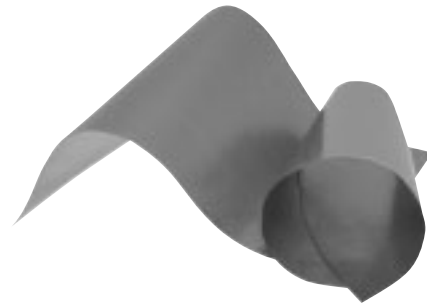


“PGS” Graphite Sheets

Type: **EYG**

PGS (Pyrolytic Graphite Sheet) is a thermal interface material which is very thin, synthetically made, has high thermal conductivity, and is made from a highly oriented graphite polymer film. It is ideal for providing thermal management/heat-sinking in limited spaces or to provide supplemental heat-sinking in addition to conventional means. This material is flexible and can be cut into customizable shapes.



■ Features

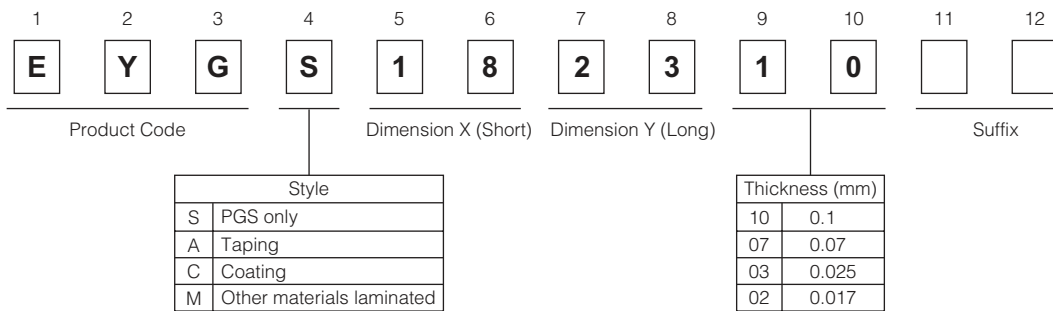
- Excellent thermal conductivity : 700 to 1750 W/(m·K)
(2 to 4 times as high as copper, 3 to 7 times as high as aluminum)
- Lightweight: Specific gravity : 0.85 to 2.1 g/cm³
(1/4 to 1/10 of copper, 1/1.3 to 1/3 of aluminum in density)
- Flexible and easy to be cut or trimmed.
(withstands repeated bending)
- Low thermal resistance
- RoHS compliant

■ Recommended applications

- Smart phones, Cellular phones, DVC, DSC, PCs and peripherals, pickup
- Semiconductor manufacturing equipment (Sputtering, Dry etching, Steppers)
- Optical communications equipment

■ Handling Precautions (Please see Page 380)

■ Explanation of Part Numbers

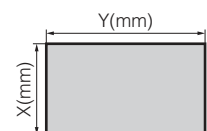


*Custom product is suffix.

■ Dimensions in mm (not to scale)

Dimension of representative

Part No.	Dimension X (Short)*	Dimension Y (Long)*	Thickness (mm)								
EYGS1823 <table border="1" style="font-size: small; text-align: center;"><tr><td>1</td><td>0</td></tr><tr><td>0</td><td>7</td></tr></table>	1	0	0	7	180±5 mm	230±5 mm	0.10±0.03, 0.07±0.015				
1	0										
0	7										
EYGS1218 <table border="1" style="font-size: small; text-align: center;"><tr><td>1</td><td>0</td></tr><tr><td>0</td><td>7</td></tr><tr><td>0</td><td>3</td></tr><tr><td>0</td><td>2</td></tr></table>	1	0	0	7	0	3	0	2	115±5 mm	180±5 mm	0.10±0.03, 0.07±0.015, 0.025±0.010, 0.017±0.005
1	0										
0	7										
0	3										
0	2										
EYGS0912 <table border="1" style="font-size: small; text-align: center;"><tr><td>1</td><td>0</td></tr><tr><td>0</td><td>7</td></tr><tr><td>0</td><td>3</td></tr><tr><td>0</td><td>2</td></tr></table>	1	0	0	7	0	3	0	2	90±5 mm	115±5 mm	0.10±0.03, 0.07±0.015, 0.025±0.010, 0.017±0.005
1	0										
0	7										
0	3										
0	2										



