

Silicone Rubber Thermofoil™ Heaters

Rugged and flexible to 235°C

Overview

Silicone rubber is a rugged, flexible elastomer material with excellent temperature properties. It is most suited to larger heaters and industrial applications.

- Rugged construction provides high reliability in a wide range of heating applications
- Optional custom profiled heat density creates a uniform heat sink temperature which can improve processing yields
- Factory vulcanization and high temperature capability allows higher wattage levels for faster processing
- High temperature capability to 235°C (455°F)
- UL and TÜV component recognition available
- Resistant to many chemicals
- Not suitable for radiation, vacuum, or prolonged exposure to oil
- Most economical in large sizes

Typical applications

- Thermal developing in graphic imaging equipment
- Prevent condensation in instrument cabinets
- Heat outdoor electronics
- Food service equipment
- Medical respirators
- Laminators
- Drums and other vessels
- Airplane engine heaters

Custom options

- Custom shapes and sizes to 22" × 90" (560 × 2285 mm)
- Custom resistance to 200 Ω/in² (31 Ω/cm²)
- Minco can factory vulcanize rubber heaters to metal shapes for best economy and performance
- Heaters can have integral snaps, straps, or Velcro® for removable installation
- Heaters can include thermostats, temperature sensors and cutouts, wiring harnesses, and connectors
- RoHS compliance
- Contact Access: Minco Sales and Support for design assistance



Specifications

Temperature range: -45 to 235°C (-50 to 455°F).
With UL component recognition: -45 to 220°C (-50 to 428°F).

Material: Fiberglass reinforced silicone rubber, 0.008" (0.20 mm).

Resistance tolerance: ±10% or ±0.5 Ω, whichever is greater.

Dielectric strength: 1000 VRMS.

Minimum bend radius: 0.125" (3.2 mm).

Leadwire: Red PTFE insulated, stranded.

Current capacity (based on 100°C max. ambient temp.):

AWG 30 - 3.0 A	AWG 24 - 7.5 A
AWG 26 - 5.0 A	AWG 20 - 13.5 A

Maximum heater thickness:

	No adhesive (A):	#12 PSA (B):
Over element	0.020" (0.5 mm)	0.025" (0.6 mm)

Over leads

AWG 30 (0.057 mm ²)	0.070" (1.8 mm)	0.085" (2.2 mm)
AWG 26 (0.141 mm ²)	0.080" (2.0 mm)	0.095" (2.4 mm)
AWG 24 (0.227 mm ²)	0.090" (2.3 mm)	0.105" (2.7 mm)
AWG 20 (0.563 mm ²)	0.120" (3.0 mm)	0.135" (3.4 mm)

Add 0.005" (0.1 mm) to above dimensions for foil backing.

Dimensional tolerance:

6" (150 mm) or less	±0.03" (±0.8 mm)
6.01 to 12" (150 to 300 mm)	±0.06" (±1.5 mm)
Over 12" (300 mm)	±0.12" (±3.0 mm)

Tighter tolerances are available on custom designs if needed.

Configure Minco heaters and order online at:
www.minco.com/heater_config/


Specifications subject to change

Stock Silicone Rubber Thermofoil™ Heaters

These heaters are normally available from stock for immediate shipment. Voltage and wattage values are for reference only. Heaters may be operated at other voltages if they do not exceed the maximum allowable watt density ratings.

See "Standard Polyimide and Rubber Heaters" for these and other models with additional ordering options:

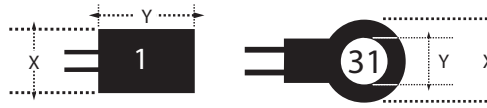
Greater selection of resistances

- Variable lead length
- More backing options
- UL recognition 

Specification options

HR5167R264L12	Model number
B	Heater backing A = No adhesive -45 to 235°C B = #12 PSA -45 to 177°C
HR5167R264L12B = Sample part number	

Type (configuration)



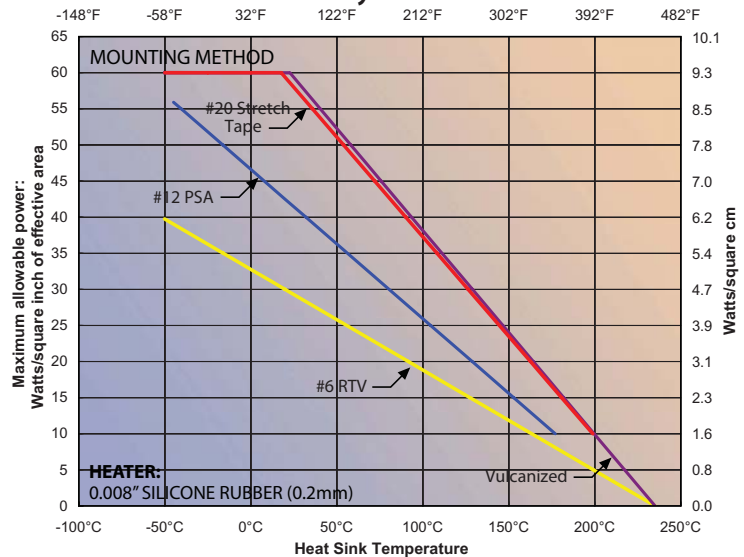
TAB DIMENSIONS:
AWG 30: 0.40" long x 0.25" wide (10.2 x 6.4 mm)
AWG 24/26: 0.40" x 0.40" (10.2 x 10.2 mm)



Size (inches)		Size (mm)		Type	Resistance in ohms*	Typical power	Effective area in ² (cm ²)	Lead AWG	Model number
X	Y	X	Y						
0.50	2.00	12.7	50.8	1	44.0	18 W at 28 V	0.79 (5.10)	30	HR5160R44.0L12
0.50	4.00	12.7	101.6	1	78.4	10 W at 28 V	1.67 (10.77)	30	HR5161R78.4L12
1.00	1.00	25.4	25.4	1	78.4	10 W at 28 V	0.82 (5.29)	30	HR5163R78.4L12
1.00	3.00	25.4	76.2	1	52.3	15 W at 28 V	2.70 (17.42)	30	HR5165R52.3L12
1.00	5.00	25.4	127.0	1	529.0	25 W at 115 V	4.41 (28.45)	30	HR5166R529L12
1.00	10.00	25.4	254.0	1	264.0	50 W at 115 V	8.96 (57.81)	30	HR5167R264L12
2.00	3.00	50.8	76.2	1	441.0	30 W at 115 V	5.50 (35.48)	30	HR5170R441L12
3.00	3.00	76.2	76.2	1	294.0	45 W at 115 V	8.41 (54.26)	30	HR5174R294L12
3.00	5.00	76.2	127.0	1	176.0	75 W at 115 V	14.23 (91.81)	30	HR5175R176L12
4.00	4.00	101.6	101.6	1	42.9	308 W at 115 V	15.20 (98.06)	30	HR5178R42.9L12
4.00	4.00	101.6	101.6	1	165.0	80 W at 115 V	15.20 (98.06)	30	HR5178R165L12
4.00	8.00	101.6	203.2	1	82.7	160 W at 115 V	30.84 (198.97)	24	HR5179R82.7L12
3.00	0.12	76.2	3.1	31	107.0	64 W at 115 V	6.61 (42.65)	26	HR5188R107L12

*Resistance tolerance is ±10% or ±0.5 Ω, whichever is greater
Note: Standard leadwire length is 12" (305mm) minimum

Silicone Rubber Heaters (foil) Maximum Watt Density



Example: At 100°C, the maximum power of a vulcanized heater is 36 W/in² (5.58 W/cm²).

Specifications subject to change



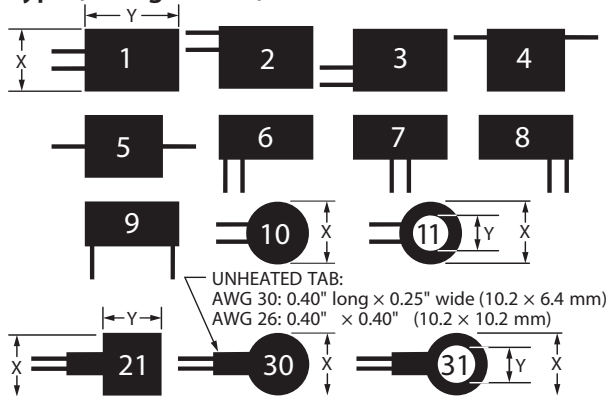
Standard Polyimide and Rubber Heaters

Minco has invested in the design time and fabrication tooling so you can jump immediately to your prototyping efforts. The following table outlines the specifications of previously designed polyimide and silicone rubber Thermofoil™ heaters.

Minco's build-to-order turnaround time is typically 3 weeks depending on quantity requirements. There is a limited available inventory of a variety of part configurations which generally allows us to meet your immediate delivery needs.

Contact Access: Minco Sales and Support to discuss mix and matching heater sizes and resistance values to help satisfy performance and lead time demands.

Type (configuration)



Types 21, 30, and 31 have lead connections on an external tab. The tab produces negligible heat and, in most cases, need not be adhered to the heat sink. On type 21 heaters that are 0.25" (6.4 mm) wide, the tab is the same width as the heated area.

Specification options

Technical Specifications on pages 16 (polyimide) & 20 (rubber).

