

Energy (keV)	Detector Thickness				Si Efficiency					Photoelectric Fraction
	200 um	300 um	500 um	680 um	200 um	300 um	500 um	680 um	300 um	
Be Window Thickness	1 mil	1 mil	1 mil	1 mil	0.5 mil	0.5 mil	0.5 mil	0.5 mil	1/3 mil	
	Efficiency	Efficiency	Efficiency	Efficiency	Efficiency	Efficiency	Efficiency	Efficiency	Efficiency	
0.2	3.55E-120	3.55E-120	3.55E-120	3.55E-120	6.26E-75	6.26E-75	6.26E-75	6.26E-75	2.17E-34	1
0.3	2.49E-44	2.49E-44	2.49E-44	2.49E-44	8.19E-28	8.19E-28	8.19E-28	8.19E-28	5.15E-13	1
0.4	1.66E-21	1.66E-21	1.66E-21	1.66E-21	1.23E-13	1.23E-13	1.23E-13	1.23E-13	1.39E-06	1
0.5	5.23E-12	5.23E-12	5.23E-12	5.23E-12	9.81E-08	9.81E-08	9.81E-08	9.81E-08	6.62E-04	1
0.6	1.47E-07	1.47E-07	1.47E-07	1.47E-07	5.69E-05	5.69E-05	5.69E-05	5.69E-05	1.19E-02	1
0.8	9.55E-04	9.55E-04	9.55E-04	9.55E-04	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.41E-01	1
1	2.50E-02	2.50E-02	2.50E-02	2.50E-02	1.01E-01	1.01E-01	1.01E-01	1.01E-01	3.54E-01	1
1.5	3.34E-01	3.34E-01	3.34E-01	3.34E-01	5.06E-01	5.06E-01	5.06E-01	5.06E-01	7.34E-01	1
2	6.34E-01	6.34E-01	6.34E-01	6.34E-01	7.53E-01	7.53E-01	7.53E-01	7.53E-01	8.79E-01	1
3	8.78E-01	8.78E-01	8.78E-01	8.78E-01	9.22E-01	9.22E-01	9.22E-01	9.22E-01	9.64E-01	1
4	9.48E-01	9.48E-01	9.48E-01	9.48E-01	9.68E-01	9.68E-01	9.68E-01	9.68E-01	9.85E-01	1
5	9.74E-01	9.74E-01	9.74E-01	9.74E-01	9.84E-01	9.84E-01	9.84E-01	9.84E-01	9.93E-01	1
6	9.84E-01	9.85E-01	9.85E-01	9.85E-01	9.89E-01	9.90E-01	9.90E-01	9.90E-01	9.96E-01	1
8	9.44E-01	9.82E-01	9.93E-01	9.93E-01	9.47E-01	9.85E-01	9.95E-01	9.96E-01	9.87E-01	0.999998609
8.5	9.16E-01	9.73E-01	9.94E-01	9.95E-01	9.18E-01	9.75E-01	9.96E-01	9.98E-01	9.76E-01	0.999991107
9	8.79E-01	9.56E-01	9.91E-01	9.96E-01	8.81E-01	9.58E-01	9.93E-01	9.98E-01	9.59E-01	0.999962027
9.5	8.37E-01	9.33E-01	9.86E-01	9.96E-01	8.38E-01	9.34E-01	9.88E-01	9.98E-01	9.35E-01	0.999880133
10	7.91E-01	9.04E-01	9.78E-01	9.95E-01	7.93E-01	9.05E-01	9.79E-01	9.96E-01	9.05E-01	0.999699285
10.5	7.44E-01	8.69E-01	9.65E-01	9.90E-01	7.45E-01	8.70E-01	9.66E-01	9.94E-01	8.71E-01	0.999320934
11	6.95E-01	8.31E-01	9.47E-01	9.83E-01	6.96E-01	8.32E-01	9.48E-01	9.89E-01	8.33E-01	0.99868556
11.5	6.48E-01	7.91E-01	9.25E-01	9.72E-01	6.49E-01	7.92E-01	9.26E-01	9.82E-01	7.92E-01	0.997742045
12	6.02E-01	7.49E-01	8.99E-01	9.57E-01	6.03E-01	7.50E-01	9.00E-01	9.72E-01	7.50E-01	0.996467439
12.5	5.59E-01	7.07E-01	8.70E-01	9.39E-01	5.60E-01	7.08E-01	8.71E-01	9.58E-01	7.08E-01	0.994867051
