 Relay Panel	16" X 14" X 7"
30-4052	2 Relay Panel	16" X 14" X 7"
30-4053	3 Relay Panel	16" X 14" X 7"
30-4054	4 Relay Panel	16" X 14" X 7"
30-4055	5 Relay Panel	20" X 18" X 7"
30-4056	6 Relay Panel	20" X 18" X 7"

Relay Panels requiring more than six relays are also available by special order. Please contact customer service for details.

## Zone Analog Controller

#### For use in conjunction with the Solid State Relay Panel

- Zone Analog Controllers offer the ability to control one or more heaters in a specified target area.
- All heaters in each zone will be controlled simultaneously.
- Each Zone Analog Intensity Control Knob can control a maximum of three relays from the Solid State Relay Panel.
- The Zone Analog Control is wired to the Solid State Relay Control Panel with a low voltage wire (CAT 5 or comparable).
- The Zone Analog Control also requires 1 amp of 120V from a local circuit.
- Optional Digital Timers include intervals of 15 min, 30 min, 60 min, 2 hours, and 4 hours.



## **Zone Analog Controllers**

#### In-Wall Assemblies for Indoor or Outdoor Protected Areas



Part# 30-4032
1 Zone Analog Controller



Part# 30-4045
1 Zone Analog Controller
w/Digital Timer



Part# 30-4033 2 Zone Analog Controller



Part# 30-4046
2 Zone Analog Controller
w/Digital Timer



Part# 30-4034
3 Zone Analog Controller



Part# 30-4047
3 Zone Analog Controller
w/Digital Timer



Part# 30-4035 4 Zone Analog Controller



All Zone Analog Controllers also available in white (Special Order)

# Solid State Relay Control Package Placement

### Solid State Relay Placement

- Surface Mount in a well ventilated area.
- Heat Sinks are the 1" deep Aluminum
   Extrusions on the left and right sides of
   the panel. It is suggested the power be
   brought in through the top or bottom of
   the panel (not from the back).
- Minimum clearance is 6" on each side, 12" from the top and bottom. Additional clearance will be needed if placed in a poorly ventilated area.
- NEMA 4 Rated, which is completely weather resistant.
- Must be accessible per National Electric Code (NEC).

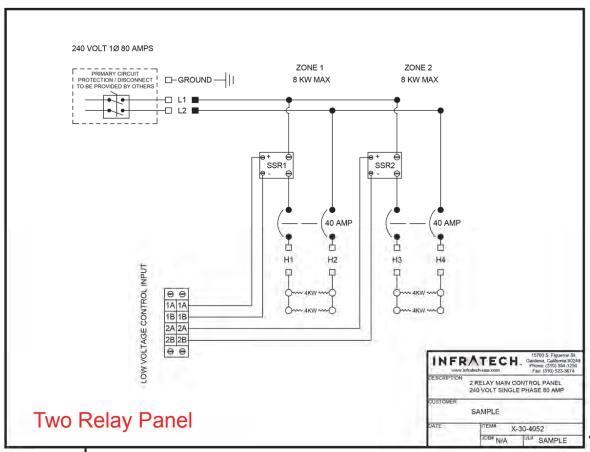


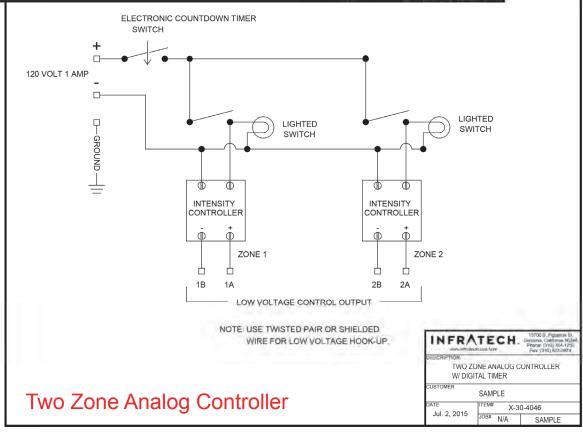


### Zone Analog Controller Placement

- NEMA 12 Rated, will need to be mounted in a well-protected covered area.
- Zone Analog Controllers can be installed in any suitable location that will make it convenient to control the heater(s).
- Custom NEMA 4 housing also available upon special order.

