

## Unclad laminates for electronic parts & machines

Test item	Condition	Unit	PL-1102 Paper phenolic laminate for machining process Test data : 15mm	PL-1147 Paper phenolic laminate for machining process Test data : 15mm	EL-3762 Glass epoxy laminate for machining process Test data : 13mm	PL-1131 Paper phenolic laminate for punching process Test data : 1mm
Flatwise dielectric strength	C-90/20/65	MV/m	≥13	≥13	≥18	-
Edgewise dielectric strength	E-0.5/90	kV	≥8	≥8	≥45	-
Insulation resistance	C-90/20/65	Ω	1E+10	5E+11	2E+15	5E+11
	C-90/20/65+D-2/100		1E+9	1E+11	3E+14	5E+8
Flexural strength	A	Mpa	200	130	390(MD)/370(TD)	150
Izod impact strength	A	J/cm	0.27	0.24	6.6	-
Cleavage strength	A	kN	5.5	4.0	10.8	-
Water absorption	E-24/50+D-24/23	%	0.34	0.19	0.01	1.9
Appearance after heating	E-2/130	-	No remarkable change	No remarkable change	No remarkable change	No remarkable change
Specific gravity	A	-	1.39	1.38	1.92	1.32
Anti acetone	A	-	No remarkable change	No remarkable change	No remarkable change	No remarkable change
Flame retardancy (UL method)	A	-	-	V-0	V-0	-
	E-168/70	-	-	V-0	V-0	-
Symbols according to JIS	-	-	PL-PEM equivalent	PL-PEM-PF equivalent	EL-PGEF equivalent	PL-PEM-PF equivalent
Size	A	mm	1020*1020	1020*1020	1020*1020 1200*1200	1020*1020

\*The data mentioned above is not guaranteed value but representative.