

The background of the slide features a stylized, grayscale circuit board pattern. It consists of various geometric shapes, including circles, lines, and polygons, representing traces and components on a printed circuit board. The pattern is centered and extends across the entire width and height of the slide.

タッチパネル基板 製造装置

Wet-Processing EQ which manufactures the substrate of Touch Panels

進和工業株式会社 SHINWA IND. CO., LTD.

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The background of the slide features a stylized, grayscale circuit board pattern. It consists of various geometric shapes, including circles, lines, and polygons, arranged in a way that suggests a complex electronic layout. The pattern is centered and extends across the entire width and height of the slide.

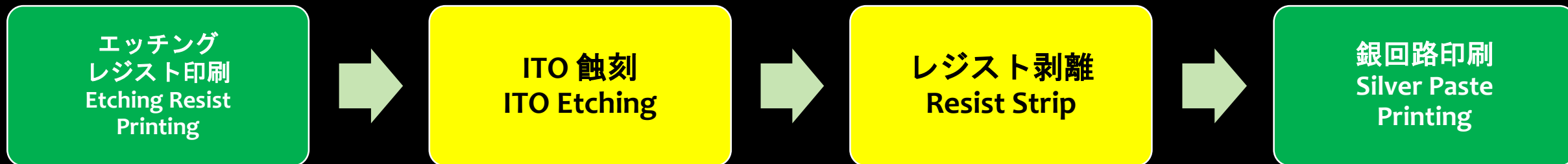
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抵抗膜式タッチパネル製造工程フローチャート

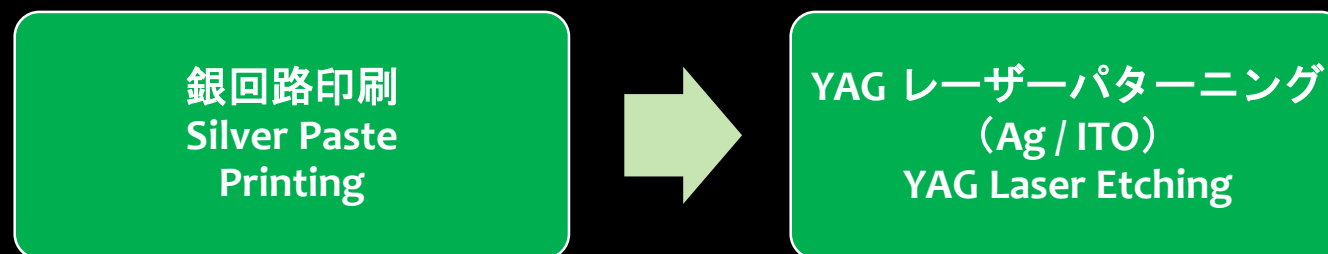
The manufacturing process chart of Resistance Film Type Touch Panel

【上面 フィルム電極 Wet Etching 法】 Upper Side (ITO Film) by Wet Etching



(Wet Process EQ)