# Solid State Relay Control Package Sample Wiring Diagrams





# Home Management Relay Panel

### For use in conjunction with your Home Management System

- Infratech's Home Management Control is compatible with top selling systems like Lutron<sup>™</sup>, Crestron<sup>™</sup>, Control 4<sup>™</sup>, and others.
- Infratech's simple interface requires a 0-10V DC signal for streamlined installation and straightforward programing.
- This control option allows the user the ability to save preferred heat settings for off-site control via mobile device, control zones, heat intensity, timer functions, and more!

### Three Simple Steps for Infratech's Smart Home Setup



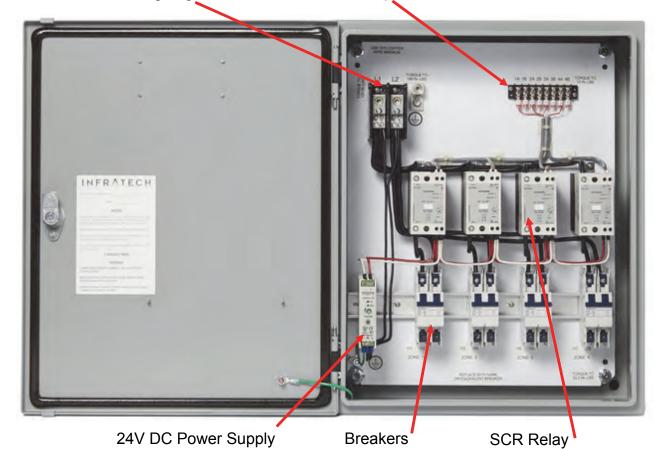
<sup>\*</sup>Contact us to check compatibility



# Home Management Relay Panel

Main Distribution Block and Grounding Lug

0-10V DC Input Terminal Strip



Part#	Description	Exterior Dims.
30-4061	1 Relay Home Management Panel	20" X 16" X 7"
30-4062	2 Relay Home Management Panel	20" X 16" X 7"
30-4063	3 Relay Home Management Panel	20" X 16" X 7"
30-4064	4 Relay Home Management Panel	20" X 16" X 7"
30-4065	5 Relay Home Management Panel	24" X 20" X 7"
30-4066	6 Relay Home Management Panel	24" X 20" X 7"

Home Management Relay Panels requiring more than six relays are also available by special order. Please contact customer service for details.

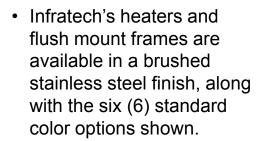
# W-Series and WD-Series Color and Finish Options



White



**Bronze** 





**Almond** 



Black

 The Standard Colors are powder coated over the stainless steel and baked to achieve a long lasting, fade and corrosion resistant finish.



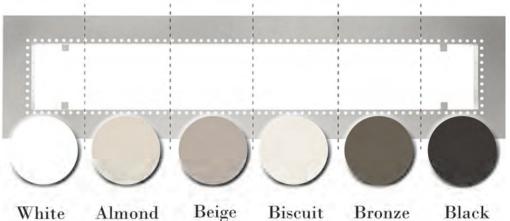
Beige



**Biscuit** 

 You may also choose your own custom finish color, that complements your wall or ceiling treatments. (See page 3)

Note: Flush Mount Installations require powder coating the frame, rather then the heater itself to achieve the desired look.



# **SL-Series Color Options**

Slimline Heaters can be ordered in the following configurations to better coordinate with your environment.



### Stainless Steel

The Slimline SL-Series comes with a stainless steel trim over a stainless hue anodized aluminum body/mounting brackets.



### **Anodized Bronze**

Available with a Stainless steel trim over bronze anodized aluminum body/mounting brackets.

To order the Bronze body and brackets, add "BR" to the end of the model part number.



### All Black Slimline Shadow™

Infratech's All Black Slimline
Shadow™ has a powder coated
black trim over black anodized
aluminum body/mounting brackets.

To order the All Black Slimline Shadow™ add "BL" to the end of the model part number.

### **Custom Colors**

### Virtually Any Custom Color Available

- Applicable for the W-Series and WD-Series Heaters and Infratech's Flush Mount Frames.
- Wide spectrum of colors, textures, and finishes available.
   Contact Infratech for a copy of Tiger Drylac's color chart to make your selection.
- Once selecting a Tiger Drylac's RAL Number, please contact customer service for a custom quote.
- All custom color orders are Non-Refundable, and have an approximate lead time of 3-4 weeks.