HK	Insulation: HK = Polyimide HR = Silicone rubber																		
5200	Model number from tables on following pages																		
R17.4	Heater resistance in ohms																		
L12	Lead length in inches 12" (305 mm) is standard Contact Minco for other lengths																		
A	Heater backing option (see page 8)																		
	<table border="1"> <thead> <tr> <th></th> <th>HK</th> <th>HR</th> </tr> </thead> <tbody> <tr> <td>A = No adhesive</td> <td>-200 to 200°C</td> <td>-45 to 235°C</td> </tr> <tr> <td>B = PSA backing</td> <td>-32 to 100°C</td> <td>-45 to 177°C</td> </tr> <tr> <td>D = Foil backing</td> <td>-200 to 150°C</td> <td>-45 to 235°C</td> </tr> <tr> <td>E = Foil/Acrylic PSA</td> <td>-32 to 150°C</td> <td>-32 to 150°C</td> </tr> <tr> <td>F = Foil/#12 PSA</td> <td>-73 to 150°C</td> <td>-45 to 204°C</td> </tr> </tbody> </table>		HK	HR	A = No adhesive	-200 to 200°C	-45 to 235°C	B = PSA backing	-32 to 100°C	-45 to 177°C	D = Foil backing	-200 to 150°C	-45 to 235°C	E = Foil/Acrylic PSA	-32 to 150°C	-32 to 150°C	F = Foil/#12 PSA	-73 to 150°C	-45 to 204°C
	HK	HR																	
A = No adhesive	-200 to 200°C	-45 to 235°C																	
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E = Foil/Acrylic PSA	-32 to 150°C	-32 to 150°C																	
F = Foil/#12 PSA	-73 to 150°C	-45 to 204°C																	
U	U = Marked for UL component recognition: Omit for no UL marking (lower cost) UL limits: 220°C for rubber heaters																		
HK5200R17.4L12AU = Sample part number																			

Temperature sensitive elements

Heaterstats™ (page 44) require temperature sensitive heating elements, such as those found in the "NiFe" and "Ni" columns. Their resistance increases with temperature. The resistances listed are measured at 0°C (32°F).

How to use the table of Standard Polyimide & Silicone Rubber Heaters

Overall heater size in inches. Listed in ascending order, first by dimension X, then Y. Round heaters are last.

Heater type (lead exit configuration).

Element resistance options in ohms. Select resistance to produce desired wattage with available voltage (see Ohm's law).

Effective heating area. Use this value for calculating watt density.

Available heater insulation options for this model. K=Polyimide R=rubber

Size (in)		Size (mm)		Type	Resistance options- ohms*						Effective area in ² (cm ²)	Lead AWG	Insulation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] → NiFe Ni									
0.40	2.60	10.2	66.0	1	123	62.5	37.8	18.2		19.1	0.74 (4.77)	30	K, R	5215
0.41	4.80	10.4	121.9	6	100	50.1	30.2	14.5		15.5	1.40 (9.03)	26	K, R	5218
0.41	8.30	10.4	210.8	5	61.9	31.1	18.8	9.1	6.2	4.3	2.50 (16.13)	26	K, R	5219

Overall heater size in millimeters. Listed in ascending order, first by dimension X, then Y.

Temperature sensitive element resistance options (at 0°C) for use with Minco Heaterstat. Rubber (HR) models are not available with NiFe element.

Leadwire size. Maximum current capacities are listed on pages 17 and 20.

Base model number

*Resistance tolerance is ±10% or ±0.5, whichever is greater
Rubber (HR) models not available with NiFe element

Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*					Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] → NiFe Ni								
0.25	0.25	6.4	6.4	21	10.0	5.3				0.04 (0.26)	30	K	5565
0.25	0.50	6.4	12.7	21	15.0	7.9	4.3			0.08 (0.52)	30	K	5566
0.25	0.75	6.4	19.1	21	20.0	10.5	5.7			0.13 (0.84)	30	K	5567
0.25	1.00	6.4	25.4	21	25.0	13.1	7.1		3.9	0.18 (1.16)	30	K	5568
0.25	1.25	6.4	31.8	21	30.0	15.8	8.5		4.7	0.23 (1.48)	30	K	5569
0.25	1.50	6.4	38.1	21	35.0	18.4	10.0	4.7		0.27 (1.74)	30	K	5570
0.25	1.75	6.4	44.5	21	40.0	21.0	11.4	5.3		0.32 (2.06)	30	K	5571
0.25	2.30	6.4	58.4	6	17.4	9.2	5.2			0.38 (2.45)	26	K, R	5200
0.25	6.82	6.4	173.2	9	100	46.7	28.2	13.6		1.22 (7.87)	26	K, R	5201
0.25	7.67	6.4	194.8	8	143	71.7	38.1	19.1		1.15 (7.42)	30	K, R	5202
0.25	10.40	6.4	264.2	5	160	80.1	48.4	23.3		1.55 (10.00)	26	K, R	5203
0.27	2.00	6.9	50.8	1	18.9	9.5	5.7			0.35 (2.26)	26	K, R	5204
0.27	5.50	6.9	139.7	8	153	76.5	40.7	20.4		0.87 (5.61)	30	K	5205
0.27	6.90	6.9	175.3	1	220	110	65.5	32.1		1.40 (9.03)	30	K	5206
0.30	1.50	7.6	38.1	1	42.1	20.7	12.5	6.1		0.30 (1.94)	30	K, R	5207
0.30	3.11	7.6	79.0	1	44.1	22.1	13.3	6.4		0.70 (4.52)	26	K, R	5208
0.30	3.11	7.6	79.0	1	31.7	15.8	9.6	4.6		0.72 (4.65)	26	K, R	5209
0.34	3.47	8.6	88.1	1	120	56.1	33.9	16.3		0.88 (5.68)	30	K	5210
0.36	7.95	9.1	201.9	8	225	113	68.3	32.8		1.97 (12.71)	26	K, R	5211
0.37	6.10	9.4	154.9	1	73.1	36.4	22.1	10.6		1.68 (10.84)	26	K, R	5212
0.37	20.20	9.4	513.1	1	130	65.0	39.3	18.9	12.9	5.54 (35.74)	26	R	5213
0.40	2.60	10.2	66.0	1	123	62.5	37.8	18.2		0.74 (4.77)	30	K, R	5215
0.41	4.80	10.4	121.9	6	100	50.1	30.2	14.5		1.40 (9.03)	26	K, R	5218
0.41	8.30	10.4	210.8	5	61.9	31.1	18.8	9.1	6.2	2.50 (16.13)	26	K, R	5219
0.41	9.00	10.4	228.6	5	199	99.7	60.3	29.1		2.77 (17.87)	26	K, R	5220
0.42	2.30	10.7	58.4	1	50.1	26.1	15.3	7.3		0.67 (4.32)	26	K, R	5222
0.42	4.90	10.7	124.5	1	198	100	60.2	28.9		1.55 (10.00)	26	K	5224
0.42	7.10	10.7	180.3	1	322	161	85.7	42.8		2.06 (13.29)	30	K, R	5225
0.42	14.40	10.7	365.8	1	709	354	189	94.3		4.17 (26.90)	30	K	5227
0.43	3.95	10.9	100.3	8	238	119	63.3	31.7		1.22 (7.87)	26	K	5228
0.43	5.50	10.9	139.7	1	131	65.8	35.0	17.5		1.70 (10.97)	30	K, R	5229
0.43	5.90	10.9	149.9	6	37.3	18.8	11.3	5.4	3.7	1.87 (12.06)	26	K, R	5230
0.44	3.00	11.2	76.2	6	27.8	13.6	8.2	3.9		1.03 (6.65)	26	K, R	5231
0.44	3.00	11.2	76.2	6	45.8	22.9	13.8	6.6		1.03 (6.65)	26	K, R	5232
0.44	3.00	11.2	76.2	6	77.7	38.8	23.5	11.3		1.03 (6.65)	26	K, R	5233
0.45	3.88	11.4	98.6	8	153	76.4	40.7	20.3		1.17 (7.55)	26	K	5234
0.45	3.88	11.4	98.6	1	102	51.1	30.9	14.8		1.16 (7.48)	26	K, R	5235
0.45	3.88	11.4	98.6	3	134	67.3	40.7	19.6		1.16 (7.48)	26	K	5236
0.45	3.88	11.4	98.6	8	102	51.2	27.2	13.6		1.17 (7.55)	30	K, R	5237
0.46	5.10	11.7	129.5	1	264	132	79.9	38.4		1.77 (11.42)	26	K	5238
0.48	4.50	12.2	114.3	8	47.1	23.6	14.3	6.8	4.7	1.60 (10.32)	26	K, R	5239
0.48	6.28	12.2	159.5	8	70.2	35.1	18.7	9.3	6.2	2.20 (14.19)	26	K, R	5240
0.49	4.80	12.4	121.9	8	170	85.1	51.5	24.7		1.60 (10.32)	26	K, R	5241
0.50	0.50	12.7	12.7	21	26.5	13.9	7.5			0.19 (1.23)	30	K	5572
0.50	0.75	12.7	19.1	21	30.0	15.7	8.5			0.30 (1.94)	30	K, R	5573
0.50	1.00	12.7	25.4	21	35.0	18.3	10.0	4.6		0.41 (2.65)	30	K, R	5574

