



# Glasrope® Heaters


## Single and Double

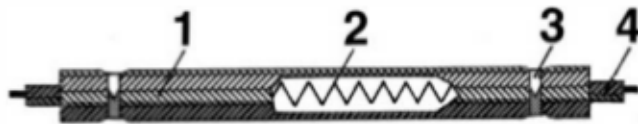


### Applications

Pipes, Tubes, and other similar apparatus where spot or particular locations need to be warmed, Odd Shapes such as: Laboratory Beakers, Valves, Piping, Appliances, Drier Units for Blueprint Machines, Incubators, and Tracers for Pipe Lines.

### Features (Single Glasrope®)

-  Recognized-No. E56973 C.S.A. Certified• 016386-0-000
- The Hotwatt Single Glasrope® Heater has a termination on each end.
- The nominal diameter is .165" x .032" wall for 120 volts, and .180" x .040" wall for 240 volts.
- Lengths to 300".
- Maximum temperature is 900°F (482°C).
- Made in U.S.A.

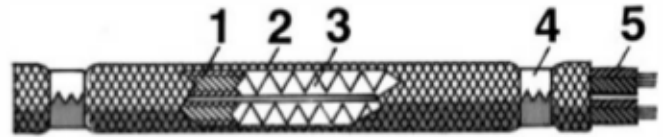


### Construction

- 1 Flexible woven fiberglass braid
- 2 Premium grade resistance wire element.
- 3 Braid retainer.
- 4 Fiberglass insulated leads.

### Features (Double Glasrope®)

- The Hotwatt Double Glasrope® Heater has two terminations on the same end.
- The nominal diameter is .300".
- Lengths to 150".
- Maximum temperature is 900°F (482°C).
- Made in U.S.A.



### Construction

- 1 Single Glasrope®.
- 2 Additional fiberglass sleeve.
- 3 Premium grade resistance wire element.
- 4 Braid retainer.
- 5 Fiberglass insulated leads.



# Glasrope® Heaters

## Single and Double

### Single Glasrope®

▼ Manufactured Items ▼		
Length	Catalog Number	Maximum Wattage
6"	GR16-6	30
8"	GR16-8	40
10"	GR16-10	50
12"	GR16-12	60
14"	GR16-14	70
16"	GR16-16	80
18"	GR16-18	90
24"	GR16-24	120
30"	GR16-30	150
36"	GR16-36	180
42"	GR16-42	210
48"	GR16-48	240
60"	GR16-60	300
72"	GR16-72	360
84"	GR16-84	420
96"	GR16-96	480
108"	GR16-108	540
120"	GR16-120	600

Unit lengths between and longer than those listed may be ordered.

### Wattage

Maximum wattage is based on 5 watts per linear inch of heater. Higher or lower wattages are available depending on the application.

### Voltage

Voltage is normally 120 or 240 volts. Lower voltages are available.

### How To Order

**Specify:** GR16 followed by length, wattage, voltage, lead length, and special features if required.

**Example:** GR16-34/150W120V/SF1-18.

### Double Glasrope®

Length	Catalog Number	Maximum Wattage
24"	GR30-24	190
30"	GR30-30	240
36"	GR30-36	290
42"	GR30-42	330
48"	GR30-48	390
60"	GR30-60	480
72"	GR30-72	575
84"	GR30-84	660
96"	GR30-96	760
108"	GR30-108	860
120"	GR30-120	960

Unit lengths between and longer than those listed may be ordered.

### Wattage

Maximum wattage is based on 8 watts per linear inch of heater. Higher or lower wattages are available depending on the application.

### Voltage

Voltage is normally 120 or 240 volts. Lower voltages are available.

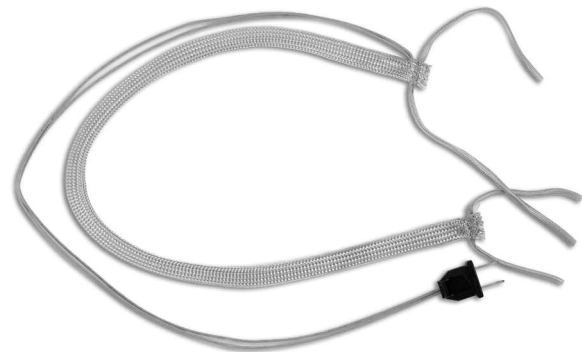
### How To Order

**Specify:** GR30 followed by length, wattage, voltage, lead length, and special features if required.

**Example:** GR30-65/500W120V/SF1-6.

▼ IN STOCK ITEMS ▼						
Length	Cat No.	Diameter	Watts	Volts	Lead	Weight (lbs)
36"	GR16-36	.165"	125	120	12"	.07
60"	GR16-60	.165"	250	120	12"	.12
96"	GR16-96	.165"	400	120	12"	.18
120"	GR16-120	.165"	500	120	12"	.25