# Heat Your Space in 3 Easy Steps

Infratech offers the widest range of fixtures, installation and control capabilities to create comfortable spaces.

<u>STEP</u> 01

Measure the Area

**STEP** 02

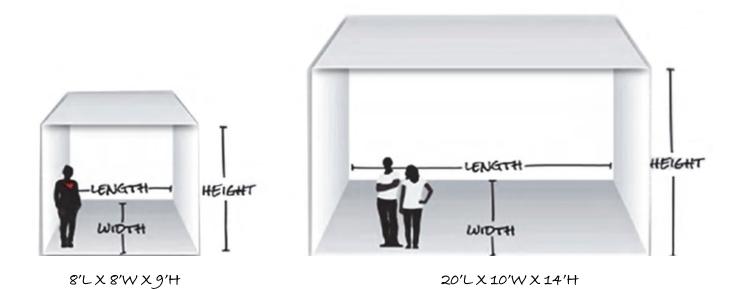
Select the Heaters

**STEP** 03

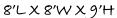
Choose the Controls

### STEP 1: Measure The Area

Determine the approximate measurements and mounting heights of the area you want to heat. (Include length, width, and height)





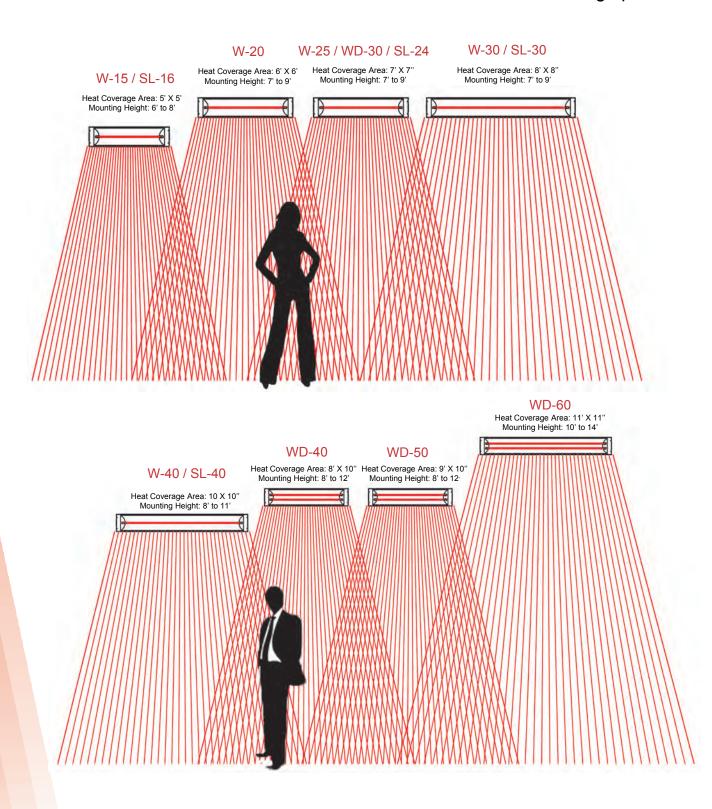




11'LX11'WX14'H

### STEP 2: Select The Heaters

Select the heater(s) that will work both functionally and aesthetically for your space. Consider factors such as size, number of heaters, colors, and mounting options.



Note: Indoor or well-protected environments will generally exceed average coverage. Heaters may provide less than average coverage in extremely cold or windy conditions.

### STEP 3: Choose The Controls

Choose the control option that works best for your desired control capabilities or budget. Options include value control installations or infinite adjustment with solid-state controls.