*Resistance tolerance is ±10% or ±0.5, whichever is greater
Rubber (HR) models not available with NiFe element

Standard
Polyimide
& Rubber



Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*						Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] →									
0.50	1.25	12.7	31.8	21	40.0	20.9	11.4	5.3		6.2	0.52 (3.35)	30	K, R	5575
0.50	1.50	12.7	38.1	21	45.0	23.5	12.8	5.9	4.4	7.0	0.63 (4.06)	30	K, R	5576
0.50	1.75	12.7	44.5	21	50.0	26.1	14.2	6.6	4.9	7.8	0.74 (4.77)	30	K, R	5577
0.50	2.00	12.7	50.8	1	157	78.4	44.0			24.3	0.79 (5.10)	30	K, R	5160
0.50	2.50	12.7	63.5	1	71.1	35.1	21.3	10.3		11.0	0.84 (5.42)	26	K, R	5242
0.50	3.00	12.7	76.2	1	124	65.0	35.3	16.4	12.3	9.3	1.09 (7.03)	26	K, R	5594
0.50	3.77	12.7	95.8	1	233	117	62.1	31.1		36.1	1.43 (9.23)	30	K	5243
0.50	3.77	12.7	95.8	1	163	81.5	43.4	21.7		25.3	1.36 (8.77)	30	K, R	5244
0.50	4.00	12.7	101.6	1	78.4	39.2	22.0			12.2	1.67 (10.77)	30	K, R	5161
0.50	4.00	12.7	101.6	1	43.9	22.1	13.3	6.4	4.4	6.8	1.63 (10.52)	30	K, R	5245
0.50	4.00	12.7	101.6	1	52.7	26.4	15.9	7.7	5.2	3.6	1.63 (10.52)	30	K, R	5246
0.50	5.00	12.7	127.0	5	36.7	18.3	11.1	5.3	3.6	5.7	1.63 (10.52)	26	K, R	5247
0.50	5.10	12.7	129.5	8	126	62.5	37.8	18.2		19.5	1.90 (12.26)	30	K, R	5248
0.50	6.00	12.7	152.4	1	52.3	26.1	14.6			8.1	2.35 (15.16)	30	K, R	5162
0.50	7.50	12.7	190.5	1	53.1	26.2	16.1	7.7	5.3	3.7	2.72 (17.55)	24	K, R	5249
0.50	12.87	12.7	326.9	6	230	115	69.5	33.5		35.7	4.80 (30.97)	26	K, R	5250
0.50	12.87	12.7	326.9	6	115	57.5	34.8	16.7	11.4	8.1	4.67 (30.13)	26	K, R	5251
0.50	12.87	12.7	326.9	6	77.1	38.5	23.3	11.2	7.7	5.4	4.67 (30.13)	26	K, R	5252
0.50	18.50	12.7	469.9	1	289	145	87.7	42.1	29.1	20.3	7.20 (46.45)	26	R	5253
0.52	8.20	13.2	208.3	8	224	112	59.6	28.8		34.7	3.46 (22.32)	26	K, R	5254
0.53	1.00	13.5	25.4	1	63.2	31.6	16.8	8.4		9.8	0.39 (2.52)	30	K	5255
0.53	1.20	13.5	30.5	1	59.6	29.8	15.9	7.9		9.2	0.39 (2.52)	30	K	5256
0.53	2.00	13.5	50.8	2	135	67.6	36.1	18.1		20.9	0.79 (5.10)	30	K	5257
0.53	4.60	13.5	116.8	3	166	83.3	50.4	24.2		25.7	1.76 (11.35)	24	K, R	5259
0.53	4.60	13.5	116.8	3	95.7	56.5	28.9	13.9		14.8	1.85 (11.94)	26	K, R	5260
0.54	2.00	13.7	50.8	1	135	67.5	40.8	19.6		20.9	0.75 (4.84)	30	K	5261
0.54	8.10	13.7	205.7	1	233	117	62.1	31.1		36.1	3.34 (21.55)	26	K, R	5262
0.55	1.20	14.0	30.5	1	24.9	12.9	7.8	3.7			0.35 (2.26)	26	K, R	5264
0.55	6.60	14.0	167.6	1	107	53.9	32.6	15.7	10.7	7.5	2.79 (18.00)	26	K, R	5267
0.55	15.00	14.0	381.0	1	217	108	65.8	31.7	21.7	15.2	6.38 (41.16)	24	K, R	5268
0.60	9.90	15.2	251.5	1	229	115	69.5	33.4	22.9	16.1	4.65 (30.00)	26	K, R	5270
0.60	10.65	15.2	270.5	6	360	180	95.9	47.9		55.8	4.84 (31.23)	30	K, R	5271
0.65	10.75	16.5	273.1	7	124	64.1	37.5	18.1	12.4	8.6	5.56 (35.87)	26	K, R	5273
0.75	0.75	19.1	19.1	21	35.0	18.3	9.9	4.6		5.4	0.48 (3.10)	30	K, R	5578
0.75	1.00	19.1	25.4	21	40.0	20.9	11.4	5.2		6.2	0.65 (4.19)	30	K, R	5579
0.75	1.25	19.1	31.8	21	45.0	23.4	12.8	5.9	4.4	7.0	0.82 (5.29)	30	K, R	5580
0.75	1.50	19.1	38.1	21	50.0	26.0	14.2	6.5	4.8	7.8	0.99 (6.39)	30	K, R	5581
0.75	1.75	19.1	44.5	21	55.0	28.6	15.6	7.2	5.3	8.5	1.17 (7.55)	30	K, R	5582
0.75	1.85	19.1	47.0	1	50.1	25.2	15.2	7.3	5.1	3.5	1.02 (6.58)	26	K, R	5274
0.75	2.00	19.1	50.8	21	124	64.9	35.3	16.4	12.2	9.2	1.34 (8.65)	26	K, R	5595
0.75	2.50	19.1	63.5	2	43.5	21.8	13.2	6.3	4.3	6.7	1.37 (8.84)	26	K, R	5275
0.75	3.00	19.1	76.2	1	144	71.7	43.6	21.1		22.3	1.72 (11.10)	26	K, R	5276
0.75	3.00	19.1	76.2	1	18.1	8.5	5.3				1.14 (7.35)	24	K, R	5277
0.75	3.25	19.1	82.6	6	160	80.1	48.5	23.3		24.8	1.95 (12.58)	26	K, R	5278
0.75	4.00	19.1	101.6	1	36.1	17.7	10.7	5.1	3.5	5.6	2.41 (15.55)	26	K, R	5279
0.75	4.00	19.1	101.6	1	24.5	11.1	6.9	3.3			1.69 (10.90)	24	K, R	5280

*Resistance tolerance is ±10% or ±0.5, whichever is greater
 Rubber (HR) models not available with NiFe element