### Insulated Tape Heaters



### Description

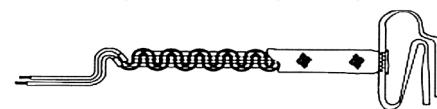
Insulated tape heaters, are high temperature, flexible electric heating elements in tape form. Through a new design, they offer the convenience of leads on the same end.

### Specifications

- High temperature capability: 1400°F yarn insulation
- Low watt density design: 13 watts/inch<sup>2</sup>
- Dual, knitted, serpentine construction: Minimized expansion, vibration and thermal stress, longer life, flexible
- Multi-stranded wire element: High temperature and flexible
- Heavy braided outer cover: Heavy yarn
- 2 ft. high temperature leads with plug

### Features

Heating tape basic construction: Heating tape construction begins by first: Double braiding high temperature yarn over multiple strands of fine resistance wire, then second: knitting the assembly into a tight serpentine configuration, forming a flat tape. Insulated tapes feature the basic element construction with the exception that two elements are knitted side by side as shown. This arrangement allows the two elements to be connected in series on one end and leads to exit from the other. The assembly is protected by a heavy braided cover.



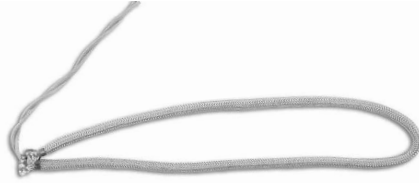
Catalog No.	Metric (cm)	U.S.	Watts	Volts
AWH-051-020D	1.3 X 60	½" X 2'	156	120
AWH-051-040D	1.3 X 120	½" X 4'	312	120
AWH-051-060D	1.3 X 180	½" X 6'	468	120
AWH-051-080D	1.3 X 240	½" X 8'	624	120



# Glasrope® Heaters

## Special Glasrope®

### High Temperature Glasrope®: GH16



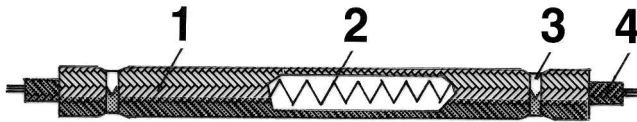
### Silicone Rubber Glasrope®: GS16

U.I. Recognized-No.E48358 C.S.A. Certified• 016386-0-000



#### Features

- The Hotwatt High Temperature Glasrope® Heater is similar to the Standard Single Glasrope® Heater in construction except the woven fiberglass braid is of special design to withstand higher temperatures.
- The nominal diameter is .165".
- Lengths to 300".
- Maximum temperature is 1200°F (649°C).
- Made in U.S.A.



#### Construction

- 1 Flexible woven high temperature fiberglass braid.
- 2 Premium grade resistance wire element.
- 3 Braid retainer.
- 4 Fiberglass insulated leads.

#### Wattage

Maximum wattage is computed at 7 watts per linear inch.

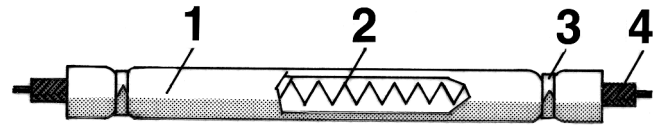
#### How To Order

**Specify:** GH16 followed by length, wattage, voltage, lead length, and special features if required.

**Example:** GH16-80/400W120V/SF1-10.

#### Features

- The Hotwatt Silicone Rubber Glasrope® Heater is sheathed in silicone rubber for use in wet or moist applications.
- The heater is supplied with neoprene insulated flexible leads.
- The nominal diameter is .165".
- Lengths to 300".
- Maximum temperature is 325°F (163°C).
- Made in U.S.A.



#### Construction

- 1 Silicone rubber sleeve.
- 2 Premium grade resistance wire element.
- 3 Sleeve retainer.
- 4 Insulated leads.

#### Wattage

Maximum wattage is computed at 3 watts per linear inch.

