

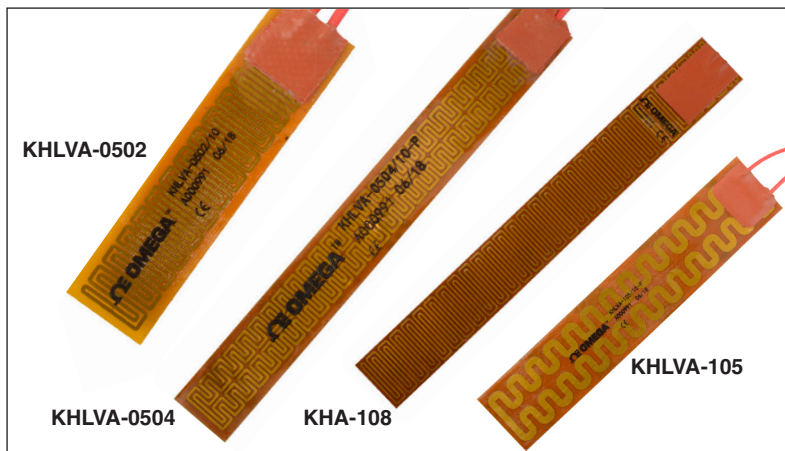
# POLYIMIDE FILM INSULATED FLEXIBLE HEATERS



## KHRA/KHLVA/KHA Series



- ✓ Rated Up to 200°C (392°F)
- ✓ Etched Foil Design
- ✓ 0.010" Max Thickness
- ✓ 2.5, 5, or 10 Watts/in<sup>2</sup>
- ✓ 115, 230<sup>†</sup> and 28V
- ✓ Optional Pressure-Sensitive Adhesive (PSA)



Smaller than actual size

## Specifications

### Operating Temperature:

-56 to 200°C (-70 to 392°F) for heaters without pressure sensitive adhesive (PSA). Maximum operating temperature for heaters with pressure sensitive adhesive is 120°C (248°F)

**Maximum Thickness:** 0.010" except at lead wire exit

**Wattage:** 2.5, 5 or 10 W/in<sup>2</sup>

**Leads:** PTFE insulated (UL 1180), 12" (305 mm) long (wire gauge varies with heater)

**Dielectric Strength:** 1250 Vac

**Minimum Bending Radius:** 0.032"

<sup>†</sup> Most sizes available in 230V.

Consult heaters sales and engineering.

Polyimide film insulated heaters are available in a variety of shapes, sizes, and wattages. Wattage ratings are 2.5, 5, or 10 W/in<sup>2</sup> at 115, 230<sup>†</sup> or 28V

Polyimide film offers a high degree of resistance to chemicals, Flexible nature can fit into Intrinsic voids & can be applied very Easily.

## KHRA Series, Round, 115 Volts

To Order				
Without PSA Model No.	With PSA Model No.	Diameter in (cm)	Total Wattage for Watt Density	
			5 W/in <sup>2</sup>	10 W/in <sup>2</sup>
KHRA-2/(*)	KHRA-2/(*)-P	2 (5)	—	31.4
KHRA-3/(*)	KHRA-3/(*)-P	3 (8)	35.3	70.7
KHRA-4/(*)	KHRA-4/(*)-P	4 (10)	62.8	126
KHRA-5/(*)	KHRA-5/(*)-P	5 (13)	98.2	196
KHRA-6/(*)	KHRA-6/(*)-P	6 (15)	141	283
KHRA-8/(*)	KHRA-8/(*)-P	8 (20)	251	503
KHRA-10/(*)	KHRA-10/(*)-P	10 (25)	393	785
KHRA-12/(*)	KHRA-12/(*)-P	12 (30)	565	1131

Comes complete with operator's manual.

\* Insert watt density: "2" for 2.5 W/in<sup>2</sup>, "5" for 5 W/in<sup>2</sup> or "10" for 10 W/in<sup>2</sup>.