13	5.18E-01	6.65E-01	8.38E-01	9.17E-01	5.19E-01	6.66E-01	8.39E-01	9.42E-01	6.66E-01	0.992968453
13.5	4.80E-01	6.25E-01	8.04E-01	8.92E-01	4.81E-01	6.25E-01	8.05E-01	9.22E-01	6.26E-01	0.990813101
14	4.45E-01	5.86E-01	7.70E-01	8.65E-01	4.45E-01	5.86E-01	7.70E-01	8.99E-01	5.87E-01	0.988448753
14.5	4.12E-01	5.49E-01	7.34E-01	8.36E-01	4.12E-01	5.49E-01	7.35E-01	8.74E-01	5.49E-01	0.985924185
15	3.82E-01	5.14E-01	6.99E-01	8.06E-01	3.82E-01	5.14E-01	7.00E-01	8.47E-01	5.14E-01	0.983284481
15.5	3.54E-01	4.81E-01	6.64E-01	7.74E-01	3.54E-01	4.81E-01	6.65E-01	8.18E-01	4.81E-01	0.979664208
16	3.29E-01	4.50E-01	6.30E-01	7.42E-01	3.29E-01	4.50E-01	6.31E-01	7.88E-01	4.50E-01	0.975864837
16.5	3.05E-01	4.21E-01	5.97E-01	7.11E-01	3.05E-01	4.21E-01	5.98E-01	7.58E-01	4.21E-01	0.971936185
17	2.84E-01	3.94E-01	5.66E-01	6.79E-01	2.84E-01	3.94E-01	5.66E-01	7.28E-01	3.94E-01	0.967921577
17.5	2.64E-01	3.69E-01	5.35E-01	6.48E-01	2.64E-01	3.69E-01	5.36E-01	6.98E-01	3.69E-01	0.963857903
18	2.46E-01	3.45E-01	5.06E-01	6.18E-01	2.46E-01	3.46E-01	5.07E-01	6.68E-01	3.46E-01	0.959775958
18.5	2.30E-01	3.24E-01	4.79E-01	5.88E-01	2.30E-01	3.24E-01	4.79E-01	6.38E-01	3.24E-01	0.955700529
19	2.14E-01	3.04E-01	4.53E-01	5.60E-01	2.15E-01	3.04E-01	4.53E-01	6.10E-01	3.04E-01	0.951651848
19.5	2.00E-01	2.85E-01	4.28E-01	5.33E-01	2.01E-01	2.85E-01	4.28E-01	5.82E-01	2.85E-01	0.947646108
20	1.88E-01	2.68E-01	4.05E-01	5.07E-01	1.88E-01	2.68E-01	4.05E-01	5.55E-01	2.68E-01	0.943695689
20.5	1.76E-01	2.52E-01	3.84E-01	4.83E-01	1.76E-01	2.52E-01	3.84E-01	5.31E-01	2.53E-01	0.937100249
21	1.66E-01	2.38E-01	3.64E-01	4.60E-01	1.66E-01	2.38E-01	3.65E-01	5.07E-01	2.38E-01	0.930520425
21.5	1.56E-01	2.25E-01	3.46E-01	4.39E-01	1.56E-01	2.25E-01	3.46E-01	4.84E-01	2.25E-01	0.923979888
22	1.47E-01	2.12E-01	3.28E-01	4.18E-01	1.47E-01	2.12E-01	3.28E-01	4.63E-01	2.13E-01	0.917498945
22.5	1.39E-01	2.01E-01	3.12E-01	3.99E-01	1.39E-01	2.01E-01	3.12E-01	4.42E-01	2.01E-01	0.911092358
23	1.31E-01	1.90E-01	2.96E-01	3.80E-01	1.31E-01	1.90E-01	2.96E-01	4.22E-01	1.90E-01	0.904772407
23.5	1.24E-01	1.80E-01	2.82E-01	3.63E-01	1.24E-01	1.80E-01	2.82E-01	4.03E-01	1.80E-01	0.898548834
24	1.17E-01	1.71E-01	2.68E-01	3.46E-01	1.17E-01	1.71E-01	2.68E-01	3.85E-01	1.71E-01	0.892428526
24.5	1.11E-01	1.62E-01	2.55E-01	3.30E-01	1.11E-01	1.62E-01	2.55E-01	3.68E-01	1.62E-01	0.886416583
25	1.05E-01	1.54E-01	2.43E-01	3.15E-01	1.05E-01	1.54E-01	2.43E-01	3.52E-01	1.54E-01	0.880517239
25.5	1.00E-01	1.46E-01	2.32E-01	3.01E-01	1.00E-01	1.46E-01	2.32E-01	3.37E-01	1.46E-01	0.874731942