#### How To Order

**Specify:** GS16 followed by length, wattage, voltage, lead length, and special features if required.

**Example:** GS16-30/50W120V/SF1-12.



# Glasrope® Heaters

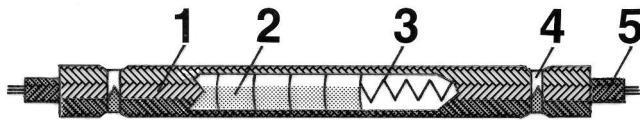
## Special Glasrope® (Cont.)

### Flexible Metal Glasrope®: FM25



#### Features

- The Hotwatt Flexible Metal Glasrope® is for high temperature, corrosive applications.
- The nominal diameter is .250".
- Lengths to 120".
- Maximum temperature is 1300°F (704°C).
- Made in U.S.A.



#### Construction

- 1 Stainless steel braid.
- 2 Ceramic Bead Insulation.
- 3 Premium grade resistance wire element.
- 4 Braid retainer.
- 5 Fiberglass insulated leads.

#### Wattage

Maximum wattage is computed at 5 watts per linear inch.

#### How To Order

**Specify:** FM25 followed by length, wattage, voltage, lead length, and special features if required.

**Example:** FM25-72/250W120V/SF1-6.

#### Standard Termination

**SF1:** Flexible leads. Standard length is 6". Longer lengths are available. Leads are non-repairable.



#### Special Features

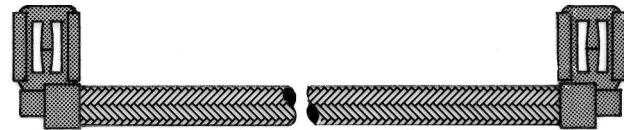
**SF11A:** Ring terminals. Specify #6, #8, or #10.



**SF11B:** Female straight quick connect terminals. Specify 3/8" or 1/4".



**SF11C:** Female flag quick connect terminals. Specify 3/8" or 1/4".



**SF11D:** Spade terminals. Specify #6, #8, or #10.



**SF11E:** Weld terminals. For spot weld connections.



Terminals may be supplied attached to the end of the lead or directly on the glasrope.