### Solid State Relay Control Package



Solid State Relay Panel

used with

Zone Analog Controller w/Digital Timer



Home Management

Value Controls



**INF** Regulator



**Duplex/Stack Switch** 

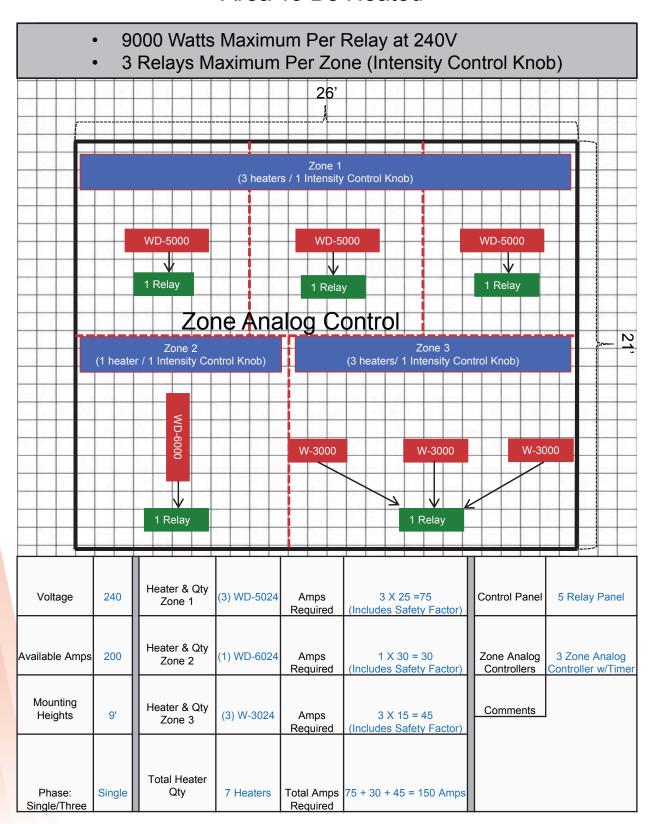


# Example of Heater and Control Layout

Customer Name: <u>John Doe</u> Date: <u>May 1, 2015</u>

Job Name: 123 Main Contact: Mary Smith (212) 555-1212

### Area To Be Heated



#### Why choose an electric heater, rather than a gas heater?

Simply put, electric heaters look better, are more efficient and are easier to operate and maintain. Electric heaters are over 90% efficient and are perfectly safe for use indoors or outdoors. They are also economical to operate and require little maintenance beyond periodic cleaning. Unlike gas heaters, there are no valves, ignition components, moving parts or burners to maintain or repair. In addition, electric heaters produce no sound, odors or toxic emissions.

Electric heaters also offer added mounting and installation options. They may be flush mounted into a standard 8' ceiling using our flush mount frame. When surface mounted, they hang less than 9-1/2" from the ceiling. The most commonly used overhead gas heater requires a minimum ceiling height of almost 10' and, when mounted properly, will hang almost 24" below it.

An electric heater is also easier to use. Enjoying electric comfort heat is as easy as flipping a switch. You can adjust the intensity of an electric heater infinitely from zero to 100% of power. By contrast, gas heaters only produce infrared energy on their highest possible settings.

#### How can I estimate my cost of operation?

Electric heaters are economical to operate. It is easy to estimate your operating cost by multiplying the total kilowatts by your local power rate for a "kilowatt hour" (kwh). Standard power rates vary from market to market. Your rate should appear on any monthly utility statement. For example, a typical 3,000 watt (3 KW) heater, at full power, would cost 39¢ per hour based on a utility rate of 13¢ per kwh. Also keep in mind that your electric heater has a lower acquisition cost than a standard gas heater.

#### How do I determine how many heaters I will need?

Please visit the "Getting Started" page for simple steps to help you select the right heaters and control options for your space. For professional assistance, you may be required to submit some basic information about your area to be heated. We are happy to help you design a system that will satisfy your needs and your budget.

#### How small of a heater can I use?

Always choose a heater size with the appropriate heat output for the mounting height and area to cover. By selecting a smaller unit, you may require more heaters to get the same amount of heat output. If you are choosing a dual element unit for aesthetic purposes, you will be concentrating more heat into a tighter space. Again, this may mean that you will possibly require more fixtures to provide total coverage of your area. Patio heating is often a compromise between functionality and finding the desired look.

#### How much heat should I expect?

At their Food Services Testing Center, Pacific Gas & Electric has determined that a good patio heat installation (gas or electric) will provide between 3-7° of perceived heat at 60° F ambient conditions. Test results determined that more than 7° is too warm to sit in for extended periods. Colder or draftier areas may require more heat; protected or warmer areas may require less. Every installation will vary, along with our customers' expectations.

#### Does an electric heater cost more than a gas unit to operate?

Operating costs vary by region. Nationwide, electric heaters are less expensive than propane, and are competitive with natural gas. Depending upon the total hours of usage, electric heaters normally have a much lower cost of ownership when factoring in purchase price and maintenance needs. Basically, this means that while it can cost more per hour to operate an electric unit in some areas, it typically takes 7-10 years to save enough money operating on gas to recover the substantially higher purchase price-not to mention cost of regular maintenance for a gas heater.