【上面 フィルム電極 Laser Etching 法】 Upper Side (ITO Film) by Laser Etching



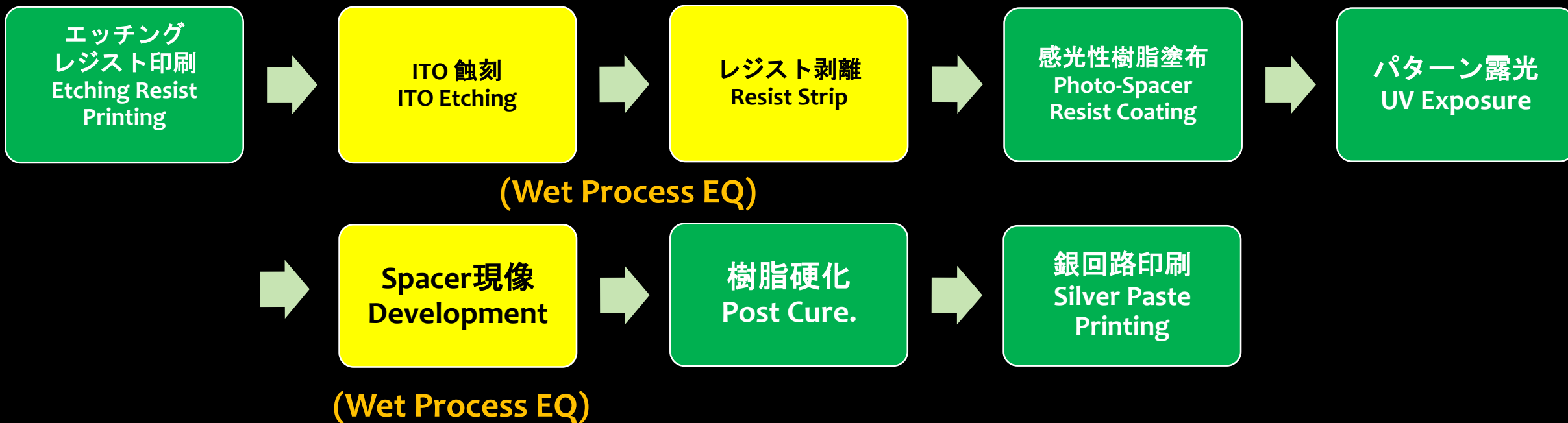
抵抗膜式タッチパネル製造工程フローチャート

The manufacturing process chart of Resistance Film Type Touch Panel

【裏面 Glass Wet Etching & Spacer 印刷法】 Lower Side (ITO Glass) by Wet Etching

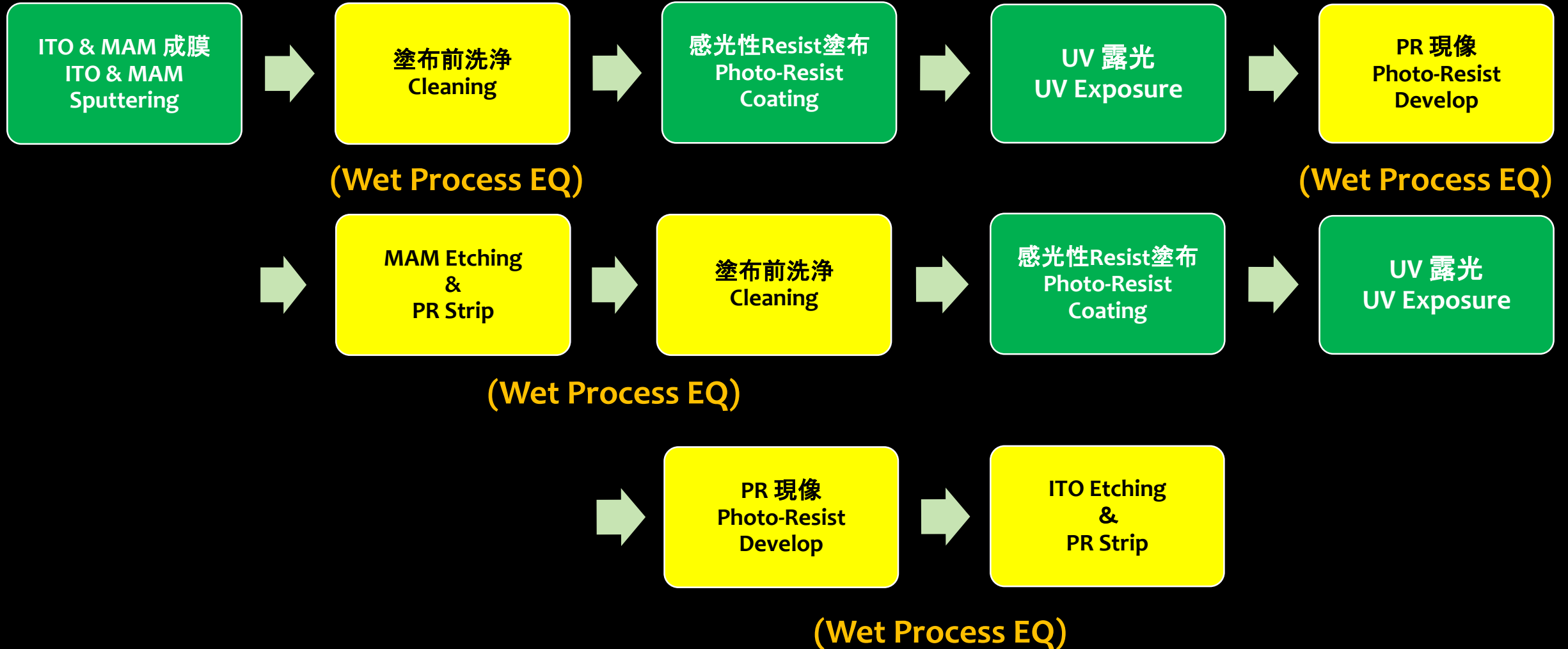


【裏面 Glass Wet Etching + Photo-Spacer 法】 Lower Side (ITO Glass) by Wet Etching+Photo Spacer