**Note:** Heaters are available in only the watt densities where total wattage is indicated.

**Ordering Example:** KHLVA-104/5-P, 1 x 4" (2.5 x 10 cm), 28V, 5 W/in<sup>2</sup> Polyimide film heater with PSA.

## KHLVA Series, Rectangular, 28 Volts

Without PSA Model No.	With PSA Model No.	Width, in (cm)	Length, in (cm)	Total Wattage for Watt Density		
				2.5 W/in <sup>2</sup>	5 W/in <sup>2</sup>	10 W/in <sup>2</sup>
KHLVA-0502/(*)	KHLVA-0502/(*)-P	0.5 (1)	2 (5)	—	5	10
KHLVA-0504/(*)	KHLVA-0504/(*)-P	0.5 (1)	4 (10)	5	10	20
KHLVA-101/(*)	KHLVA-101/(*)-P	1 (3)	1 (3)	—	5	10
KHLVA-102/(*)	KHLVA-102/(*)-P	1 (3)	2 (5)	5	10	20
KHLVA-103/(*)	KHLVA-103/(*)-P	1 (3)	3 (8)	7.5	15	30
KHLVA-104/(*)	KHLVA-104/(*)-P	1 (3)	4 (10)	10	20	40
KHLVA-105/(*)	KHLVA-105/(*)-P	1 (3)	5 (13)	12.5	25	50
KHLVA-202/(*)	KHLVA-202/(*)-P	2 (5)	2 (5)	10	20	40
KHLVA-203/(*)	KHLVA-203/(*)-P	2 (5)	3 (8)	15	30	60
KHLVA-204/(*)	KHLVA-204/(*)-P	2 (5)	4 (10)	20	40	80
KHLVA-205/(*)	KHLVA-205/(*)-P	2 (5)	5 (13)	25	50	100
KHLVA-303/(*)	KHLVA-303/(*)-P	3 (8)	3 (8)	22.5	45	90

Typical construction consists of an etched foil element of 0.001" thickness, which is encapsulated between two layers of 0.002" Polyimide film.

For rectangular heaters, lead wires exit centrally from the width (W) side. Leads exit round heaters radially.

Pressure sensitive adhesive (PSA) is available as an option. The heaters can also be mechanically clamped or epoxy mounted by the user.

