ELL 101 - Dielectric Properties Table

LAMINATE:

Thickness	&	Tol.	Construction					Nominal Thickness (inch)	RC%	10 GHz Dk	10 GHz Df	40 GHz Dk	40 GHz Df	80 GHz Dk	80 GHz Df
0.0020	±	0.0005	1	1035				0.0020	67.0%	3.13	0.0013	3.12	0.0015	3.11	0.0019
0.0025	±	0.0005	1	1078				0.0025	60.0%	3.20	0.0015	3.19	0.0017	3.19	0.0020
0.0030	±	0.0005	1	1078				0.0030	66.0%	3.14	0.0014	3.13	0.0016	3.12	0.0019
0.0035	±	0.0005	1	2013				0.0035	53.0%	3.29	0.0016	3.28	0.0018	3.27	0.0022
0.0035	±	0.0005	1	1078				0.0035	70.0%	3.10	0.0013	3.09	0.0015	3.08	0.0018
0.0040	±	0.0005	2	1035				0.0040	67.0%	3.13	0.0013	3.12	0.0015	3.11	0.0019
0.0045	±	0.0005	2	1035				0.0046	71.0%	3.09	0.0013	3.08	0.0015	3.07	0.0018
0.0050	±	0.0007	1	2116				0.0050	57.0%	3.24	0.0015	3.23	0.0017	3.22	0.0021
0.0050	±	0.0007	2	1078				0.0050	60.0%	3.20	0.0015	3.19	0.0017	3.19	0.0020
0.0060	±	0.0007	2	1078				0.0060	66.0%	3.14	0.0014	3.13	0.0016	3.12	0.0019
0.0070	±	0.0010	2	2013				0.0071	53.0%	3.29	0.0016	3.28	0.0018	3.27	0.0022
0.0080	±	0.0010	2	2013				0.0080	57.5%	3.23	0.0015	3.22	0.0017	3.22	0.0021
0.0090	±	0.0010	1	2116	+	1	2116	0.0091	52.9%	3.29	0.0016	3.28	0.0018	3.28	0.0022
0.0100	±	0.0010	2	2116				0.0101	57.0%	3.24	0.0015	3.23	0.0017	3.22	0.0021
0.0120	±	0.0015	2	2013	+	1	2116	0.0121	54.6%	3.27	0.0016	3.26	0.0018	3.25	0.0022
0.0140	±	0.0015	2	2116	+	1	2116	0.0141	54.4%	3.27	0.0016	3.26	0.0018	3.26	0.0022
0.0150	±	0.0015	2	2116	+	1	2116	0.0151	57.0%	3.24	0.0015	3.23	0.0017	3.22	0.0021
0.0160	±	0.0015	2	1078	+	2	2116	0.0161	60.3%	3.20	0.0015	3.19	0.0017	3.19	0.0020
0.0160	±	0.0015	4	2116				0.0160	48.0%	3.36	0.0018	3.35	0.0020	3.34	0.0023
0.0180	±	0.0015	2	2116	+	2	2116	0.0181	52.9%	3.29	0.0016	3.28	0.0018	3.28	0.0022

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Thickness	&	Tol.	Construction					Nominal Thickness (inch)	RC%	10 GHz Dk	10 GHz Df	40 GHz Dk	40 GHz Df	80 GHz Dk	80 GHz Df
0.0200	±	0.0025	4	2116				0.0202	57.0%	3.24	0.0015	3.23	0.0017	3.22	0.0021
0.0240	±	0.0025	4	2116	+	1	2116	0.0242	55.5%	3.26	0.0016	3.25	0.0018	3.24	0.0021
0.0250	±	0.0025	5	2116				0.0252	57.0%	3.24	0.0015	3.23	0.0017	3.22	0.0021
0.0280	±	0.0025	5	2116	+	1	1078	0.0282	57.9%	3.23	0.0015	3.22	0.0017	3.21	0.0021
0.0300	±	0.0025	6	2116				0.0303	57.0%	3.24	0.0015	3.23	0.0017	3.22	0.0021
0.0390	±	0.0040	7	2116	+	1	2013	0.0388	56.6%	3.24	0.0016	3.23	0.0018	3.23	0.0021

PREPREG:

Glass	RC%	10GHz Dk	10GHz Df	40 GHz Dk	40 GHz Df	80 GHz Dk	80 GHz Df	Thickness (inches)	Thickness (µm)
1035	73	3.07	0.0012	3.06	0.0014	3.06	0.0018	0.0025	63.2
1035	76	3.04	0.0012	3.03	0.0014	3.03	0.0017	0.0028	71.9
1035	78	3.03	0.0011	3.02	0.0013	3.01	0.0017	0.0031	79.1
1078	70	3.10	0.0013	3.09	0.0015	3.08	0.0018	0.0035	88.0
1078	75	3.05	0.0012	3.04	0.0014	3.04	0.0018	0.0042	107.8

The following laminate and prepreg items are a representative of available materials. These items and their associated values may not be regularly available and additional lead times or minimum order quantities could apply. Please contact our office or your local technical representative for assistance with choosing the best material for your design and application.

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