Standard
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Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*							Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] →										
0.75	4.95	19.1	125.7	8	267	134	71.1	35.6		41.4	9.4	3.06 (19.74)	30	K	5281
0.75	5.00	19.1	127.0	1	30.6	14.1	8.7	4.2				2.24 (14.45)	24	K, R	5282
0.75	6.00	19.1	152.4	1	36.7	16.6	10.3	5.1		5.7		2.79 (18.00)	24	K, R	5283
0.75	7.00	19.1	177.8	1	38.8	19.4	12.1	5.5	4.1	6.0		3.34 (21.55)	24	K, R	5284
0.75	8.00	19.1	203.2	1	48.7	22.1	13.7	6.4	4.4	3.3	7.5	3.89 (25.10)	24	K, R	5285
0.75	9.00	19.1	228.6	1	54.7	25.1	15.6	7.1	5.1	3.6	8.5	4.44 (28.65)	24	K, R	5286
0.75	10.00	19.1	254.0	1	60.8	27.7	17.2	7.7	5.5	4.1	9.4	4.99 (32.19)	24	K, R	5287
0.75	11.00	19.1	279.4	1	66.9	30.4	18.8	8.7	6.1	4.5	10.4	5.54 (35.74)	24	K, R	5288
0.75	11.00	19.1	279.4	1	200	100	60.5	29.1	19.9	13.9	31.0	6.32 (40.77)	24	K, R	5289
0.75	12.00	19.1	304.8	1	72.6	33.1	20.5	9.1	6.4	4.7	11.3	6.09 (39.29)	24	K, R	5290
0.78	2.76	19.8	70.1	6	83.7	41.9	22.3	11.1	7.4	5.6	13.0	1.79 (11.55)	30	K, R	5292
0.80	1.55	20.3	39.4	2	313	156	83.1	41.6			48.5	0.90 (5.81)	30	K	5294
0.80	1.55	20.3	39.4	2	105	52.5	27.9	14.0			16.3	0.94 (6.06)	30	K, R	5295
0.80	2.75	20.3	69.9	8	39.7	19.8	12.1	5.7	3.9	6.2		1.52 (9.81)	26	K, R	5296
0.80	6.00	20.3	152.4	8	123	61.8	37.4	17.9	12.3	8.6	19.1	4.23 (27.29)	26	K, R	5297
0.80	8.10	20.3	205.7	8	21.5	11.2	6.9					5.39 (34.77)	26	K, R	5298
0.80	11.50	20.3	292.1	8	166	83.2	50.3	24.2	16.5	11.6	25.7	7.52 (48.52)	24	K, R	5299
0.80	14.25	20.3	362.0	8	206	103	62.4	30.1	20.5	14.4	31.9	9.38 (60.52)	24	K, R	5300
0.81	4.81	20.6	122.2	2	64.7	32.9	19.6	9.4	6.4	4.5	10.0	3.33 (21.48)	26	K, R	5301
0.82	2.46	20.8	62.5	9	243	121	64.5	32.3			37.7	1.66 (10.71)	30	K, R	5302
0.85	1.00	21.6	25.4	6	70.2	35.1	20.6	9.9			10.9	0.60 (3.87)	30	K, R	5303
0.85	2.48	21.6	63.0	9	268	134	71.3	35.7			41.5	1.65 (10.65)	30	K	5304
0.85	4.90	21.6	124.5	3	207	104	55.1	27.5			32.1	3.60 (23.23)	26	K, R	5305
0.86	15.80	21.8	401.3	1	140	70.1	42.3	20.3	13.9	9.7	21.7	11.10 (71.61)	24	K, R	5306
0.87	8.65	22.1	219.7	8	561	281	149	74.7			87.0	6.39 (41.23)	26	K, R	5307
0.87	14.85	22.1	377.2	8	131	65.4	39.6	19.1	13.1	9.1	20.3	10.28 (66.32)	24	K, R	5308
0.88	5.35	22.4	135.9	8	62.6	31.3	18.9	9.1	6.2	4.4	9.7	3.85 (24.84)	26	K, R	5309
0.90	4.95	22.9	125.7	3	207	103	62.6	30.1			32.1	3.52 (22.71)	26	K, R	5310
0.94	3.90	23.9	99.1	9	119	59.6	31.8	15.9	10.6	7.9	18.4	2.94 (18.97)	30	K, R	5311
0.96	1.48	24.4	37.6	3	76.1	38.1	20.2	10.1			11.8	1.10 (7.10)	30	K, R	5312
0.97	1.21	24.6	30.7	3	84.3	42.2	22.4	11.2			13.1	0.90 (5.81)	30	K, R	5313
0.97	2.96	24.6	75.2	2	303	151	80.5	40.3			47.0	2.45 (15.81)	30	K, R	5314
0.98	1.48	24.9	37.6	6	80.1	39.7	24.1	11.6			12.4	1.13 (7.29)	26	K, R	5315
0.98	2.75	24.9	69.9	1	206	103	61.7	29.7			31.9	2.07 (13.35)	26	K, R	5316
1.00	1.00	25.4	25.4	1	157	78.4	44.0				24.3	0.82 (5.29)	30	K, R	5163
1.00	1.00	25.4	25.4	1	52.1	26.1	15.7	7.6			8.1	0.65 (4.19)	26	K, R	5318
1.00	1.00	25.4	25.4	21	70.0	36.6	19.9	9.2	6.8	5.2	10.9	0.88 (5.68)	30	K, R	5583
1.00	1.25	25.4	31.8	21	65.0	33.9	18.5	8.5	6.3	4.7	10.1	1.12 (7.23)	30	K, R	5584
1.00	1.50	25.4	38.1	21	75.0	39.1	21.3	9.8	7.3	5.4	11.6	1.35 (8.71)	30	K, R	5585
1.00	1.75	25.4	44.5	21	100	52.2	28.4	13.1	9.7	7.3	15.5	1.59 (10.26)	30	K, R	5586
1.00	2.00	25.4	50.8	1	78.4	39.2	22.0				12.2	1.76 (11.35)	30	K, R	5164
1.00	2.00	25.4	50.8	1	14.6	7.3	4.5					1.04 (6.71)	24	K, R	5319
1.00	2.30	25.4	58.4	3	220	110	58.4	29.2			34.1	1.82 (11.74)	30	K, R	5320
1.00	2.50	25.4	63.5	1	146	72.1	43.1	20.7			22.6	1.89 (12.19)	26	K, R	5321
1.00	2.50	25.4	63.5	1	107	53.3	32.3	15.5			16.6	1.89 (12.19)	26	K, R	5322
1.00	3.00	25.4	76.2	1	52.3	26.1	14.6				8.1	2.70 (17.42)	30	K, R	5165

*Resistance tolerance is ±10% or ±0.5, whichever is greater
 Rubber (HR) models not available with NiFe element

Standard
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Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*								Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] → NiFe Ni											
1.00	3.00	25.4	76.2	1	23.9	10.7	6.6						1.84 (11.87)	24	K, R	5323
1.00	3.00	25.4	76.2	1	58.0	26.6	16.1	7.7	5.3	3.7	9.0		2.30 (14.84)	26	K, R	5324
1.00	3.00	25.4	76.2	1	36.4	17.9	10.8	5.2	3.6		5.6		2.30 (14.84)	26	K, R	5325
1.00	3.62	25.4	91.9	3	61.1	30.6	18.5	8.9	6.1	4.2	9.5		2.97 (19.16)	26	K, R	5326
1.00	3.72	25.4	94.5	3	445	223	118	59.2			69.0	15.8	3.15 (20.32)	30	K, R	5327
1.00	3.72	25.4	94.5	3	389	195	118	56.7			60.3	13.8	3.06 (19.74)	26	K, R	5328
1.00	3.82	25.4	97.0	2	160	80.1	48.5	23.3	15.9	11.2	24.8	5.6	3.29 (21.23)	26	K, R	5329
1.00	4.00	25.4	101.6	1	83.3	42.7	25.2	12.1	8.3	5.8	12.9		3.33 (21.48)	26	K, R	5330
1.00	4.00	25.4	101.6	1	30.8	13.9	8.6	4.2					2.64 (17.03)	24	K, R	5331
1.00	4.75	25.4	120.7	6	302	151	91.6	44.1			46.8	10.6	4.29 (27.68)	24	K, R	5332
1.00	4.75	25.4	120.7	6	266	133	80.5	38.7			41.2	9.4	4.05 (26.13)	26	K, R	5333
1.00	5.00	25.4	127.0	1	529	264	148				82.0	18.7	4.41 (28.45)	30	K, R	5166
1.00	5.00	25.4	127.0	1	38.1	17.2	10.7	5.1			5.9		4.34 (28.00)	24	K, R	5334
1.00	6.00	25.4	152.4	1	45.3	20.8	12.9	5.8	4.1		7.0		4.24 (27.35)	24	K, R	5335
1.00	6.00	25.4	152.4	2	162	80.9	48.9	23.5	16.1	11.3	25.1	5.7	5.13 (33.10)	26	K, R	5336
1.00	7.00	25.4	177.8	1	52.1	24.1	14.9	6.8	4.7	3.5	8.1		5.04 (32.52)	24	K, R	5337
1.00	7.00	25.4	177.8	1	86.1	43.1	26.1	12.3	8.5	6.1	13.3		6.19 (39.94)	26	K, R	5338
1.00	7.05	25.4	179.1	1	111	55.7	33.7	16.2	11.1	7.7	17.2		6.12 (39.48)	26	K, R	5339
1.00	8.00	25.4	203.2	1	58.9	27.5	17.1	7.7	5.4	3.9	9.1		5.84 (37.68)	24	K, R	5340
1.00	9.00	25.4	228.6	1	66.1	30.4	18.8	8.7	5.9	4.4	10.2		6.64 (42.84)	24	K, R	5341
1.00	10.00	25.4	254.0	1	264	132	74.1				40.9	9.2	8.96 (57.81)	30	K, R	5167
1.00	10.00	25.4	254.0	1	73.4	34.1	21.1	9.4	6.6	4.9	11.4		7.44 (48.00)	24	K, R	5342
1.00	11.00	25.4	279.4	1	79.8	37.2	23.1	10.3	7.2	5.4	12.4		8.24 (53.16)	24	K, R	5343
1.00	12.00	25.4	304.8	1	86.5	40.3	24.9	11.1	7.7	5.8	13.4		9.04 (58.32)	24	K, R	5344
1.00	12.00	25.4	304.8	3	163	82.1	49.6	23.8	16.3	11.4	25.3	5.7	10.53 (67.94)	24	K, R	5345
1.00	12.00	25.4	304.8	1	1063	531	321	154			165	37.6	10.53 (67.94)	26	K, R	5346
1.00	12.10	25.4	307.3	1	155	76.6	46.3	22.3	15.2	10.6	24.0	5.4	10.62 (68.52)	26	K, R	5347
1.00	15.00	25.4	381.0	1	176	88.2	49.4				27.3	6.1	13.51 (87.16)	30	K, R	5168
1.00	19.00	25.4	482.6	1	121	60.8	36.8	17.7	12.1	8.5			13.88 (89.55)	24	R	5348
1.00	22.06	25.4	560.3	1	93.1	46.5	24.8	12.4	8.3	6.2			18.90 (121.94)	24	R	5349
1.02	10.00	25.9	254.0	5	946	473	252	126			147	33.5	8.60 (55.48)	24	K, R	5350
1.04	2.76	26.4	70.1	5	262	131	69.6	34.8			40.6	9.3	2.04 (13.16)	26	K, R	5351
1.04	4.35	26.4	110.5	1	87.6	43.8	23.3	11.7	7.8	5.8	13.6		4.06 (26.19)	26	K, R	5352
1.04	7.76	26.4	197.1	8	1321	660	352	176			205	47.1	6.80 (43.87)	30	K	5353
1.05	4.04	26.7	102.6	8	243	122	64.8	32.4			37.7	8.5	3.65 (23.55)	30	K, R	5354
1.05	4.65	26.7	118.1	8	152	74.1	44.4	21.3			23.6	5.3	4.05 (26.13)	26	K, R	5355
1.05	5.60	26.7	142.2	7	440	220	133	64.1			68.2	15.5	5.04 (32.52)	26	K, R	5356
1.05	9.70	26.7	246.4	1	276	138	73.4	36.7	24.5	18.3	42.8	9.6	8.80 (56.77)	24	K, R	5357
1.07	4.05	27.2	102.9	8	103	51.3	27.3	13.7	9.1	6.8	16.0		3.67 (23.68)	30	K, R	5358
1.10	4.00	27.9	101.6	1	600	300	181	87.3			93.0	21.3	3.75 (24.19)	30	K	5359
1.10	4.00	27.9	101.6	1	394	197	119	57.4			61.1	13.9	3.70 (23.87)	30	K, R	5360
1.10	18.50	27.9	469.9	3	350	175	106	50.1	34.8	24.3		12.2	17.64 (113.81)	24	R	5361
1.13	3.51	28.7	89.2	8	107	53.4	28.4	14.2	9.5	6.6	16.6		3.43 (22.13)	30	K, R	5362
1.17	1.91	29.7	48.5	2	125	62.5	37.8	18.2			19.4		1.79 (11.55)	26	K, R	5364
1.20	2.76	30.5	70.1	1	275	136	82.7	39.8			42.6	9.7	2.86 (18.45)	30	K, R	5366
1.20	3.40	30.5	86.4	7	92.0	45.7	26.6	13.3	9.1	6.4	14.3		3.41 (22.00)	26	K, R	5367