#### **ELECTRICAL**

#### Can I run my heaters on only 120 volts of power?

Using a 110/120-volt heater (1,500 watts maximum) is fine for enclosed areas like garages, indoor work areas or outdoor spaces no larger than 5' x 5'. When heating larger areas, running a dedicated 110/120-volt circuit is not practical or economical. A 240-volt circuit will require the same amount of wiring, will heat substantially larger areas with greater comfort, and will simply require two spaces in the breaker panel, rather than one.

#### What's the difference between 208-volt and 240-volt power?

Many new homes and businesses are supplied with 208-volt power, as opposed to the more familiar 240-volt option. It is very important to determine your power voltage before ordering and installing a heater. A 240-volt heater on 208 volts of power will only produce about 60% of the desired infrared energy. Contact the marketing department of your local utility or consult a licensed electrician to determine the actual voltage at your property location. Infratech heaters are available in single and dual element 120, 208, 240, 277 and 480-volt models.

#### What are your safety certificates?

All Infratech W-Series heaters are Underwriters Laboratories (UL) and Canadian Underwriters Laboratories (cUL) Listed under File E 29825. We are NZ/Australia and CE Listed under Wakefield Laboratories File NSW 21732. All Infratech fixtures are also certified IP X4 rated.

#### **PRODUCT**

#### Should I purchase Infratech solid-state controls?

Infratech solid-state controls give you the most efficient and versatile form of control for your heaters. While other lower cost controls are available, if your space calls for larger heaters or multiple heaters, solid-state controls quickly become your best choice for a quality installation. Contact us and let our qualified staff help you configure the best heaters and controls for your project.

#### How long can I expect an Infratech guartz element to last?

Infratech elements are rated for 5,000 hours of continuous use. In many installations you may enjoy your heater for years before a replacement would be needed. Always refer to the W-Series manual for specific instructions, and be sure to disconnect the power to your heater before attempting to change an element.

#### Are quartz elements better than "short wave" halogen elements?

If you are concerned about ambience, the appearance of your décor and creating a more relaxing environment, Infratech infrared quartz elements are always the best choice. Infratech quartz elements provide comfortable medium wave heat. Competitive products with short wave halogen elements produce more intense heat while emitting very bright and harsh-colored light. By contrast, Infratech medium wave elements effectively heat your space, while providing a soft, warm glow that is practically unnoticeable.

#### SMART HOME INTEGRATION

### Can I operate Infratech heaters from home lighting controls or home management systems?

Yes. There are two ways to integrate our solid-state controls into your home management system. One permits on/off and timer functionality only, by switching the 120-volt power to the analog remote. The second way allows for full integration with our controls designed to accept a 0-10-volt DC signal from the home management system, to vary the intensity of the heaters. Contact us for a complete consultation.

#### SLIMLINE

#### Can I recess a SL series heater?

No. The SL series heater housing operates at a significantly higher temperature than the W series fixtures due to the narrow profile and tight clearances to the heating element. The SL housing would exceed safe operating temperatures for wiring with restricted air circulation.

#### Can the SL series heater be painted or powder coated?

No. The SL series heater housing is anodized aluminum. It is available in a silver, stainless colored finish or a dark bronze, almost black anodized finish. Paint or powder coating interferes with the T slot, and reduces heat dissipation. This layer of paint "insulation" increases the operating temperature of the housing beyond acceptable limits.

#### Why has my Slimline reflector distorted or warped?

There are two possible reasons. First and most common would be because the safety grill is not properly installed in the channel, between the reflector returns, and under the stainless trim ring. The grill needs to be in the channel to hold the reflector properly placed.

The reflector is designed to expand and contract as the housing heats and cools at a different rate. The reflector has slotted holes on each end. If the screws securing the end are over tightened (tight to the bottom) the reflector can deform with the grill in place. During assembly the end screws are backed out, from ½ to 1 full turn to allow room for expansion. This is important to know should you need to replace a reflector for damage or maintenance.

### Will the SL series heater generate the same heat as a comparably rated W series heater?

Yes, they will have the same heat output. A watt = watt. The difference is in the styling, and construction, but with the narrower design of the SL units, the heat pattern is slightly more concentrated towards the center.

#### Do I need to use the supplied mounting brackets?

No. The installer can use any desired bracket that meets the minimum clearance requirements. You can use a ½" hex bolt head in the T slot if attaching to structural tubing.