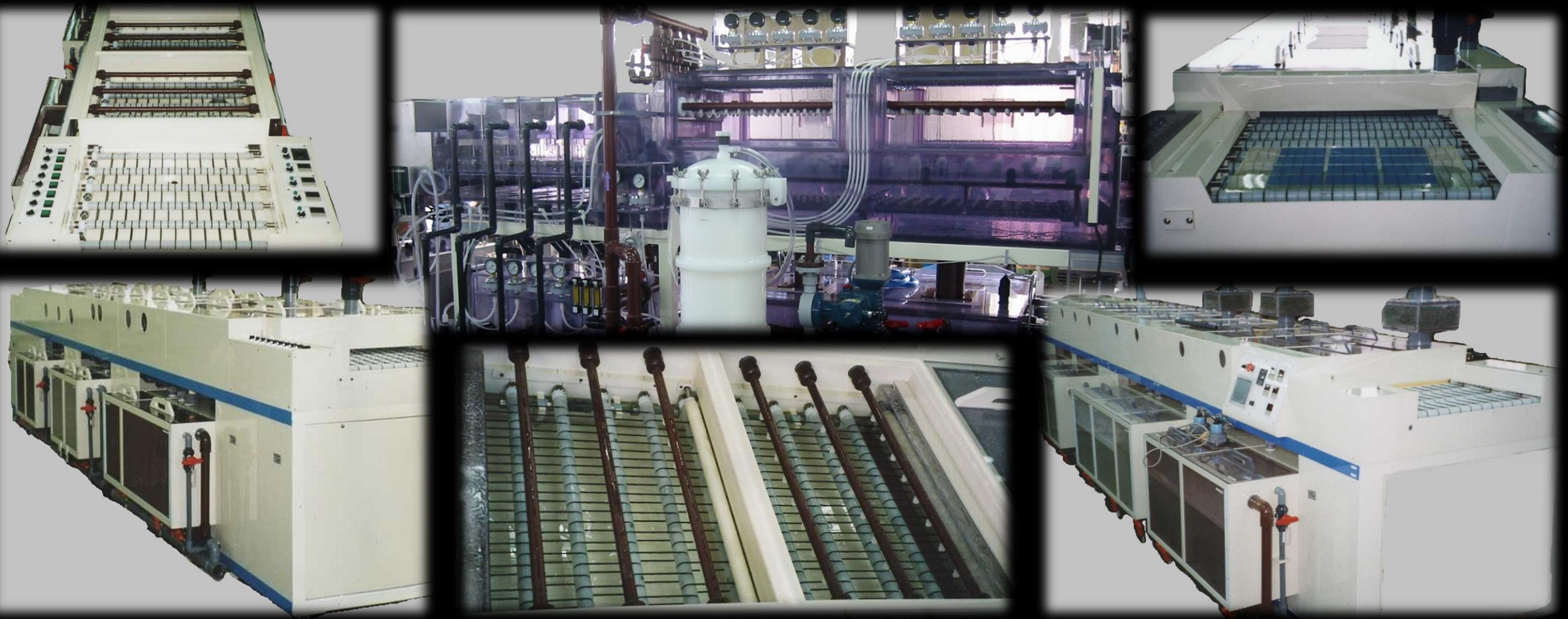
静電容量式タッチパネル製造工程フローチャート

The manufacturing process chart of Capacitive type Touch Panel



製作装置例 枚葉式フィルムエッチング剥離装置

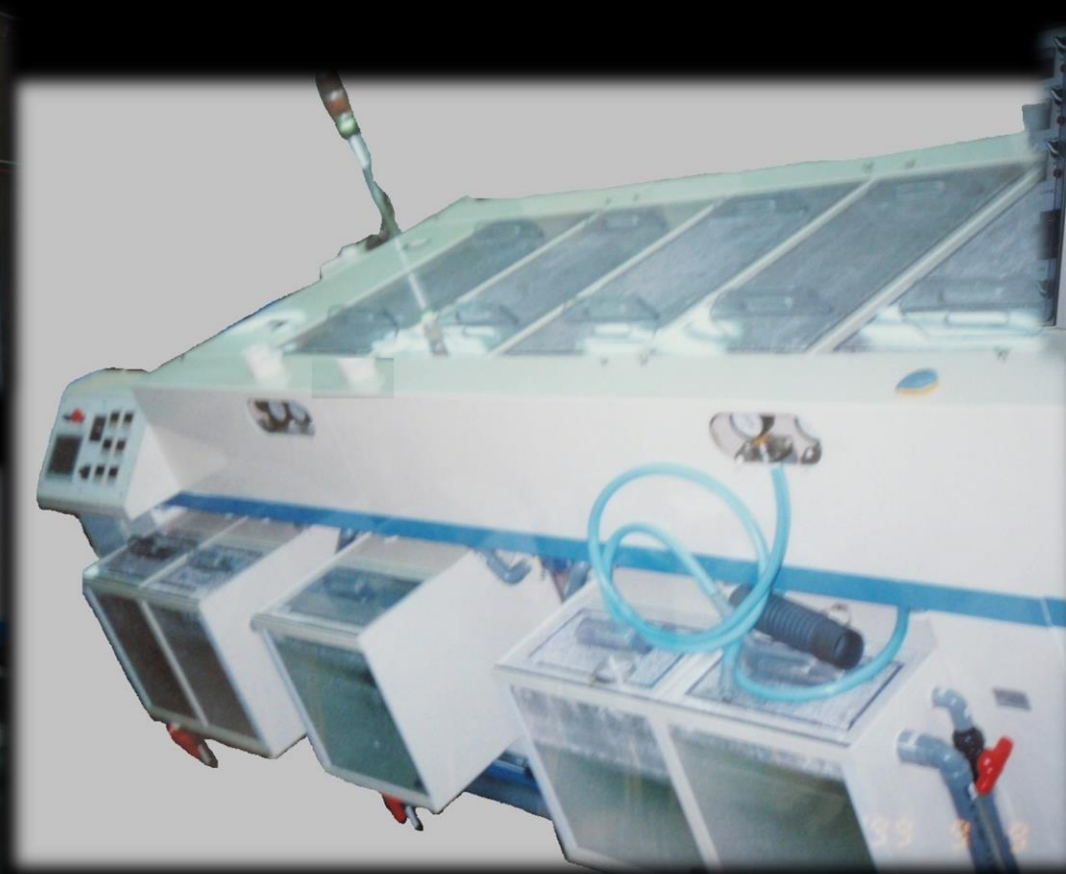
ITO Etching-Strip Machine for Sheet Film