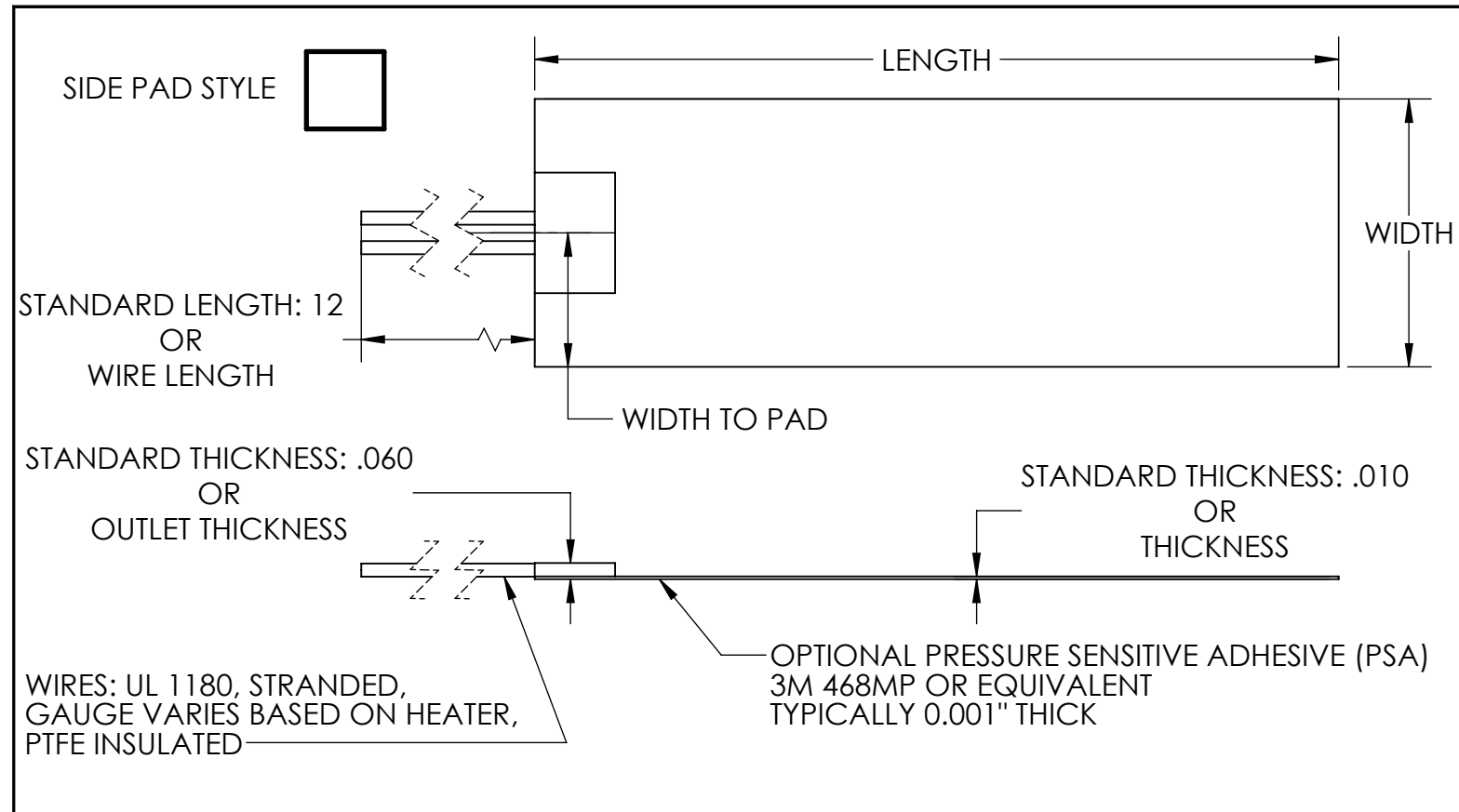
### KHA Series, Rectangular, 115 Volts

<b>To Order</b>					
Without PSA Model No.	With PSA Model No.	Width, in (cm)	Length, in (cm)	Total Wattage for Watt Density	
				5 W/in <sup>2</sup>	10 W/in <sup>2</sup>
—	KHA-102/(*)-P	1 (3)	2 (5)	—	30
KHA-103/(*)	KHA-103/(*)-P	1 (3)	3 (8)	—	30
KHA-104/(*)	KHA-104/(*)-P	1 (3)	4 (10)	20	40
KHA-105/(*)	KHA-105/(*)-P	1 (3)	5 (13)	25	50
KHA-106/(*)	KHA-106/(*)-P	1 (3)	6 (15)	30	60
KHA-108/(*)	KHA-108/(*)-P	1 (3)	8 (20)	40	80
KHA-110/(*)	KHA-110/(*)-P	1 (3)	10 (25)	50	100
KHA-112/(*)	KHA-112/(*)-P	1 (3)	12 (30)	60	120
KHA-202/(*)	KHA-202/(*)-P	2 (5)	2 (5)	20	40
KHA-203/(*)	KHA-203/(*)-P	2 (5)	3 (8)	30	60
KHA-204/(*)	KHA-204/(*)-P	2 (5)	4 (10)	40	80
KHA-205/(*)	KHA-205/(*)-P	2 (5)	5 (13)	50	100
KHA-206/(*)	KHA-206/(*)-P	2 (5)	6 (15)	60	120
KHA-208/(*)	KHA-208/(*)-P	2 (5)	8 (20)	80	160
KHA-210/(*)	KHA-210/(*)-P	2 (5)	10 (25)	100	200
KHA-212/(*)	KHA-212/(*)-P	2 (5)	12 (30)	120	240
KHA-303/(*)	KHA-303/(*)-P	3 (8)	3 (8)	45	90
KHA-304/(*)	KHA-304/(*)-P	3 (8)	4 (10)	60	120
KHA-305/(*)	KHA-305/(*)-P	3 (8)	5 (13)	75	150
KHA-306/(*)	KHA-306/(*)-P	3 (8)	6 (15)	90	180