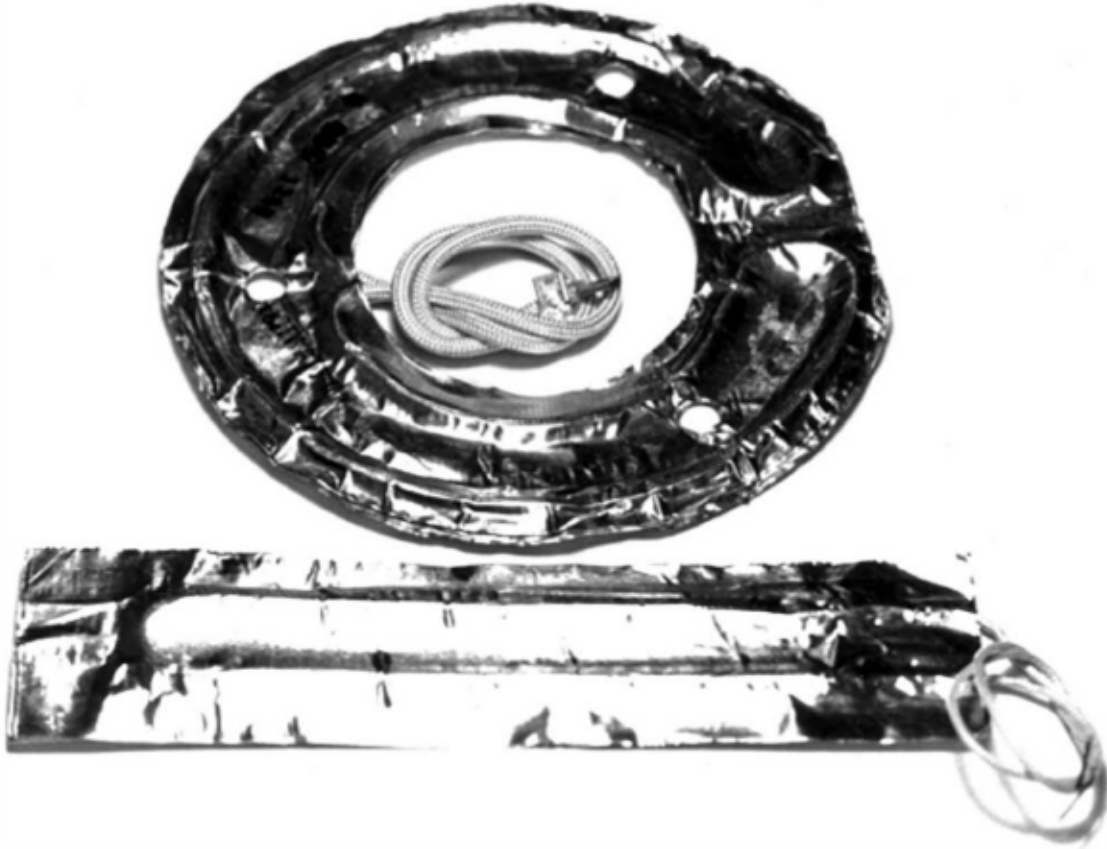
#### Tolerance


Wattage tolerances are held to +5%, -10% at the voltage specified.



# Foil Heaters

FOIL



Recognized-No. E56973  
for USA and Canada 

## Applications

Battery Warmers, Cabinets, Defrost Applications, Heated Food Tables, Incubators, Laboratory Equipment, Ceiling Panels, and Wall Panels.

## Features

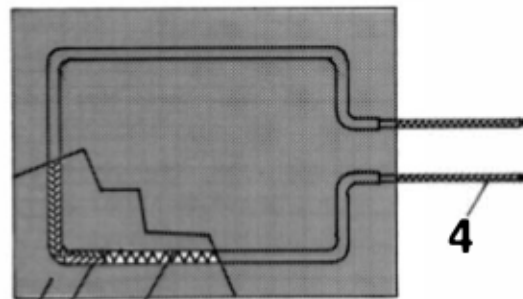
- The Hotwatt Foil Heater is a self-contained one-piece assembly.
- A resistant element is laminated between two layers of aluminum foil.
- The heater is ideally suited for area and surface heating applications.
- Sheath temperatures to 300°F (149°C).
- Widths range from 1¼" minimum -36".
- Lengths range from 4" -60".
- Heaters are available with a thermostat.
- Many configurations with or without holes and cutouts are available.
- Made in U.S.A.

## Wattage

The maximum wattage is based on 3 watts per square inch of surface.

## Construction

- 1 Aluminum foil.
- 2 Insulating sleeve.
- 3 Premium grade resistance wire element.
- 4 Insulated leads.



**1 2 3**

## Voltage

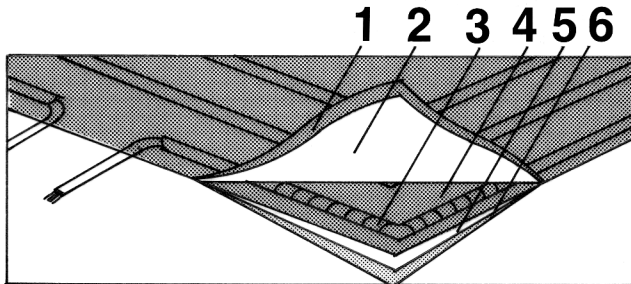
Voltage is normally 120 or 240 volts. Lower voltages are available.



# Foil Heaters

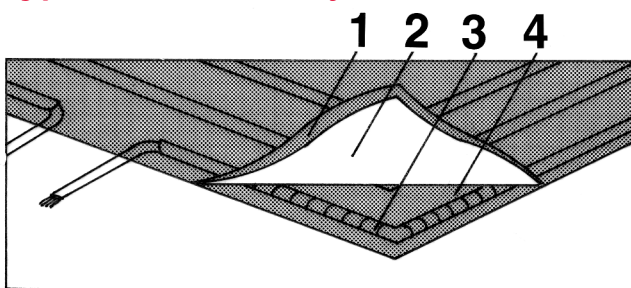
## Foil Heater Construction

### Type A: Self-Adhering: Flexible



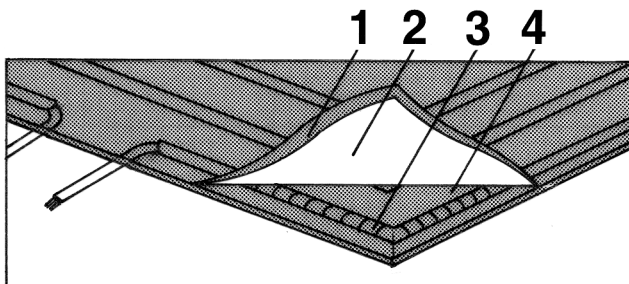
- |                  |                  |
|------------------|------------------|
| 1 Aluminum foil. | 4 Aluminum foil. |
| 2 Adhesive.      | 5 Adhesive.      |
| 3 Element.       | 6 Release paper. |