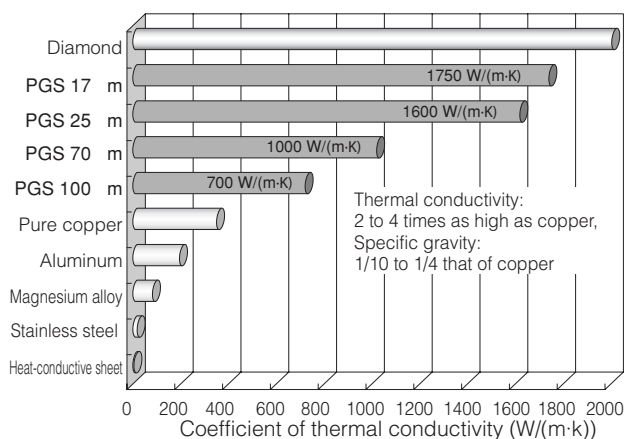
*Please contact us for other dimensions other than those above.

■ Characteristics

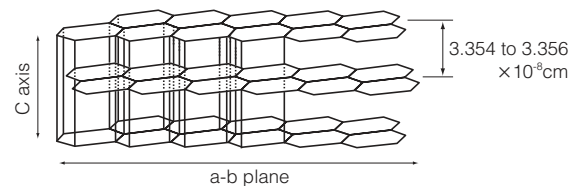
Thickness		100 μm	70 μm	25 μm	17 μm
		0.10 ± 0.03 mm	0.07 ± 0.015 mm	0.025 ± 0.010 mm	0.017 ± 0.005 mm
Density		0.85 g/cm ³	1.21 g/cm ³	1.90 g/cm ³	2.10 g/cm ³
Thermal conductivity	a-b plane	700 W/(m·K)	1000 W/(m·K)	1600 W/(m·K)	1750 W/(m·K)
Electrical conductivity		10000 S/cm	10000 S/cm	20000 S/cm	20000 S/cm
Extensional strength		19.6 MPa	22.0 MPa	30.0 MPa	40.0 MPa
Expansion coefficient	a-b plane	9.3×10^{-7} 1/K	9.3×10^{-7} 1/K	9.3×10^{-7} 1/K	9.3×10^{-7} 1/K
	c axis	3.2×10^{-5} 1/K	3.2×10^{-5} 1/K	3.2×10^{-5} 1/K	3.2×10^{-5} 1/K
Heat resistance		400 °C			
Bending(angle 180,R5)		10000 cycles			

*Values are for reference, not guaranteed.

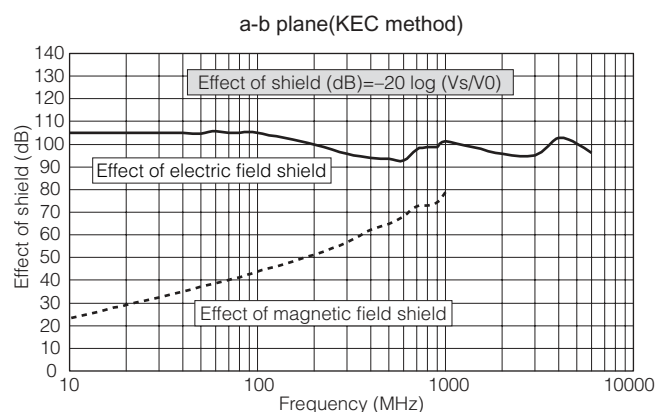
■ Comparison of thermal conductivity (a-b plane)



■ Layered structure of PGS

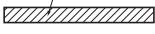
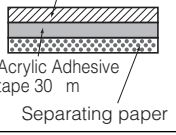
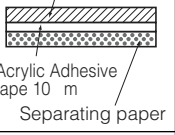
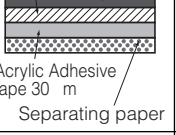
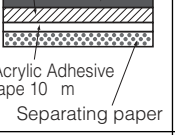
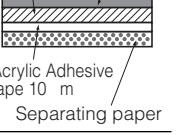