26	9.50E-02	1.39E-01	2.21E-01	2.88E-01	9.50E-02	1.39E-01	2.21E-01	3.22E-01	1.39E-01	0.869062852
26.5	9.03E-02	1.32E-01	2.11E-01	2.75E-01	9.03E-02	1.32E-01	2.11E-01	3.09E-01	1.32E-01	0.863509578
27	8.59E-02	1.26E-01	2.01E-01	2.63E-01	8.59E-02	1.26E-01	2.01E-01	2.96E-01	1.26E-01	0.858071977
27.5	8.18E-02	1.20E-01	1.92E-01	2.52E-01	8.18E-02	1.20E-01	1.92E-01	2.83E-01	1.20E-01	0.852748875
28	7.79E-02	1.15E-01	1.84E-01	2.41E-01	7.79E-02	1.15E-01	1.84E-01	2.71E-01	1.15E-01	0.84753951
28.5	7.43E-02	1.09E-01	1.75E-01	2.31E-01	7.43E-02	1.09E-01	1.76E-01	2.60E-01	1.09E-01	0.842441781
29	7.09E-02	1.04E-01	1.68E-01	2.21E-01	7.09E-02	1.04E-01	1.68E-01	2.49E-01	1.04E-01	0.837453478
29.5	6.77E-02	9.98E-02	1.61E-01	2.12E-01	6.77E-02	9.98E-02	1.61E-01	2.39E-01	9.99E-02	0.832572359
30	6.47E-02	9.54E-02	1.54E-01	2.04E-01	6.47E-02	9.55E-02	1.54E-01	2.30E-01	9.55E-02	0.827796931
40	3.21E-02	4.78E-02	7.84E-02	1.05E-01	3.21E-02	4.78E-02	7.84E-02	1.20E-01	4.78E-02	0.682657632
50	2.02E-02	3.02E-02	4.98E-02	6.71E-02	2.02E-02	3.02E-02	4.98E-02	7.66E-02	3.02E-02	0.536095248
60	1.48E-02	2.21E-02	3.66E-02	4.95E-02	1.48E-02	2.22E-02	3.67E-02	5.66E-02	2.22E-02	0.408856505
80	1.03E-02	1.54E-02	2.56E-02	3.47E-02	1.03E-02	1.54E-02	2.56E-02	3.97E-02	1.54E-02	0.233437555
100	8.51E-03	1.27E-02	2.11E-02	2.87E-02	8.51E-03	1.27E-02	2.11E-02	3.28E-02	1.27E-02	0.138070027
150	6.73E-03	1.01E-02	1.67E-02	2.27E-02	6.73E-03	1.01E-02	1.67E-02	2.60E-02	1.01E-02	0.047579413
200	5.93E-03	8.88E-03	1.47E-02	2.00E-02	5.93E-03	8.88E-03	1.47E-02	2.29E-02	8.88E-03	0.021696272
300	5.03E-03	7.53E-03	1.25E-02	1.70E-02	5.03E-03	7.53E-03	1.25E-02	1.95E-02	7.53E-03	0.007358105

Amptek Inc.

Si Efficiency

XR100CR

400	4.47E-03	6.70E-03	1.11E-02	1.51E-02	4.47E-03	6.70E-03	1.11E-02	1.73E-02	6.70E-03	0.003577253
500	4.07E-03	6.10E-03	1.01E-02	1.38E-02	4.07E-03	6.10E-03	1.01E-02	1.58E-02	6.10E-03	0.002130644
600	3.76E-03	5.63E-03	9.37E-03	1.27E-02	3.76E-03	5.63E-03	9.37E-03	1.46E-02	5.63E-03	0.001442151
800	3.29E-03	4.94E-03	8.22E-03	1.12E-02	3.29E-03	4.94E-03	8.22E-03	1.28E-02	4.94E-03	0.000831852
1000	2.96E-03	4.44E-03	7.38E-03	1.00E-02	2.96E-03	4.44E-03	7.38E-03	1.15E-02	4.44E-03	0.000575352

NOTE: to obtain the photoelectric efficiency, multiply the appropriate column by the Photoelectric Fraction column

NOTE: the response below 6 keV is due almost entirely to the Be Window. To obtain the 1/3 mil data for the other thicknesses, simply substitute in the 300 um 1/3 mil data from 0.2 keV to 6 keV