- * Roll to Roll 対応設備も製作可能です。詳細はお問合せ下さい。
- * It is possible to manufacture " Roll to Roll " Line. Please Contact Us.

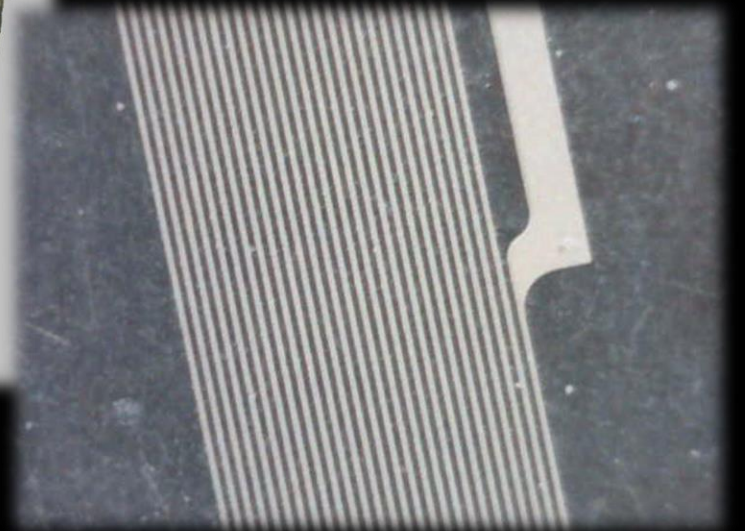
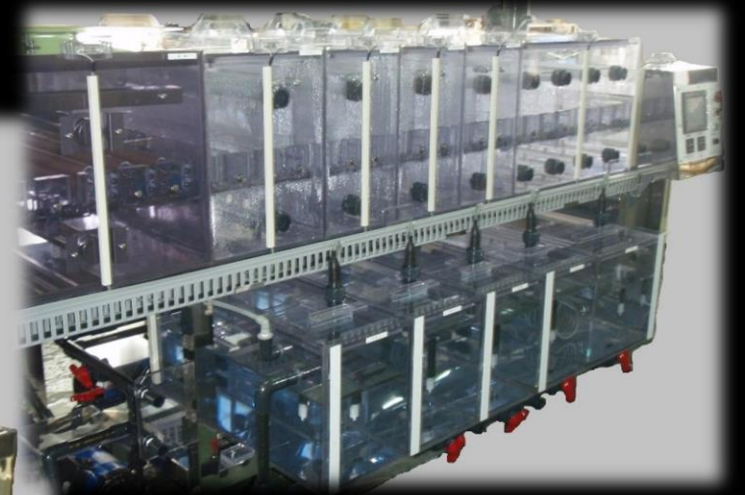
製作装置例 枚葉式フィルムエッチング剥離装置