KHA-308/(*)	KHA-308/(*)-P	3 (8)	8 (20)	120	240
KHA-310/(*)	KHA-310/(*)-P	3 (8)	10 (25)	150	300
KHA-312/(*)	KHA-312/(*)-P	3 (8)	12 (30)	180	360
KHA-404/(*)	KHA-404/(*)-P	4 (10)	4 (10)	80	160
KHA-405/(*)	KHA-405/(*)-P	4 (10)	5 (13)	100	200
KHA-406/(*)	KHA-406/(*)-P	4 (10)	6 (20)	120	240
KHA-408/(*)	KHA-408/(*)-P	4 (10)	8 (20)	160	320
KHA-410/(*)	KHA-410/(*)-P	4 (10)	10 (25)	200	400
KHA-412/(*)	KHA-412/(*)-P	4 (10)	12 (30)	240	480
KHA-505/(*)	KHA-505/(*)-P	5 (13)	5 (13)	125	250
KHA-506/(*)	KHA-506/(*)-P	5 (13)	6 (15)	150	300
KHA-508/(*)	KHA-508/(*)-P	5 (13)	8 (20)	200	400
KHA-510/(*)	KHA-510/(*)-P	5 (13)	10 (25)	250	500
KHA-512/(*)	KHA-512/(*)-P	5 (13)	12 (30)	300	600
KHA-606/(*)	KHA-606/(*)-P	6 (15)	6 (15)	180	360
KHA-608/(*)	KHA-608/(*)-P	6 (15)	8 (20)	240	480
KHA-610/(*)	KHA-610/(*)-P	6 (15)	10 (25)	300	600
KHA-612/(*)	KHA-612/(*)-P	6 (15)	12 (30)	360	720
KHA-808/(*)	KHA-808/(*)-P	8 (20)	8 (20)	320	640
KHA-810/(*)	KHA-810/(*)-P	8 (20)	10 (25)	400	800
KHA-812/(*)	KHA-812/(*)-P	8 (20)	12 (30)	480	960
KHA-1010/(*)	KHA-1010/(*)-P	10 (25)	10 (25)	500	1000
KHA-1012/(*)	KHA-1012/(*)-P	10 (25)	12 (30)	600	1200
KHA-1212/(*)	KHA-1212/(*)-P	12 (30)	12 (30)	720	1440