### Type B: Mechanically Fastened: Flexible



- |                  |
|------------------|
| 1 Aluminum foil. |
| 2 Adhesive.      |
| 3 Element.       |
| 4 Aluminum foil. |

### Type C: Mechanically Fastened: Semi-Rigid



- |                                |
|--------------------------------|
| 1 Aluminum foil.               |
| 2 Adhesive.                    |
| 3 Element.                     |
| 4 Aluminum Sheet: .025" thick. |

## Standard Termination

SF1: Flexible leads for applications where leads can be bent close to the end of the unit. Leads are non-repairable.



## Special Features

SF11A: Ring terminals. Specify #6, #8, or #10.



SF11B: Straight quick connect terminals. Specify male or female and size:  $\frac{3}{16}$ " or  $\frac{1}{4}$ ".



SF11C: Flag quick connect terminals. Specify male or female and size:  $\frac{3}{16}$ " or  $\frac{1}{4}$ ".



SF11D: Spade terminals. Specify #6, #8, or #10.



## How to Order

Determine catalog number as shown below. For complex configurations, attach drawings.

Example: FH3-6/50W120V/SF1-12/SF11A-#8/A4-20

FH: Prefix for foil heater.

3: Width of heater from which side the lead comes out.

6: Length of heater.

50W: Voltage.

120V: Voltage.

SF1-12: Lead type and length.

SF11A: Terminal if required.

A: Construction of heater (specify A, B or C).

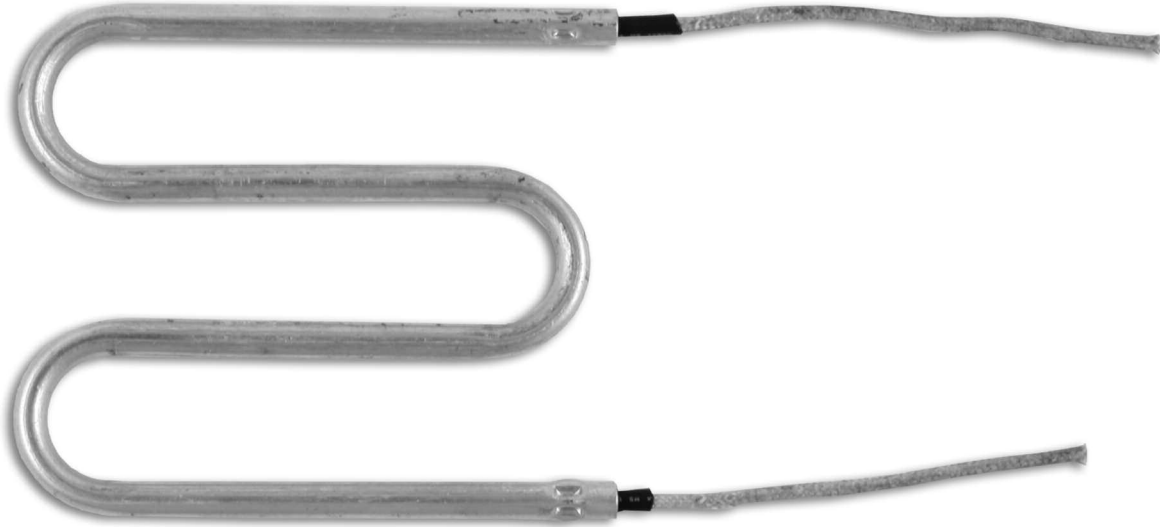
4: The number of passes of element inside the foil (generally determined by the factory).

20: Element length (generally determined by the factory).



# Tubular Sheathed Glasrope® Heaters

TUBULAR SHEATHED GLASROPE



U.L. Recognized-E56973

## Applications

Blueprint Machinery, Cabinets, Compressor Crankcase Heating, Copiers, and Defrost Heaters.