ITO Etching-Strip Machine for Sheet Film



- * Roll to Roll 対応設備も製作可能です。詳細はお問合せ下さい。
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製作装置例 枚葉式 感光銀ペースト現像装置 Photosensitive Ag Paste Developer for Sheet Film



製作装置例 枚葉式 ガラス基板洗浄装置 Wet Cleaner for Sheet Glass Substrate



Air-Knife System

Magnet Drive Type Roll Brush
(Non-Contact Drive)

製作装置例 枚葉式 ガラス基板洗浄装置 Wet Cleaner for Sheet Glass Substrate



製作装置例 枚葉式 ガラス基板現像装置 Developer for Glass Substrate



ITOフィルム 蝕刻剥離装置 形式 SLES-550F 標準仕様 (概要)
ITO Film Etch - Strip Machine MODEL SLES-550F Standard Specifications (Outline)

No.	分類 Class	項目 Item	標準仕様 Standard Spec.	注記 Notes
1-1	処理基材 Substrate	基板 Substrate	ITO Film + Etching Resist INK * Base PET Film t = 0.2mm	ガラス基板兼用可 Glass substrate processing is also possible.
1-2		基板寸法 Dimension	□ 300 x 300 ~ 550 x 600 mm t = 0.1 ~ 2.0 mm	客先要望により変更可 User's arrangement is possible.
2-1	基本情報 Basic Info.	搬送方式 Conveyance System	水平型 Roller 搬送式 Horizontal Roller Conveyor	O-Ring Conveyor is possible.
2-2		処理速度 Process Speed	Standard 1.2 m /min. Variable 0.5 ~ 3.5 m / min.	客先要望により変更可 User's arrangement is possible.
2-3		装置構成 Line Type	標準 Stand Alone In-Line System is option.	The arrangements with the customer are required.
2-3		処理面 Processing Side	上面 The upper side is the patterning.	
2-4		装置寸法 Machine Dimension	7,400 L x 2,200 W (*) x 1,400 H mm * 付帯設備を含む * Including Attached Optional Units.	処理高 : 床面 + 1,100 mm Pass-Line : FL + 1,100 mm
3-1	ユーティリティ Utilities	給水 Water Supply	純水 D.I.Water ~ 20 LPM	客先要望により変更可 User's arrangement is possible.
3-2		冷却機構 Chiller Unit	無し Option	客先要望により変更可 User's arrangement is possible.
3-3		排水 Drain	酸・アルカリ Acid / Alkaline ~ 50LPM	The arrangements with the customer are required.
3-4		排気 Exhaust	酸・アルカリ Acid / Alkaline ~ 10,000LPM	The arrangements with the customer are required.
3-5		圧縮空気 CDA	Clean Dry Air ~ 2,000 NLPM (* Using Air-Knife)	The arrangements with the customer are required.
3-6		電源 Power	3φ 200V Approx. 12kVA (100A/125AF)	The arrangements with the customer are required.
4-1	処理工程 Process	投入 Loading	生産管理機構はOption CIM System is option.	客先要望により変更可 User's arrangement is possible.
4-2		水洗 Water Rinse	循環水洗 Circulation Rinsing Spray	酸性ガス洗浄工程 Acid Gas Scrubber
4-3		ITO 蝕刻 ITO Etching	循環スプレ Spray Circulation タンク容量 Tank Capa. Max. 200L 処理温度 Temp. Max. 45°C Chemicals : FeCl3+HCl, HCl+HN03 etc.	詳細は別途打合せが必要 The arrangements with the customer are required.
4-4		水洗 Water Rinse	循環水洗 Circulation Rinsing Spray x2	The arrangements with the customer are required.
4-5		レジスト剥離 Resist Strip	循環スプレ Spray Circulation タンク容量 Tank Capa. Max. 200L 処理温度 Temp. Max. 40°C Chemicals : NaOH or KOH ~3%	詳細は別途打合せが必要 The arrangements with the customer are required.
4-6		水洗 Water Rinse	循環水洗 Circulation Rinsing Spray x2 純水洗 D.I.W. Rinse	The arrangements with the customer are required.
4-7		液切乾燥 Drier	Air-Knife & Squeeze Roller Hot Air Circulation ~ 80°C	客先要望により変更可 User's arrangement is possible.
4-8		排出 Unloading	生産管理機構はOption CIM System is option.	客先要望により変更可 User's arrangement is possible.