■ Electric field shield performance



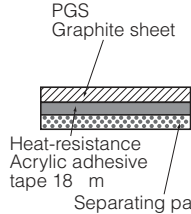
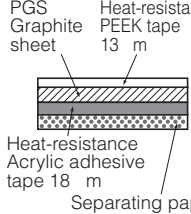
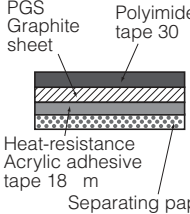
Rating and Characteristics

Standard series (PGS 100, 70, 25, 17 m)

Type	PGS Only	Adhesive Type		Laminated type (Insulation & Adhesive)		
	S type	A-A type	A-M type	A-PA type	A-PM type	A-DM type
Front face	-	-	-	Polyester tape standard type 30 m	Polyester tape standard type 30 m	Polyester tape thin type 10 m
Rear face	-	Insulative adhesion type 30 m	Insulative thin adhesion type 10 m	Insulative adhesion type 30 m	Insulative thin adhesion type 10 m	Insulative thin adhesion type 10 m
Structure						
Features	<ul style="list-style-type: none"> High Thermal Conductivity High Flexibility Low Thermal Resistance Available up to 400 °C Conductive Material 	<ul style="list-style-type: none"> With insulation material on one side With strong adhesive tape for putting chassis Withstanding Voltage : 2 kV 	<ul style="list-style-type: none"> With insulation material on one side Low thermal resistance comparison with A-A type Withstanding Voltage : 1 kV 	<ul style="list-style-type: none"> With insulation material on both side Withstanding Voltage PET tape : 4 kV Adhesive Tape : 2 kV 	<ul style="list-style-type: none"> With insulation material on both side Withstanding Voltage PET tape : 4 kV Adhesive Tape : 1 kV 	<ul style="list-style-type: none"> With insulation material on both side Withstanding Voltage PET tape : 1 kV Adhesive Tape : 1 kV
Withstand temperature	400 °C	100 °C	100 °C	100 °C	100 °C	100 °C
Standard Size	115 × 180 mm	90 × 115 mm	90 × 115 mm	90 × 115 mm	90 × 115 mm	90 × 115 mm
Maximam size	180 × 230 mm 115 × 180 mm(25 m)	115 × 180 mm	115 × 180 mm	115 × 180 mm	115 × 180 mm	115 × 180 mm
100 m	Part No.	EYGS121810	-	-	-	-
	Thickness	100 m	-	-	-	-
70 m	Part No.	EYGS121807	EYGA091207A	EYGA091207M	EYGA091207PA	EYGA091207PM
	Thickness	70 m	100 m	80 m	130 m	110 m
25 m	Part No.	EYGS121803	EYGA091203A	EYGA091203M	EYGA091203PA	EYGA091203PM
	Thickness	25 m	55 m	35 m	85 m	65 m
17 m	Part No.	-	EYGA091202A	EYGA091202M	EYGA091202PA	EYGA091202PM
	Thickness	-	47 m	27 m	77 m	57 m

* Please contact our engineering section or factory about to special applications.

High heat resistance series (PGS 70, 25, 17 m)

Type	high heat resistance type			
	A-V type	A-RV type	A-KV type	
Front face	-	high heat resistance and insulation type 13 m	high heat resistance and insulation type 30 m	
Rear face	High heat resistance and insulation adhesion type 18 m	High heat resistance and insulation adhesion type 18 m	High heat resistance and insulation adhesion type 18 m	
Structure				
Features	<ul style="list-style-type: none"> With high heat resistance and insulation tape on one side Withstanding Voltage Adhesive tape : 2 kV 	<ul style="list-style-type: none"> With high heat resistance and insulation tape on both side Withstanding Voltage PEEK tape : 2 kV Adhesive tape : 2 kV 	<ul style="list-style-type: none"> With high heat resistance and more insulated tape on both side Withstanding Voltage PI tape : 5 kV Adhesive tape : 2 kV 	
Withstand temperature	150 °C	150 °C	150 °C (Polyimide : 180 °C)	
Standard Size	90 × 115 mm	90 × 115 mm	90 × 115 mm	
Maximam size	115 × 180 mm	115 × 180 mm	115 × 180 mm	
70 m	Part No.	EYGA091207V	EYGA091207RV	EYGA091207KV
	Thickness	88 m	101 m	118 m
25 m	Part No.	EYGA091203V	EYGA091203RV	EYGA091203KV
	Thickness	43 m	56 m	73 m
17 m	Part No.	EYGA091202V	EYGA091202RV	EYGA091202KV
	Thickness	35 m	48 m	65 m