*Resistance tolerance is ±10% or ±0.5, whichever is greater
Rubber (HR) models not available with NiFe element

Standard
Polyimide
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Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*								Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] → NiFe Ni											
1.22	2.24	31.0	56.9	8	111	55.5	29.5	14.8	9.8	7.4	17.2	2.33 (15.03)	30	K, R	5368	
1.23	2.48	31.2	63.0	2	101	50.8	27.1	13.5	9.4	6.7	15.7	2.60 (16.77)	30	K, R	5369	
1.24	1.80	31.5	45.7	2	298	148	90.1	43.3			46.2	1.90 (12.26)	30	K	5370	
1.25	1.25	31.8	31.8	21	100	52.2	28.4	13.1	9.7	7.3	15.5	1.42 (9.16)	30	K, R	5587	
1.25	1.50	31.8	38.1	21	125	65.3	35.5	16.4	12.2	9.2	19.4	1.71 (11.03)	30	K, R	5588	
1.25	1.75	31.8	44.5	21	150	78.4	42.6	19.7	14.6	11.0	23.3	2.01 (12.97)	30	K, R	5589	
1.25	6.30	31.8	160.0	1	136	68.2	41.3	19.8	13.6	9.5	21.1	6.84 (44.13)	24	K, R	5371	
1.25	8.80	31.8	223.5	1	51.9	25.9	15.7	7.5	5.1	3.6	8.0	9.86 (63.61)	24	K, R	5372	
1.25	15.00	31.8	381.0	1	219	109	66.5	32.1	21.9	15.3	33.9	15.79 (101.87)	24	K, R	5373	
1.35	5.60	34.3	142.2	3	876	438	265	127			136	6.57 (42.39)	30	K	5374	
1.37	5.80	34.8	147.3	1	250	125	75.8	36.5	24.9	17.5	38.8	7.15 (46.13)	26	K, R	5375	
1.38	2.75	35.1	69.9	2	305	152	92.1	44.2			47.3	3.21 (20.71)	26	K, R	5376	
1.40	2.34	35.6	59.4	1	197	98.7	52.5	26.3	17.5	13.1	30.5	2.90 (18.71)	30	K, R	5377	
1.40	6.30	35.6	160.0	8	771	386	205	103			120	8.08 (52.13)	30	K, R	5378	
1.45	2.40	36.8	61.0	8	106	53.4	32.3	15.5	10.6	7.4	16.4	2.90 (18.71)	26	K, R	5379	
1.45	8.15	36.8	207.0	8	474	237	126	63.1	42.1	31.5	73.5	10.52 (67.87)	24	K, R	5380	
1.48	10.10	37.6	256.5	1	126	62.9	33.5	16.7	11.2	8.4	19.5	13.40 (86.45)	24	K, R	5381	
1.50	1.50	38.1	38.1	21	150	78.3	42.6	19.7	14.6	11.0	23.3	2.07 (13.35)	30	K, R	5590	
1.50	1.75	38.1	44.5	21	175	91.4	49.7	23.0	17.1	12.9	27.1	2.43 (15.68)	30	K, R	5591	
1.50	2.00	38.1	50.8	1	14.8	7.2	4.5					1.84 (11.87)	24	K, R	5382	
1.50	3.00	38.1	76.2	1	21.8	10.7	6.6					3.14 (20.26)	24	K, R	5383	
1.50	4.00	38.1	101.6	1	29.1	14.4	8.8	4.3				4.44 (28.65)	24	K, R	5384	
1.50	4.10	38.1	104.1	2	103	51.7	27.5	13.7	9.2	6.9	16.0	4.00 (25.81)	30	K, R	5385	
1.50	5.00	38.1	127.0	1	36.2	17.9	10.9	5.1	3.4		5.6	5.74 (37.03)	24	K, R	5386	
1.50	6.00	38.1	152.4	1	43.3	21.7	13.2	6.2	4.2		6.7	7.04 (45.42)	24	K, R	5387	
1.50	6.42	38.1	163.1	8	140	70.2	37.4	18.7			21.7	7.70 (49.68)	30	K, R	5388	
1.50	6.42	38.1	163.1	8	1317	659	350	175			204	8.50 (54.84)	30	K, R	5389	
1.50	7.00	38.1	177.8	1	50.1	25.1	15.2	7.2	4.7	3.5	7.8	8.34 (53.81)	24	K, R	5390	
1.50	8.00	38.1	203.2	1	57.1	28.7	17.5	8.1	5.3	3.9	8.9	9.64 (62.19)	24	K, R	5391	
1.50	8.05	38.1	204.5	2	304	152	92.1	44.3	30.3	21.2	47.1	10.80 (69.68)	26	K, R	5392	
1.50	9.00	38.1	228.6	1	64.1	32.2	19.6	8.9	6.1	4.4	9.9	10.94 (70.58)	24	K, R	5393	
1.50	10.00	38.1	254.0	1	71.4	35.7	21.8	10.1	6.7	4.9	11.1	12.24 (78.97)	24	K, R	5394	
1.50	11.00	38.1	279.4	1	78.5	39.1	23.9	10.9	7.3	5.3	12.2	13.54 (87.35)	24	K, R	5395	
1.50	11.00	38.1	279.4	1	391	180	118	57.1	38.9	27.3	60.6	14.77 (95.29)	24	K, R	5396	
1.50	12.00	38.1	304.8	1	85.6	42.8	25.8	11.8	7.8	5.8	13.3	14.84 (95.74)	24	K, R	5397	
1.53	3.05	38.9	77.5	8	176	88.4	53.4	25.7	17.6	12.3	27.3	3.89 (25.10)	26	K, R	5398	
1.55	3.05	39.4	77.5	1	130	65.3	39.5	19.1	13.1	9.1	20.2	4.06 (26.19)	26	K, R	5399	
1.61	2.15	40.9	54.6	1	205	102	54.5	27.3			31.8	3.00 (19.35)	30	K, R	5400	
1.62	2.77	41.1	70.4	1	166	81.1	48.6	23.3	15.9	11.2	25.7	3.95 (25.48)	30	K, R	5401	
1.65	3.00	41.9	76.2	2	128	64.1	38.8	18.3	12.8	8.9	19.8	4.50 (29.03)	30	K, R	5402	
1.65	5.00	41.9	127.0	1	162	81.1	48.9	23.5	16.1	11.3	25.1	7.44 (48.00)	26	K, R	5403	
1.70	5.10	43.2	129.5	1	580	290	154	77.2			89.9	7.77 (50.13)	24	K, R	5404	
1.75	1.75	44.5	44.5	21	200	104	56.8	26.3	19.5	14.7	31.0	2.86 (18.45)	30	K, R	5592	
1.75	2.73	44.5	69.3	2	159	79.5	48.1	23.1	15.8	11.1	24.6	3.77 (24.32)	26	K, R	5405	
1.76	4.79	44.7	121.7	1	330	165	87.9	43.9	29.3	22.1	51.2	7.56 (48.77)	30	K, R	5406	
1.78	4.30	45.2	109.2	1	737	369	196	98.1			114	6.66 (42.97)	30	K, R	5407	

*Resistance tolerance is ±10% or ±0.5, whichever is greater
Rubber (HR) models not available with NiFe element