ITO Glass 蝕刻剥離装置 形式 SLES-400 標準仕様 (概要)
ITO Glass Etch - Strip Machine MODEL SLES-400 Standard Specifications (Outline)

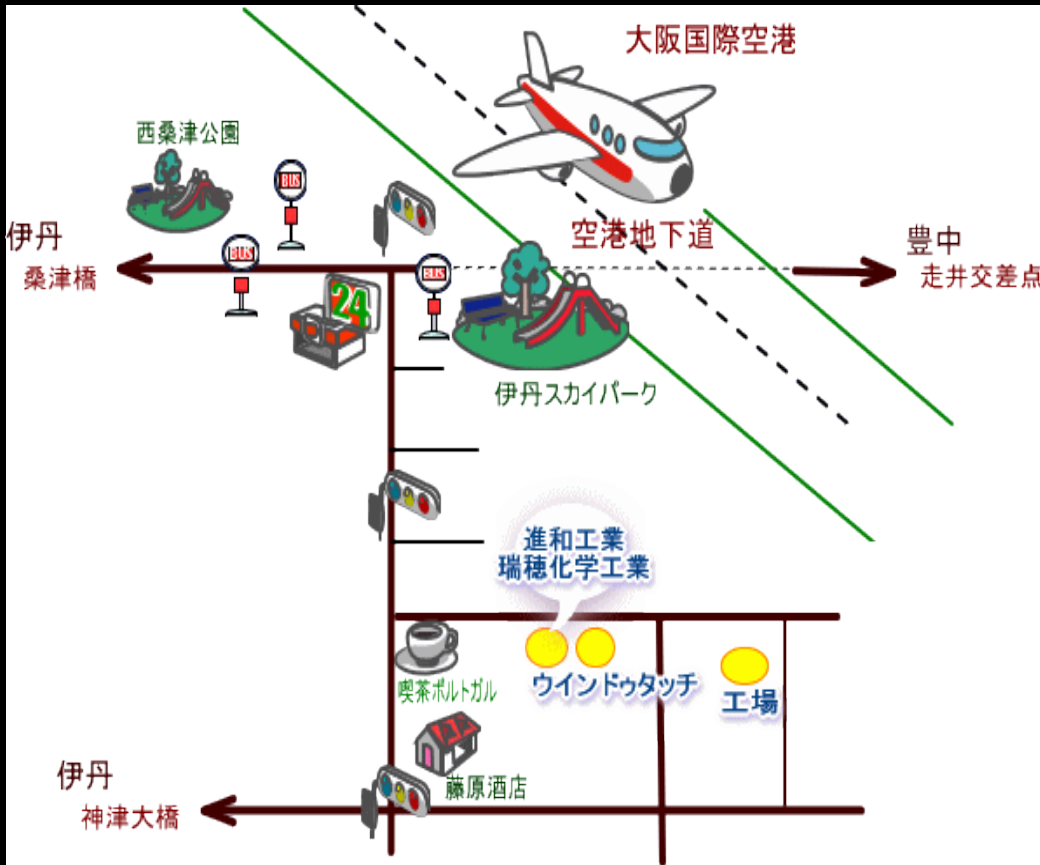
No.	分類 Class	項目 Item	標準仕様 Standard Spec.	注記 Notes
1-1	処理基材 Substrate	基板 Substrate	ITO Glass + Etching Resist (INK or Photoresist)	
1-2		基板寸法 Dimension	□ 300 x 300 ~ 400 x 500 mm t = 0.3 ~ 3.0 mm	客先要望により変更可 User's arrangement is possible.
2-1	基本情報 Basic Info.	搬送方式 Conveyance System	水平型 Roller 搬送式 Horizontal Roller Conveyor	Roller Pitch : 60 mm
2-2		処理速度 Process Speed	Standard 1.5 m /min. Variable 0.5 ~ 3.5 m / min.	客先要望により変更可 User's arrangement is possible.
2-3		装置構成 Line Type	標準 Stand Alone In-Line System is option.	The arrangements with the customer are required.
2-3		処理面 Processing Side	上面 The upper side is the patterning.	
2-4		装置寸法 Machine Dimension	12,200 L x 2,200 W (*) x 1,400 H mm * 付帯設備を含む * Including Attached Optional Units.	処理高 : 床面 + 1,100 mm Pass-Line : FL + 1,100 mm
3-1	ユーティリティ Utilities	給水 Water Supply	純水 D.I.Water ~ 50 LPM	客先要望により変更可 User's arrangement is possible.
3-2		冷却機構 Chiller Unit	有 Chiller unit is installed.	客先要望により変更可 User's arrangement is possible.
3-3		排水 Drain	酸・アルカリ Acid / Alkaline ~ 50LPM	The arrangements with the customer are required.
3-4		排気 Exhaust	酸・アルカリ Acid / Alkaline ~ 15,000LPM	The arrangements with the customer are required.
3-5		圧縮空気 CDA	Clean Dry Air ~ 6,000 NLPM (* Using Air-Knife)	The arrangements with the customer are required.
3-6		電源 Power	3φ 200V Approx. 25 kVA (175A/250AF)	The arrangements with the customer are required.
4-1	処理工程 Process	投入 Loading	生産管理機構はOption CIM System is option.	客先要望により変更可 User's arrangement is possible.
4-2		水洗 Water Rinse	循環水洗 Circulation Rinsing Spray	酸性ガス洗浄工程 Acid Gas Scrubber
4-3		ITO 蝕刻 ITO Etching	循環スプレ Spray Circulation タンク容量 Tank Capa. Max. 200L 処理温度 Temp. Max. 45°C Chemicals : FeCl3+HCl or HCl+HN03 etc.	詳細は別途打合せが必要 The arrangements with the customer are required.
4-4		水洗 Water Rinse	循環水洗 Circulation Rinsing Spray x2	The arrangements with the customer are required.
4-5		レジスト剥離 Resist Strip	循環スプレ Spray Circulation タンク容量 Tank Capa. Max. 200L 処理温度 Temp. Max. 40°C Chemicals : NaOH or KOH ~3%	詳細は別途打合せが必要 The arrangements with the customer are required.
4-6		水洗 Water Rinse	循環水洗 Circulation Rinsing Spray x2 純水洗 D.I.W. Rinse	The arrangements with the customer are required.
4-7		液切乾燥	Air-Knife	客先要望により変更可 User's arrangement is possible.
4-8		排出 Unloading	生産管理機構はOption CIM System is option.	客先要望により変更可 User's arrangement is possible.

