panelgraphic
display enhancement solutions

Data Sheet 18
Optiguard ESD ™

OptiguardESD™

Electro-Static Dissipative Coating (Anti-Static)

Technical Characteristics

OptiguardESD™

Clear Polycarbonate base material.
Static Dissipative (anti-static) coating applied to both surfaces.
Clear Abrasion Resistant hard coating applied to both surfaces.

ELECTRICAL	Method			Unit	Polycarbonate ESD Hard Coating
Surface resistivity	ASTM D-257	DIN 53482	IEC 60093	Ω/□	10^6~ 10^7
Electrostatic discharge	MIL B-81705B			s	<0.1
Dielectric constant	ASTM D-150	DIN 53483	IEC 60250		3

PHYSICAL					
Density	ASTM D-792	DIN 53479	ISO 1183	g/cm^3	1.20
Water absorption	ASTM D-270	DIN 53495	ISO 62A	%	0.3
Pencil hardness	JIS K5400				H
Grid adhesiveness	JIS D0202			-	100/100

OPTICAL					
Light transmittance	ASTM D-1003		ISO 13468	%	83
Haze	ASTM D-1003		ISO 14782	%	2
Refractive index	ASTM D-542		ISO 489	-	1.59
Distinctness of image (DOI)	JIS K7105			%	90

MECHANICAL					
Tensile strength	ASTM D-638	DIN 53455	ISO 527	MPa	67
Tensile elongation at break	ASTM D-638	DIN 53455	ISO 527	%	100
Flexural strength	ASTM D-790	DIN 53452	ISO 178	MPa	90
Flexural modulus	ASTM D-790		ISO 178		2300
Compressive strength	ASTM D-695		ISO 604	MPa	85.3
Charpy impact strength (23 C)			ISO 179	kJ/m^2	17.5
Notched impact strength (23 C)	ASTM D-256		ISO 180	J/m	847

THERMAL					
Heat deflection temperature	ASTM D-648	DIN 53461	ISO 75	°C	135
Coefficient of linear thermal expansion	ASTM D-696		ISO 11359	mm/mm°C	7 x 10^{-5}
Thermal conductivity	ASTM C-177			W/mK	0.20
Specific heat	ASTM C-177			KJ/kgK	1.26
Heat shrinkage	JIS K6745			%	0
Flammability	UL 94				V-0 > 6mm

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