Standard
Polyimide
& Rubber



Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*							Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number			
X	Y	X	Y		R(0°C) [May be used with Heaterstat] →													
1.78	5.28	45.2	134.1	1	588	294	156	78.2					91.1	20.7	8.34 (53.81)	30	K, R	5408
1.80	1.80	45.7	45.7	3	251	126	66.8	33.4					38.9	8.9	2.70 (17.42)	30	K, R	5409
1.88	5.75	47.8	146.1	1	288	144	86.9	41.7	28.6	20.1			44.6	10.1	9.68 (62.45)	24	K, R	5410
1.90	3.16	48.3	80.3	6	236	118	62.8	31.4	20.9	15.7			36.6	8.3	5.48 (35.35)	26	K, R	5411
1.92	4.45	48.8	113.0	8	348	174	92.5	46.3	30.8	23.1			53.9	12.2	7.69 (49.61)	26	K, R	5412
1.94	5.29	49.3	134.4	6	508	254	135	67.6	45.1	31.6			78.7	17.8	9.38 (60.52)	30	K, R	5413
1.96	3.77	49.8	95.8	1	749	374	199	99.6					116	26.5	6.83 (44.06)	30	K, R	5414
1.97	2.16	50.0	54.9	3	112	56.3	34.1	16.4	11.2	7.8			17.4		3.79 (24.45)	26	K, R	5415
1.98	3.82	50.3	97.0	1	752	376	200	98.9					117	26.6	6.75 (43.55)	30	K, R	5416
2.00	2.00	50.8	50.8	1	661	331	185						102	23.6	3.59 (23.16)	30	K, R	5169
2.00	2.00	50.8	50.8	1	36.1	17.8	10.9	5.3					5.6		2.82 (18.19)	24	K, R	5417
2.00	2.60	50.8	66.0	7	344	172	104	51.8					53.3	12.1	4.75 (30.65)	26	K, R	5418
2.00	3.00	50.8	76.2	1	441	220	123						68.4	15.5	5.50 (35.48)	30	K, R	5170
2.00	3.00	50.8	76.2	1	53.3	25.9	15.9	7.5	5.4	3.6			8.3		4.62 (29.81)	24	K, R	5419
2.00	3.00	50.8	76.2	7	33.3	15.6	9.8	4.5					5.2		4.54 (29.29)	24	K, R	5463
2.00	3.25	50.8	82.6	6	86.6	43.3	26.2	12.6	8.6	6.1			13.4		5.60 (36.13)	24	K, R	5420
2.00	3.25	50.8	82.6	6	75.6	37.8	22.8	10.9	7.5	5.3			11.7		5.50 (35.48)	26	K, R	5421
2.00	4.00	50.8	101.6	1	331	165	92.7						51.3	11.6	7.41 (47.81)	30	K, R	5171
2.00	4.00	50.8	101.6	1	70.1	34.6	21.2	10.4	6.9	4.8			10.9		6.73 (43.42)	24	K, R	5422
2.00	4.00	50.8	101.6	7	23.7	11.6	7.3								6.34 (40.90)	24	K, R	5487
2.00	5.00	50.8	127.0	1	88.1	43.2	26.2	13.1	8.6	5.9			13.7		8.22 (53.03)	24	K, R	5423
2.00	5.00	50.8	127.0	7	23.9	13.1	8.8	4.3							8.14 (52.52)	24	K, R	5506
2.00	6.00	50.8	152.4	1	220	110	61.6						34.1	7.7	11.23 (72.45)	30	K, R	5172
2.00	6.00	50.8	152.4	1	104	51.8	31.9	15.1	9.8	7.1			16.1		10.02 (64.65)	24	K, R	5424
2.00	6.05	50.8	153.7	1	99.7	49.9	30.2	14.5	9.9	6.9			15.5		11.00 (70.97)	24	K, R	5425
2.00	7.00	50.8	177.8	1	120	60.4	36.5	17.5	11.2	8.3			18.6		11.82 (76.26)	24	K, R	5426
2.00	8.00	50.8	203.2	1	137	68.9	41.9	20.1	12.9	9.4			21.2		13.62 (87.87)	24	K, R	5427
2.00	9.00	50.8	228.6	1	154	77.7	46.8	21.6	14.3	10.6			23.9	5.3	15.42 (99.48)	24	K, R	5428
2.00	10.00	50.8	254.0	1	171	85.8	52.1	23.8	16.1	11.6			26.5	5.9	17.22 (111.10)	24	K, R	5429
2.00	10.00	50.8	254.0	6	320	160	96.8	46.5	31.8	23.3			49.6	11.1	18.20 (117.42)	26	K, R	5430
2.00	11.00	50.8	279.4	1	188	94.1	57.1	26.4	17.7	13.1			29.1	6.5	19.02 (122.71)	24	K, R	5431
2.00	12.00	50.8	304.8	1	220	110	61.6	28.6					34.1	7.6	22.69 (146.39)	24	K, R	5173
2.00	12.00	50.8	304.8	1	206	102	61.9	28.5	18.8	14.1			31.9	7.2	20.82 (134.32)	24	K, R	5432
2.00	12.00	50.8	304.8	1	442	221	134	63.5	44.1	30.8			68.5	15.4	21.80 (140.64)	24	K, R	5433
2.05	2.70	52.1	68.6	8	725	362	219	97.3					112	25.7	5.19 (33.48)	30	K	5434
2.15	2.55	54.6	64.8	2	123	62.1	37.3	17.9	12.3	8.6			19.1		5.05 (32.58)	26	K, R	5435
2.17	3.80	55.1	96.5	1	681	340	181	90.6					106	24.0	7.20 (46.45)	30	K, R	5436
2.25	4.00	57.2	101.6	1	284	142	86.1	41.4	28.3	19.8			44.0	9.9	7.70 (49.68)	26	K, R	5437
2.25	4.50	57.2	114.3	6	140	70.3	42.5	20.4	14.1	9.8			21.7		8.82 (56.90)	24	K, R	5438
2.25	5.25	57.2	133.4	6	142	70.9	42.9	20.6	14.2	9.9			22.0		10.53 (67.94)	24	K, R	5439
2.25	5.25	57.2	133.4	6	160	80.1	48.6	23.4	15.9	11.2			24.8	5.6	10.40 (67.10)	24	K, R	5440
2.25	6.28	57.2	159.5	8	364	182	110	53.1	36.3	25.4			56.4	12.7	12.52 (80.77)	26	K, R	5441
2.30	9.07	58.4	230.4	6	1016	508	270	135	90.1	67.6			157	35.6	19.70 (127.10)	24	K, R	5443
2.35	4.10	59.7	104.1	7	168	84.1	50.9	24.4	16.7	11.7			26.0	5.9	8.58 (55.35)	24	K, R	5444
2.45	6.07	62.2	154.2	8	861	431	229	115					133	30.3	14.00 (90.32)	24	K, R	5445
2.50	3.00	63.5	76.2	1	421	210	127	61.2					65.3	14.8	6.40 (41.29)	26	K, R	5446

*Resistance tolerance is ±10% or ±0.5, whichever is greater
 Rubber (HR) models not available with NiFe element

Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*								Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] → NiFe Ni											
2.50	3.00	63.5	76.2	1	290	145	87.9	42.2	28.9	20.2	45.0	10.2	6.90 (44.52)	26	K, R	5447
2.50	4.00	63.5	101.6	1	576	288	174	83.8			89.3	20.2	8.90 (57.42)	30	K, R	5448
2.50	4.04	63.5	102.6	1	703	351	187	93.5			109	24.8	9.35 (60.32)	24	K, R	5449
2.50	5.00	63.5	127.0	1	231	115	69.9	33.6	22.9	16.1	35.8	8.0	11.30 (72.90)	26	K, R	5450
2.50	6.00	63.5	152.4	3	206	103	62.3	30.1	20.5	14.3	31.9	7.2	13.60 (87.74)	26	K, R	5451
2.50	8.00	63.5	203.2	1	315	157	95.3	45.8	31.3	21.9	48.8	11.0	18.70 (120.64)	26	K, R	5452
2.50	11.30	63.5	287.0	1	2341	1170	623	311			363	82.6	25.70 (165.81)	24	K, R	5453
2.50	11.42	63.5	290.1	1	2089	1045	556	278			324	73.6	26.40 (170.32)	24	K, R	5454
2.53	3.05	64.3	77.5	6	93.7	47.1	28.3	13.6	9.3	6.5	14.5		7.17 (46.26)	26	K, R	5455
2.55	3.05	64.8	77.5	8	165	82.9	50.1	24.1	16.4	11.5	25.6	5.8	7.00 (45.16)	30	K, R	5456
2.68	3.44	68.1	87.4	2	72.6	36.3	21.9	10.6	7.2	5.1	11.3		7.64 (49.29)	26	K, R	5457
2.75	12.00	69.9	304.8	1	243	121	73.6	35.4	24.2	16.9	37.7	8.4	30.90 (199.35)	24	K, R	5458
2.81	2.94	71.4	74.7	2	253	126	76.7	36.9	25.2	17.7	39.2	8.8	7.45 (48.06)	26	K, R	5459
2.87	16.41	72.9	416.8	6	1648	824	438	219	146	110		57.6	45.30 (292.26)	24	R	5460
2.92	6.82	74.2	173.2	3	713	357	190	94.8	63.2	47.4	111	24.9	18.50 (119.35)	24	K, R	5461
2.92	6.82	74.2	173.2	1	1566	784	474	228			243	55.2	18.50 (119.35)	26	K, R	5462
3.00	3.00	76.2	76.2	1	294	147	82.3				45.6	10.3	8.41 (54.26)	30	K, R	5174
3.00	3.00	76.2	76.2	1	46.5	23.3	14.6	6.4	4.9		7.2		7.34 (47.35)	24	K, R	5464
3.00	3.10	76.2	78.7	1	44.4	22.2	13.4	6.5	4.4		6.9		7.98 (51.48)	24	K, R	5465
3.00	4.00	76.2	101.6	1	62.1	30.9	19.4	8.6	5.7	4.1	9.6		10.14 (65.42)	24	K, R	5466
3.00	4.00	76.2	101.6	7	35.1	17.1	10.8	4.6			5.4		10.14 (65.42)	24	K, R	5488
3.00	5.00	76.2	127.0	1	176	88.2	49.4				27.3	6.1	14.23 (91.81)	30	K, R	5175
3.00	5.00	76.2	127.0	1	77.7	38.7	24.2	10.3	7.1	5.1	12.0		12.94 (83.48)	24	K, R	5467
3.00	5.00	76.2	127.0	7	36.1	19.5	12.6	5.9	3.7		5.6		12.94 (83.48)	24	K, R	5507
3.00	6.00	76.2	152.4	1	93.8	46.1	29.1	12.9	8.6	6.1	14.5		15.74 (101.55)	24	K, R	5468
3.00	7.00	76.2	177.8	1	109	53.4	33.9	14.3	10.1	7.1	16.9		18.54 (119.61)	24	K, R	5469
3.00	8.00	76.2	203.2	1	125	60.9	38.8	16.1	11.4	8.1	19.4		21.34 (137.68)	24	K, R	5470
3.00	9.00	76.2	228.6	1	141	68.3	43.5	18.9	12.9	9.1	21.9		24.14 (155.74)	24	K, R	5471
3.00	9.00	76.2	228.6	1	407	203	123	59.2	40.5	28.3	63.1	14.2	25.50 (164.52)	26	K, R	5472
3.00	10.00	76.2	254.0	1		340	190	88.2	67.9	53.8	103	23.1	28.75 (185.48)	24	K, R	5176
3.00	10.00	76.2	254.0	1	156	75.8	48.3	20.3	14.9	10.2	24.2	5.4	26.94 (173.81)	24	K, R	5473
3.00	11.00	76.2	279.4	1	172	83.6	53.1	22.3	15.7	11.1	26.7	6.0	29.74 (191.87)	24	K, R	5474
3.00	12.00	76.2	304.8	1	188	91.1	57.7	23.9	16.7	12.1	29.1	6.5	32.54 (209.94)	24	K, R	5475
3.00	15.00	76.2	381.0	1		226	126	58.8	45.3	35.9	68.2	15.3	43.30 (279.35)	24	K, R	5177
3.03	3.03	77.0	77.0	3	1317	658	350	175			204	46.8	8.34 (53.81)	30	K	5476
3.10	4.10	78.7	104.1	1	306	153	92.7	43.8	18.1	12.7	47.4	10.7	11.40 (73.55)	26	K, R	5477
3.10	6.10	78.7	154.9	1	88.6	44.4	26.9	12.9	8.8	6.2	13.7		16.60 (107.10)	24	K, R	5478
3.10	7.10	78.7	180.3	3	104	52.3	31.6	15.2	10.4	7.3	16.1		19.80 (127.74)	24	K, R	5479
3.10	9.10	78.7	231.1	1	1500	750	454	218			233	52.7	25.60 (165.16)	26	K, R	5480
3.10	12.10	78.7	307.3	1	445	222	135	63.9	44.3	31.1	69.0	15.5	33.90 (218.71)	24	K, R	5481
3.25	3.25	82.6	82.6	7	172	86.1	52.1	25.1	17.1	12.1	26.7	6.0	9.80 (63.23)	26	K, R	5482
3.50	7.35	88.9	186.7	1	252	126	76.3	36.7	25.1	17.6	39.1	8.8	23.30 (150.32)	24	K, R	5483
3.63	16.27	92.2	413.3	1	795	398	212	106	70.5	52.9		27.7	56.00 (361.29)	24	R	5484
3.75	4.75	95.3	120.7	6	72.5	36.3	21.9	10.5	7.2	5.1	11.2		15.60 (100.64)	26	K, R	5485
3.80	8.60	96.5	218.4	1	243	121	73.6	35.4	24.2	16.9	37.7	8.4	29.80 (192.26)	24	K, R	5486
4.00	4.00	101.6	101.6	1	330	165	92.4	42.9			51.2	11.5	15.20 (98.06)	30	K, R	5178

*Resistance tolerance is ±10% or ±0.5, whichever is greater
 Rubber (HR) models not available with NiFe element

Standard
Polyimide
& Rubber



Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*							Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] →										
4.00	4.00	101.6	101.6	1	46.5	23.3	14.3	6.1	4.9		7.2	13.94 (89.94)	24	K, R	5489
4.00	5.00	101.6	127.0	1	57.9	27.7	17.7	7.6	5.5	3.8	9.0	17.74 (114.45)	24	K, R	5490
4.00	5.00	101.6	127.0	7	48.5	25.9	16.8	7.3	5.1	3.5	7.5	17.74 (114.45)	24	K, R	5508
4.00	6.00	101.6	152.4	1	69.3	33.2	21.3	9.4	6.4	4.6	10.7	21.54 (138.97)	24	K, R	5491
4.00	7.00	101.6	177.8	1	80.7	38.6	24.7	10.9	7.2	5.3	12.5	25.34 (163.48)	24	K, R	5492
4.00	8.00	101.6	203.2	1		318	178	82.7	63.7	50.4	96.0	30.84 (198.97)	24	K, R	5179
4.00	8.00	101.6	203.2	1	92.3	43.9	28.3	12.3	8.4	6.1	14.3	29.14 (188.00)	24	K, R	5493
4.00	8.00	101.6	203.2	3	378	189	114	55.1	37.6	26.3	58.6	30.30 (195.48)	24	K, R	5494
4.00	9.00	101.6	228.6	1	103	49.5	31.7	13.4	9.3	6.8	16.0	32.94 (212.52)	24	K, R	5495
4.00	10.00	101.6	254.0	1	114	55.1	35.3	14.8	10.8	7.6	17.7	36.74 (237.03)	24	K, R	5496
4.00	11.00	101.6	279.4	1	126	60.6	38.8	16.2	11.7	8.3	19.5	40.54 (261.55)	24	K, R	5497
4.00	12.00	101.6	304.8	1		212	118	55.1	42.4	33.6	64.0	46.48 (299.87)	24	K, R	5180
4.00	12.00	101.6	304.8	1	137	66.1	42.1	17.6	12.2	9.1	21.2	44.34 (286.06)	24	K, R	5498
4.00	15.50	101.6	393.7	2	445	223	135	64.8	44.3	31.1	69.0	58.70 (378.71)	24	K, R	5499
4.00	16.80	101.6	426.7	6	720	360	218	105	71.6	50.1		63.00 (406.45)	24	R	5500
4.00	20.00	101.6	508.0	1	851	426	257	120	84.6	59.3		74.50 (480.64)	24	R	5501
4.05	8.05	102.9	204.5	1	617	312	186	89.9	61.4	43.1	95.6	30.40 (196.13)	26	K, R	5502
4.05	9.05	102.9	229.9	1	1400	700	420	210	139	97.1	217	34.10 (220.00)	26	K, R	5503
4.05	11.90	102.9	302.3	8	290	145	87.8	42.2	28.9	20.2	45.0	45.00 (290.32)	24	K, R	5504
4.50	19.40	114.3	492.8	1	30.1	15.1	9.1	4.3				81.30 (524.52)	24	R	5505
5.00	5.00	127.0	127.0	1		407	227	106	81.5	64.5	123	24.02 (154.97)	24	K, R	5181
5.00	5.00	127.0	127.0	1	61.5	32.6	21.1	8.9	6.1	4.3	9.5	22.54 (145.42)	24	K, R	5509
5.00	6.00	127.0	152.4	1	72.4	38.8	24.9	10.6	7.3	5.1	11.2	27.34 (176.39)	24	K, R	5510
5.00	7.00	127.0	177.8	1	84.3	45.1	29.2	12.3	8.9	5.9	13.1	32.14 (207.35)	24	K, R	5511
5.00	8.00	127.0	203.2	1	96.2	51.4	32.9	14.1	9.7	6.8	14.9	36.94 (238.32)	24	K, R	5512
5.00	9.00	127.0	228.6	1	108	57.8	36.9	15.6	10.7	7.6	16.7	41.74 (269.29)	24	K, R	5513
5.00	10.00	127.0	254.0	1				85.7	66.1	52.9	105	48.57 (313.35)	24	K, R	5182
5.00	10.00	127.0	254.0	1	119	64.2	41.5	18.6	11.9	8.5	18.4	46.54 (300.26)	24	K, R	5514
5.00	11.00	127.0	279.4	1	131	70.5	44.9	19.2	12.8	9.4	20.3	51.34 (331.23)	24	K, R	5515
5.00	12.00	127.0	304.8	1	142	76.7	48.7	20.4	13.7	10.2	22.0	56.14 (362.19)	24	K, R	5516
5.00	12.10	127.0	307.3	1	377	190	114	54.8	37.5	26.3	58.4	56.40 (363.87)	24	K, R	5517
5.00	15.00	127.0	381.0	1				57.2	44.1	35.3	69.8	73.12 (471.74)	24	K, R	5183
5.00	15.97	127.0	405.6	8	271	136	72.2	36.1	24.1	18.1	42.0	76.00 (490.32)	24	K, R	5518
5.05	5.05	128.3	128.3	3	227	113	68.6	32.3	22.6	15.8	35.2	23.60 (152.26)	24	K, R	5519
5.05	5.05	128.3	128.3	3	262	131	79.4	38.2	26.1	18.3	40.6	23.60 (152.26)	24	K, R	5520
5.05	8.05	128.3	204.5	1	953	476	288	138	94.8	66.4	148	38.30 (247.10)	26	K, R	5521
5.05	10.10	128.3	256.5	1	660	330	205	98.2	65.7	46.1	102	48.00 (309.68)	26	K, R	5522
5.05	10.50	128.3	266.7	6	784	392	237	114	78.1	55.2	122	50.00 (322.58)	26	K, R	5523
5.10	12.10	129.5	307.3	1	523	261	158	76.2	52.1	36.4	81.1	58.00 (374.19)	26	K, R	5524
5.50	5.50	139.7	139.7	1	50.0	25.7	14.2	6.4	4.6	3.4	7.8	29.17 (188.19)	26	K, R	5596
5.50	7.00	139.7	177.8	1	384	192	116	55.8	38.1	26.7	59.5	35.80 (230.97)	24	K, R	5525
6.00	6.00	152.4	152.4	1	174	87.0	48.7	22.6	17.4	12.2	27.0	34.38 (221.81)	24	K, R	5560
6.06	8.06	153.9	204.7	6	362	182	109	52.6	36.1	25.2	56.1	45.70 (294.84)	24	K, R	5526
6.06	8.06	153.9	204.7	2	630	315	190	91.5	62.6	43.8	97.7	46.10 (297.42)	26	K, R	5527
6.90	9.00	175.3	228.6	2	88.1	44.1	26.1	12.8	8.8	6.2	13.7	58.30 (376.13)	24	K, R	5528
7.50	11.55	190.5	293.4	8	2890	1446	874	420			448	74.00 (477.42)	26	K, R	5529