Glass 基板洗浄装置 形式 SLC-400 標準仕様 (概要) Glass Cleaner MODEL SLC-400 Standard Specifications (Outline)				
No.	分類 Class	項目 Item	標準仕様 Standard Spec.	注記 Notes
1-1	処理基材 Substrate	基板 Substrate	ITO Glass	
1-2		基板寸法 Dimension	□ 300 x 300 ~ 400 x 500 mm t = 0.3 ~ 3.0 mm	客先要望により変更可 User's arrangement is possible.
2-1	基本情報 Basic Info.	搬送方式 Conveyance System	水平型 Roller 搬送式 Horizontal Roller Conveyor	Roller Pitch : 60 mm
2-2		処理速度 Process Speed	Standard 2.0 m /min. Variable 0.5 ~ 3.5 m / min.	客先要望により変更可 User's arrangement is possible.
2-3		装置構成 Line Type	標準 Stand Alone In-Line System is option.	The arrangements with the customer are required.
2-3		処理面 Processing Side	上面 The upper side is the patterning.	
2-4		装置寸法 Machine Dimension	5,400L x 2,200W (*) x 1,200 H mm * 付帯設備を含む * Including Attached Optional Units.	処理高 : 床面 + 900 mm Pass-Line : FL + 900 mm
3-1	ユーティリティ Utilities	給水 Water Supply	純水 D.I.Water ~ 20 LPM	客先要望により変更可 User's arrangement is possible.
3-2		冷却機構 Chiller Unit	無 None	客先要望により変更可 User's arrangement is possible.
3-3		排水 Drain	アルカリ Alkaline ~ 50LPM	The arrangements with the customer are required.
3-4		排気 Exhaust	アルカリ Alkaline ~ 12,000LPM	The arrangements with the customer are required.
3-5		圧縮空気 CDA	Clean Dry Air ~ 5,000 NLPM (* Using Air-Knife)	The arrangements with the customer are required.
3-6		電源 Power	3φ 200V Approx. 8 kVA (50A/75AF)	The arrangements with the customer are required.
4-1	処理工程 Process	投入 Loading	生産管理機構はOption CIM System is option.	客先要望により変更可 User's arrangement is possible.
4-2		ブラシ洗浄 Scrubbing Cleaning	循環スプレ Circulation Spray + Roll Brush Scrubbing タンク容量 Tank Capa. Max. 100L 処理温度 Temp. Max. 40℃ Chemicals : Alkaline Detergents	詳細は別途打合せが必要 The arrangements with the customer are required.
4-3		2流体洗浄 Air Atomizing Spray	2流体洗浄 Air-Atomizing Spray	詳細は別途打合せが必要 The arrangements with the customer are required.
4-4		水洗 Water Rinse	循環水洗 Circulation Rinsing Spray + 純水洗 D.I.W. Rinse	The arrangements with the customer are required.
4-5		液切乾燥	Air-Knife	客先要望により変更可 User's arrangement is possible.
4-6		排出 Unloading	生産管理機構はOption CIM System is option. 基板整列機構 Alignment System is installed.	客先要望により変更可 User's arrangement is possible.

