

[Processes Available at Japan Display Ishikawa Plant]

Process Category	Available Processes / Treatments	Process Method / Equipment	Remarks (Dimensions, Accuracy, Materials, etc.)	Film Type	Item	Thickness (nm)	Minimum Line Width / Spacing (μm)	Resistivity (μΩ·cm)	Remarks
■ Substrate Processing	Cleaning		UV/ Chemical / High-Pressure / Ultrasonic / DI Water Cleaning						
	Film Deposition	Metal Film Formation	Sputtering	Ti, Al, MoW, Mo, ITO Please consult us if materials other than those listed are required	Ti	Wiring / Electrode	50~150	2.0	
					Al	Wiring / Electrode	50~800	2.0	<0.3Ω
		Inorganic Insulating Film Formation	P-CVD	TEOS, SiNx, SiOx	MoW	Wiring / Electrode	50~300	3.0	<0.7Ω
					Mo	Wiring / Electrode	5~250	2.0	
	Organic Insulating Film Formation	Slit Coater	Acrylic-Based		ITO	Wiring / Electrode	15~150	2.5	<200Ω
					SiNx	Insulating Film	100~300		
	Functional Film Formation	P-CVD, Sputtering	LTPO, IGZO		SiOx	Insulating Film	100~400		
					TEOS	Insulating Film			
■ Patterning Photolithography	Photore sist Coating	Slit Coater	Novolac-Based	Positive Photore sist	Organic Insulating Film	2000~3000			Line width values are for Line & Space patterns and differ from hole pattern dimensions
		Exposure	Mask Aligner	Minimum line width: 5.0 μm / Overlay accuracy: ±2.7 μm				5.0/2.7	
	Development	Stepper (i-line)	Positive Photore sist	Minimum line width: 1.5 μm / Overlay accuracy: ±1.5 μm				1.5/1.5	
	Etching	Dry Etching	Ti, Al, MoW, Mo, Si, SiNx, SiOx Photore sist					3.0/1.75	
					Ti	Wiring	50~150	2.0	
	Resist Stripping	Wet Etching	ITO, Mo, Al		Al	Wiring	50~800	2.0	Used as a Ti/Al/Ti structure
					MoW	Wiring	50~300	3.0	
	High-Temperature Annealing (Baking)	Clean Hot-Air Circulating Oven	O ₂ concentration is monitored under N ₂ atmosphere		Si	Wiring / Electrode	50~1100	2.5	
					SiNx	Through-Hole Processing	100~300	2.5	
Post-Substrate Processing	Sealant Application	Dispensing	Seal width: approx. 0.5~2.0 mm		SiOx	Through-Hole Processing	100~400	2.5	
	One Drop Fill Material dispensing, substrate alignment, and UV curing	Dispensing Equipment Bonding Equipment UV Curing Equipment	Overlay accuracy: ±3 μm		Al	Wiring / Electrode	50~800	2.00	Used as a Mo/Al/Mo structure
					Mo	Wiring / Electrode	5~250	2.00	
	Thermal Curing of Sealant	Hot-Air Circulating Furnace			ITO	Pixel electrode	15~150	2.50	
	Glass Thinning	Chemical Etching (Outsourced)	Thinning down to 0.2 mm per side is possible; thinner processing may be considered upon request						

(*) The above values represent standard specifications. More advanced manufacturing processes may be available depending on the application. Please consult us for details.

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