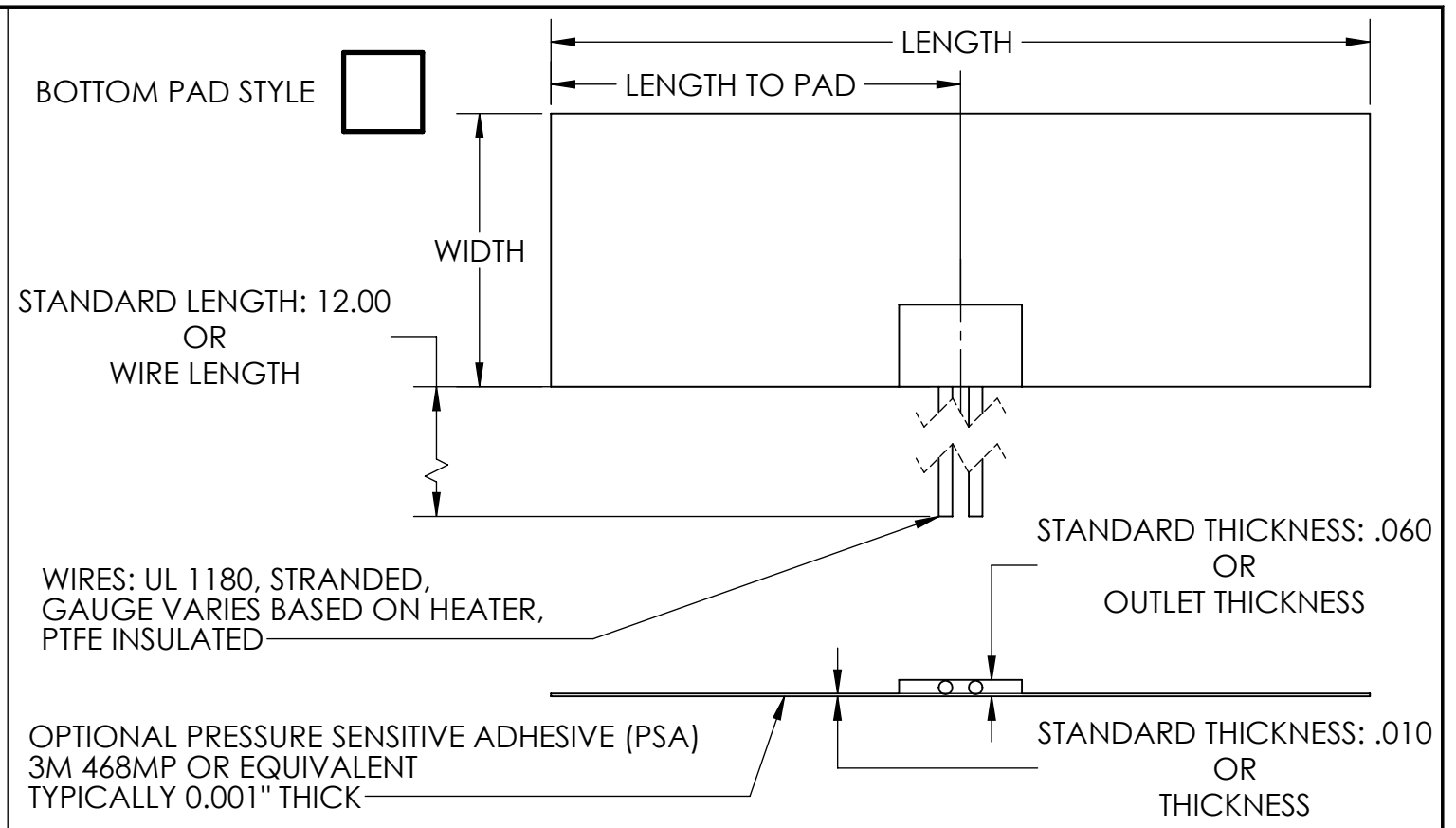
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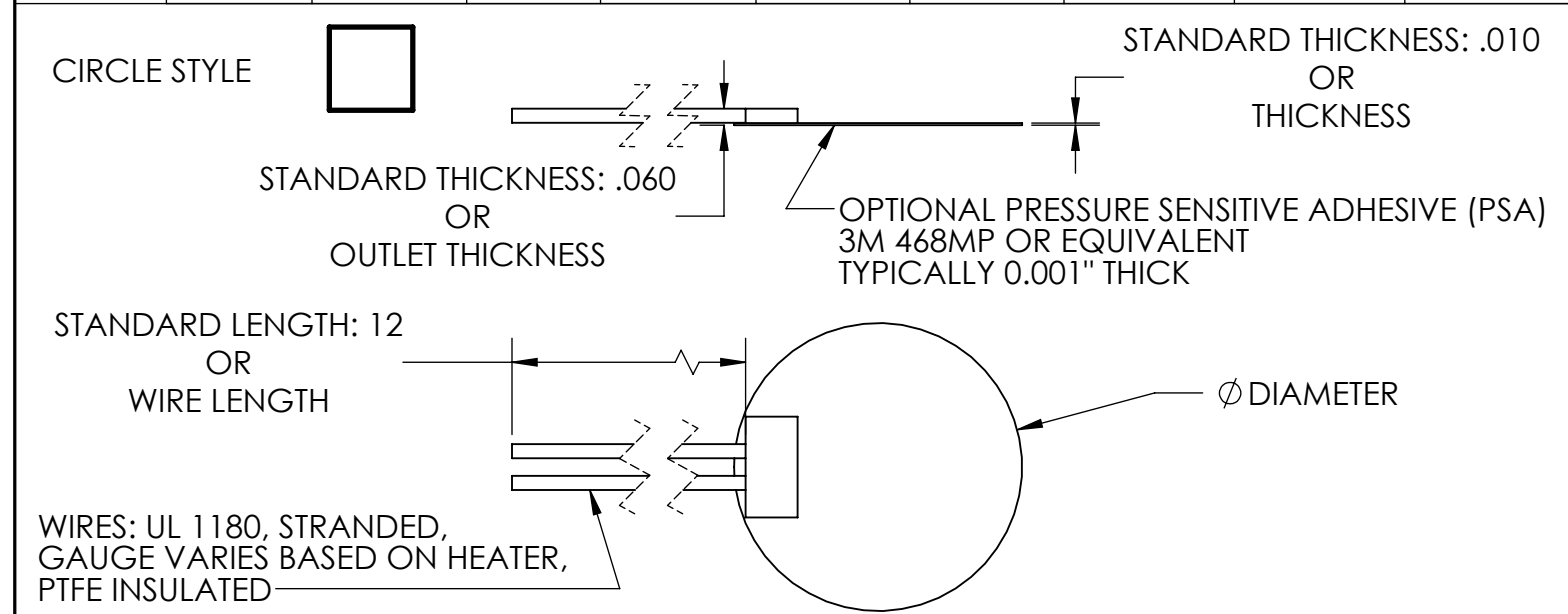
**Note:** Heaters are available in only the watt densities where total wattage is indicated.