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

Minimum order

Item	Part No.	Type	Size	Minimum order
PGS Graphite Sheet Only	S type 100 m	EYGS091210	90×115 mm	20
		EYGS121810	115×180 mm	10
		EYGS182310	180×230 mm	10
	S type 70 m	EYGS091207	90×115 mm	20
		EYGS121807	115×180 mm	10
		EYGS182307	180×230 mm	10
S type 25 m	EYGS091203	90×115 mm	20	
	EYGS121803	115×180 mm	10	
PGS 70, 25 m Adhesive Type [Standard series]	A-A type 70 m	EYGA091207A	90×115 mm	20
		EYGA121807A	115×180 mm	10
	A-A type 25 m	EYGA091203A	90×115 mm	20
		EYGA121803A	115×180 mm	10
	A-A type 17 m	EYGA091202A	90×115 mm	20
		EYGA121802A	115×180 mm	10
	A-M type 70 m	EYGA091207M	90×115 mm	20
		EYGA121807M	115×180 mm	10
	A-M type 25 m	EYGA091203M	90×115 mm	20
		EYGA121803M	115×180 mm	10
	A-M type 17 m	EYGA091202M	90×115 mm	20
		EYGA121802M	115×180 mm	10
PGS 70, 25 m Laminated Type (Insulation & Adhesive) [Standard series]	A-PA type 70 m	EYGA091207PA	90×115 mm	20
		EYGA121807PA	115×180 mm	10
	A-PA type 25 m	EYGA091203PA	90×115 mm	20
		EYGA121803PA	115×180 mm	10
	A-PA type 17 m	EYGA091202PA	90×115 mm	20
		EYGA121802PA	115×180 mm	10
	A-PM type 70 m	EYGA091207PM	90×115 mm	20
		EYGA121807PM	115×180 mm	10
	A-PM type 25 m	EYGA091203PM	90×115 mm	20
		EYGA121803PM	115×180 mm	10
	A-PM type 17 m	EYGA091202PM	90×115 mm	20
		EYGA121802PM	115×180 mm	10
	A-DM type 70 m	EYGA091207DM	90×115 mm	20
		EYGA121807DM	115×180 mm	10
	A-DM type 25 m	EYGA091203DM	90×115 mm	20
		EYGA121803DM	115×180 mm	10
	A-DM type 17 m	EYGA091202DM	90×115 mm	20
		EYGA121802DM	115×180 mm	10
PGS 70, 25 m [High heat resistance type]	A-V type 70 m	EYGA091207V	90×115 mm	20
		EYGA121807V	115×180 mm	10
	A-V type 25 m	EYGA091203V	90×115 mm	20
		EYGA121803V	115×180 mm	10
	A-V type 17 m	EYGA091202V	90×115 mm	20
		EYGA121802V	115×180 mm	10
	A-RV type 70 m	EYGA091207RV	90×115 mm	20
		EYGA121807RV	115×180 mm	10
	A-RV type 25 m	EYGA091203RV	90×115 mm	20
		EYGA121803RV	115×180 mm	10
	A-RV type 17 m	EYGA091202RV	90×115 mm	20
		EYGA121802RV	115×180 mm	10
	A-KV type 70 m	EYGA091207KV	90×115 mm	20
		EYGA121807KV	115×180 mm	10
	A-KV type 25 m	EYGA091203KV	90×115 mm	20
		EYGA121803KV	115×180 mm	10
	A-KV type 17 m	EYGA091202KV	90×115 mm	20
		EYGA121802KV	115×180 mm	10

** Please consult if the quantity of orders is little.