Glass 基板現像装置 形式 SLD-400 標準仕様 (概要)
Glass Developer MODEL SLD-400 Standard Specifications (Outline)

No.	分類 Class	項目 Item	標準仕様 Standard Spec.	注記 Notes
1-1	処理基材 Substrate	基板 Substrate	ITO Glass + Photo-Resist (Photo-Spacer etc.)	
1-2		基板寸法 Dimension	□ 300 x 300 ~ 400 x 500 mm t = 0.3 ~ 3.0 mm	客先要望により変更可 User's arrangement is possible.
2-1	基本情報 Basic Info.	搬送方式 Conveyance System	水平型 Roller 搬送式 Horizontal Roller Conveyor	Roller Pitch : 60 mm
2-2		処理速度 Process Speed	Standard 2.0 m /min. Variable 0.5 ~ 3.5 m / min.	客先要望により変更可 User's arrangement is possible.
2-3		装置構成 Line Type	標準 Stand Alone In-Line System is option.	The arrangements with the customer are required.
2-3		処理面 Processing Side	上面 The upper side is the patterning.	
2-4		装置寸法 Machine Dimension	7,400L x 2,200W (*) x 1,200 H mm * 付帯設備を含む * Including Attached Optional Units.	処理高 : 床面 + 900 mm Pass-Line : FL + 900 mm
3-1	ユーティリティ Utilities	給水 Water Supply	純水 D.I.Water ~ 20 LPM	客先要望により変更可 User's arrangement is possible.
3-2		冷却機構 Chiller Unit	有 Chiller Unit is installed.	客先要望により変更可 User's arrangement is possible.
3-3		排水 Drain	アルカリ Alkaline ~ 50LPM	The arrangements with the customer are required.
3-4		排気 Exhaust	アルカリ Alkaline ~ 12,000LPM	The arrangements with the customer are required.
3-5		圧縮空気 CDA	Clean Dry Air ~ 4,000 NLPM (* Using Air-Knife)	The arrangements with the customer are required.
3-6		電源 Power	3φ 200V Approx. 13 kVA (75A/75AF)	The arrangements with the customer are required.
4-1	処理工程 Process	投入 Loading	生産管理機構はOption CIM System is option.	客先要望により変更可 User's arrangement is possible.
4-2		感光性レジスト現像 Photo-Resist Development	循環スプレ Circulation Spray タンク容量 Tank Capa. Max. 300L 処理温度 Std. Temp. 23 °C Chemicals : Alkaline Solution	詳細は別途打合せが必要 The arrangements with the customer are required.
4-3		薬液管理 Chemical Control System	オプション Option	詳細は別途打合せが必要 The arrangements with the customer are required.
4-4		水洗 Water Rinse	循環水洗 Circulation Rinsing Spray x 2 + 純水洗 D.I.W. Rinse	The arrangements with the customer are required.
4-5		液切乾燥	Air-Knife	客先要望により変更可 User's arrangement is possible.
4-6		排出 Unloading	生産管理機構はOption CIM System is option. 基板整列機構 Alignment System is installed.	客先要望により変更可 User's arrangement is possible.

お問合せ Contact Us



- * 大阪国際空港（伊丹空港）より タクシー利用 約15分
- * JR伊丹駅・阪急伊丹駅より タクシー利用 約15分
- * JR伊丹駅・阪急伊丹駅・空港方面より 伊丹市営バス 最寄バス停 伊丹スカイパーク・上須古 徒歩15分
- * 阪神高速池田線 豊中北ICより 車で約10分
- * 中国池田IC・中国豊中ICより 車で約15分

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