*Resistance tolerance is ±10% or ±0.5, whichever is greater
 Rubber (HR) models not available with NiFe element

Standard Polyimide and Rubber Heaters

Size (in)		Size (mm)		Type	Resistance options- ohms*								Effective area in ² (cm ²)	Lead AWG	Insu- lation	Model number
X	Y	X	Y		R(0°C) [May be used with Heaterstat] → NiFe Ni											
7.90	18.30	200.7	464.8	8	241	120	73.1	35.1	24.1	16.8	8.3	140.00 (903.22)	24	R	5530	
8.80	11.20	223.5	284.5	8	220	110	66.5	31.9	21.8	15.3	34.1	94.40 (609.03)	24	K, R	5531	
9.00	12.00	228.6	304.8	3	545	273	165	79.3	54.2	38.1	84.5	103.00 (664.51)	24	K, R	5532	
9.00	18.00	228.6	457.2	6	184	92.1	55.6	26.7	18.3	12.8	6.4	156.00 (1006.45)	24	R	5533	
10.00	10.00	254.0	254.0	1				42.8	33.1	26.4	52.2	97.52 (629.16)	20	K, R	5184	
10.00	15.00	254.0	381.0	1				28.6	22.0	17.6	34.9	146.92 (947.87)	20	K, R	5185	
10.00	18.00	254.0	457.2	1	161	80.4	48.6	23.4	16.1	11.2	5.6	173.00 (1116.13)	24	R	5534	
10.07	18.27	255.8	464.1	7	327	163	98.9	47.5	32.5	22.7	11.3	177.00 (1141.93)	24	R	5535	
10.70	11.00	271.8	279.4	6	807	403	244	117	80.3	56.1	125	114.00 (735.48)	24	K, R	5536	
11.00	15.00	279.4	381.0	1	200	103	56.6	25.5	18.5	13.6	31.0	158.56 (1022.97)	20	K, R	5600	
0.50	0.09	12.7	2.4	31	25.0	12.8	7.1					0.13 (0.84)	30	K	5186	
0.50		12.7		10	26.1	13.1	7.8	3.8				0.15 (0.97)	30	K	5537	
0.75	0.12	19.1	3.1	31	39.2	20.6	11.2	5.2	3.9	3.0	6.1	0.35 (2.26)	26	K, R	5593	
0.78		19.8		10	32.2	16.1	9.7	4.7				0.32 (2.06)	30	K, R	5538	
0.78		19.8		10	70.1	35.2	21.1	10.2			10.9	0.32 (2.06)	30	K	5539	
0.98	0.12	24.9	3.0	11	37.2	18.6	11.3	5.4			5.8	0.65 (4.19)	24	K, R	5540	
1.00	0.09	25.4	2.4	31	157	80.5	44.4	19.9	14.4	10.5	24.3	0.68 (4.39)	26	K	5187	
1.10	0.12	27.9	3.0	11	61.1	30.5	18.5	8.9			9.5	0.66 (4.26)	24	K, R	5541	
1.18		30.0		30	288	144	80.6	37.4	28.8	20.2	44.6	0.90 (5.81)	30	K	5561	
1.25	0.60	31.8	15.2	11	84.4	42.2	25.5	12.3			13.1	0.59 (3.81)	26	K, R	5542	
1.32		33.5		10	38.0	19.0	10.6	4.9	3.8		5.9	1.19 (7.68)	30	K, R	5562	
1.35	0.45	34.3	11.4	11	156	78.1	47.2	22.7			24.2	0.96 (6.19)	30	K	5543	
1.50	0.12	38.1	3.1	31	75.0	39.0	21.3	9.8	7.2	5.4	11.6	1.60 (10.32)	26	K, R	5597	
1.73		43.9		10	227	114	68.7	33.1			35.2	2.00 (12.90)	30	K, R	5544	
1.75	0.12	44.5	3.0	11	61.1	30.5	18.5	8.9	6.1	4.2	9.5	2.19 (14.13)	24	K, R	5545	
1.85	0.12	47.0	3.0	11	61.2	30.6	18.5	8.9	6.1	4.2	9.5	2.44 (15.74)	26	K, R	5546	
1.90		48.3		10	156	78.4	47.4	22.8			24.2	2.48 (16.00)	24	K, R	5547	
2.00	0.12	50.8	3.1	31	100	51.9	28.4	13.0	9.6	7.1	15.5	2.93 (18.90)	26	K, R	5598	
2.13	1.12	54.1	28.4	11	180	90.1	54.6	26.3			27.9	2.16 (13.94)	26	K, R	5548	
2.45		62.2		10	530	265	160	77.1			82.2	4.16 (26.84)	26	K, R	5549	
2.85		72.4		10	200	100	56.0	26.0	20.0	14.0	31.0	5.98 (38.58)	30	K, R	5563	
3.00	0.12	76.2	3.1	31	378	194	107	48.0	34.7	25.4	58.6	6.61 (42.65)	26	K, R	5188	
3.40		86.4		10	198	99.0	55.4	25.7	19.8	13.9	30.7	8.34 (53.81)	24	K, R	5564	
3.72	2.09	94.5	53.1	11	317	158	95.9	46.1	31.6	22.1	49.1	6.76 (43.61)	26	K, R	5550	
4.30	3.42	109.2	86.9	11	405	206	125	60.1			62.8	3.91 (25.23)	26	K, R	5551	
4.75	2.50	120.7	63.5	11	54.5	27.3	14.5	7.2	4.8	3.6	8.4	11.48 (74.06)	24	K, R	5552	
6.00	0.12	152.4	3.1	11	150	77.4	42.5	19.2	14.0	10.3	23.3	27.02 (174.32)	26	K, R	5599	
6.25	2.00	158.8	50.8	11	610	305	185	88.8	60.7	42.5	94.6	25.66 (165.55)	24	K, R	5553	
6.75	4.75	171.5	120.7	11	251	125	76.1	36.6	25.1	17.5	38.9	15.79 (101.87)	26	K, R	5554	
7.06		179.3		10	120	60.1	31.9	16.1	10.6	7.4	18.6	37.19 (239.94)	24	K, R	5555	
8.25	4.32	209.6	109.7	11	670	335	202	97.4	67.1	47.4	104	36.13 (233.10)	24	K, R	5556	
9.00	3.00	228.6	76.2	11	710	355	215	101	70.6	49.4	110	52.46 (338.45)	24	K, R	5557	
9.60	0.90	243.8	22.9	11	72.7	36.3	21.9	10.6	7.2	5.1	11.3	67.65 (436.45)	24	K, R	5558	
10.00	0.25	254.0	6.4	11	667	334	202	96.7	67.1	47.7	103	74.78 (482.45)	24	K, R	5559	

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All standard polyimide and silicone rubber heater specifications subject to change

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