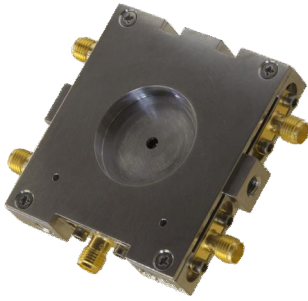


## Sydor Diamond Beam Position Monitor (DBPM)



The Sydor diamond beam position monitors (DBPMs) utilize high purity electronics grade diamond to attain high sensitivity and accurate beam characterization. The monitors provide submicron position resolution as well as flux and timing data. Their excellent vacuum, thermal properties and high hard x-ray transmission allow for continuous beam monitoring. In addition, their compact profile allows them to be utilized in space limited applications. Sydor offers monitors in various diamond types and thickness to suit the specific needs of both white beam and monochromatic beam applications.

DIAMOND BPMs	KEY PERFORMANCE PARAMETERS			
X-ray beam Type	Monochromatic	Monochromatic	Monochromatic	White
CVD Diamond Type	Electronic grade single crystal	Electronic grade single crystal	Electronic grade single crystal	Electronic grade single crystal
Total Active Area	3.0 x 3.0 mm <sup>2</sup>	3.5mm x 3.5 mm <sup>2</sup>	3.5mm x 3.5 mm <sup>2</sup>	7.0 x 37 mm <sup>2</sup>
Window Size	3.0 mm dia.	4.0 x 4.0 mm <sup>2</sup>	4.0 x 4.0 mm <sup>2</sup>	8.0 x 38.0 mm <sup>2</sup>
Gap between pads	20µm	20µm	20µm	500µm
Sensor Thickness	55µm*	20µm	20µm	30µm
Sensor Format	Quadrant	Quadrant	Quadrant	2x4 Array
Pad Size	1.5 x 1.5 mm <sup>2</sup>	1.75 x 1.75 mm <sup>2</sup>	1.75 x 1.75 mm <sup>2</sup>	3.5 x 9.25 mm <sup>2</sup>
Contact Material	Pt	Ag	Pt	Carbon based
Bias Voltage	~10 V	~10 V	~10 V	~25 V
Cooling	Not required	Not required	Not required	Fluid Cooled
Frame Rate	>1 kHz	>1 kHz	>1 kHz	>1 kHz
Readout Electronics	No	Yes	Yes	Yes
Interface	--	EPICS	EPICS	EPICS

\* Other thicknesses available