WIDTH	LENGTH	WATT DENSITY	VOLTAGE	PSA BACKING	WIDTH TO PAD	WIRE LENGTH	THICKNESS	OUTLET THICKNESS



WIDTH	LENGTH	WATT DENSITY	VOLTAGE	PSA BACKING	LENGTH TO PAD	WIRE LENGTH	THICKNESS	OUTLET THICKNESS



DIAMETER	WATT DENSITY	VOLTAGE	PSA BACKING	WIRE LENGTH	THICKNESS	OUTLET THICKNESS

**Fill this form with details required to quote this heater.  
Scan & email this Form to [heaters@omega.com](mailto:heaters@omega.com)**

**If you have specific geometry requirements, you may also create and attach your own drawing.**

**Minimum order of \$1000**

**NOTES:**

- CONSTRUCTION: POLYIMIDE MATERIAL ENCASING AN INCONEL 600 RESISTIVE FOIL ELEMENT
- OPERATING TEMP (WITHOUT PSA): -56°C TO -200°C  
OPERATING TEMP (WITH PSA): -40°C TO 120°C
- MINIMUM BENDING RADIUS: 0.032"
- DIELECTRIC STRENGTH: 1250 VAC FOR 1 SEC
- WATT DENSITY TOLERANCE: ±10%



TITLE: POLYIMIDE CUSTOM HEATER		
SIZE <b>B</b>	TEMPLATE NO. <b>080-0012</b>	REV <b>A</b>

## CUSTOM POLYIMIDE HEATER QUOTATION FORM

**Tel: 800-826-6342**

**E-mail: [Heaters@omega.com](mailto:Heaters@omega.com)**

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

State/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_ Fax: \_\_\_\_\_

- 1) What is the application? \_\_\_\_\_
- 2) Material to be heated: \_\_\_\_\_
- 3) Quantity required? \_\_\_\_\_
- 4) Will this be a one-time order or recurring order? \_\_\_\_\_
- 5) Other instrumentation to be quoted: \_\_\_\_\_
- 6) Testing or other required documentation: \_\_\_\_\_
- 7) Lead-time constrained: \_\_\_\_\_

All custom heaters are non-returnable and PO cannot be canceled.

FILL Dimensional sketch from reverse side