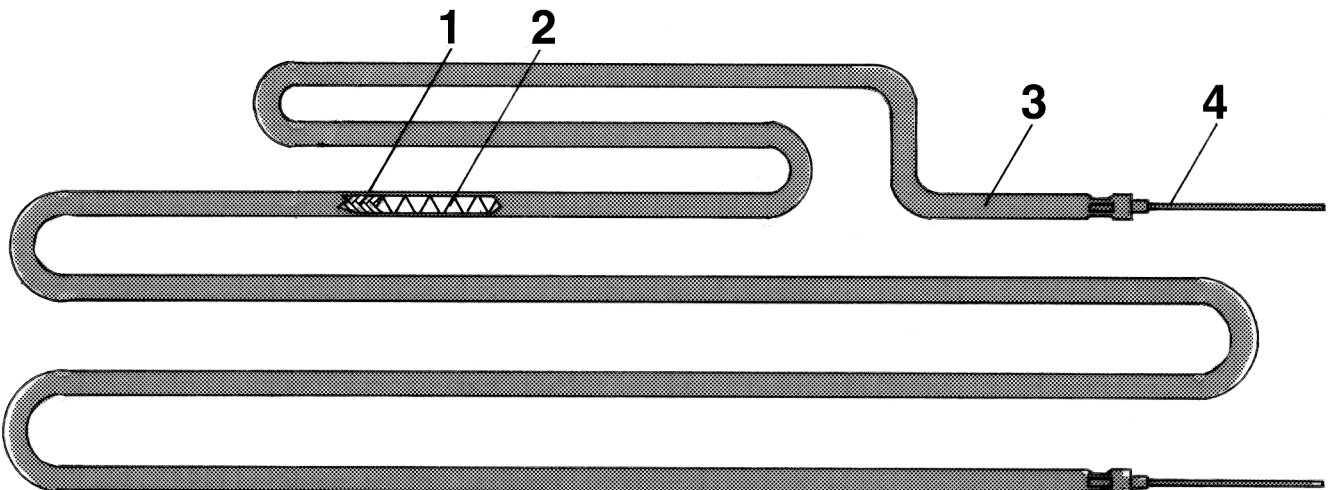
## Features

- The Hotwatt Tubular Sheathed Glasrope® Heater is a fiberglass insulated element encased in aluminum or stainless steel tubing.
- The stainless steel heater is for higher temperatures of corrosive applications.
- Extra long leads and special terminations are available. (6" long leads are standard.)

- A seal is used for wet or moist applications.
- Made in U.S.A
- The heater may be formed to special configurations.
- Special wattage distribution for specific heat location.

## Construction

- 1 Fiberglass insulation.
- 2 Premium grade resistance wire element.
- 3 Aluminum or stainless steel tubing.
- 4 Fiberglass insulated leads.





# Tubular Sheathed Glasrope® Heaters

Diameter: ¼"

## Standard with One Lead Each End

Length	Catalog Number Aluminum Sheath	Maximum Wattage
24"	AT25-24	120
30"	AT25-30	150
36"	AT25-36	180
42"	AT25-42	210
48"	AT25-48	240
54"	AT25-54	270
60"	AT25-60	300

Diameter: ⅜"

## Standard with Both Leads Same End

Length	Catalog Number Aluminum Sheath	Maximum Wattage
24"	AT37-24	200
30"	AT37-30	250
36"	AT37-36	300
42"	AT37-42	350
48"	AT37-48	400
54"	AT37-54	450
60"	AT37-60	500

Specifications	¼" Dia.	⅜" Dia.
Minimum Inside Radius For Forming	½"	1"
Minimum Helical Diameter For Forming	1"	2"
Normal Cold Ends	1"	1"
Standard Lead Length	6"	6"
Maximum Temperature	550°F (288°C)	550°F (288°C)

## Watts Per Linear Inch vs. Temperature In Air

Temperature °F	°C	Watts/Linear Inch
220°	104°	1
340°	171°	2
390°	199°	3
490°	254°	4
550°	288°	5.5

## Standard Termination

SF1: Flexible leads for applications where leads can be bent close to the end of the unit. Leads are non-repairable.



## Special Features

SF11A: Ring terminals. Specify #6, #8, or #10.



SF11B: Straight quick connect terminals. Specify male or female and size: ⅜" or ¼".



SF11C: Flag quick connect terminals. Specify male or female and size: ⅜" or ¼".



SF11D: Space terminals. Specify #6, #8, or #10.



SF37: Stainless steel sheath.

TUBULAR SHEATHED GLASROPE

## How to Order

**Specify:** diameter, length, wattage, voltage, lead length, special features (if any), any configurations (attach drawing).

**Example:** AT25-33/100W120V/SF1-10/SF37

