



# Flexible circuit board materials

## フレキシブル基板材料

# FELIOS

Double-sided copper clad **R-F775**  
Single-sided copper clad **R-F770**

### Applications 用途

Consumer mobile products (Smartphone, tablet PC),  
Medical, Industrial, Avionics, Etc.

モバイル機器 (スマートフォン、タブレット PC)、医療機器、産業機器、航空機器など



Felios adhesiveless flex materials are available in a wide-range of film and copper foil thicknesses to support all applications. Felios offers superior thermal resistance, dimensional stability and quality.

多彩な厚みのラインアップにより、モバイル機器を始め様々な用途に適用可能。また耐熱性や寸法安定性、品質にも優れる。

Superior Thermal Resistance

Wide Product Selection

High dimensional stability

### Line-up ラインアップ

Available in various film and copper foil combinations. 様々なフィルム・銅箔の組合せに対応

Roll-cut Type MAX 610mm(MD) x 500mm(TD) Roll Type W=250mm, 500mm

Copper Foil Thickness		Film Thickness							Unit: mil (mm)
		0.5 (0.013)	1.0 (0.025)	2.0 (0.050)	3.0 (0.075)	4.0 (0.100)	5.0 (0.125)	6.0 (0.150)	
RA Copper Foil 圧延銅箔	1/4oz (9 μm)	●*1	●*1	●*1	-	-	-	●*1	
	1/3oz (12 μm)	●	●	●	●	●	-	-	
	1/2oz (18 μm)	●	●*2	●*2	●*2	●*2	●*2	●	
	1oz (35 μm)	●*1	●*2	●*2	●*2	●*2	●*2	●	
	2oz (70 μm)	-	●*2	●*2	●	●	●	-	
ED Copper Foil 電解銅箔	- (2 μm)	●	●	●	●	-	-	-	
	1/6oz (6 μm)	●	●	●	-	-	-	-	
	1/4oz (9 μm)	●	●	●	●	●	●	●	
	1/3oz (12 μm)	●	●	●	●	●	●	●	
	1/2oz (18 μm)	●	●	●	●	●	-	-	
	1oz (35 μm)	-	●	●	●	●	-	-	

\*1 Special option \*2 W=610mm is optional.

### General properties 一般特性

Item	Test method	Condition	Unit	FELIOS R-F775	
Solder heat resistance	JIS C 6471	A	°C	>330	
		C-96/40/90		260	
Tensile modulus	ASTM D882	A	GPa	7.1	
Tensile strength	Internal method	A	MPa	542	
Peel strength	RA: 1/3oz(12 μm)	A	N/mm	1.35	
CTE	MD/TD	JIS R 3251	50~200°C	ppm/°C	17/19
	Z-axis			ppm/°C	101
Thermal conductivity	Laser flash	A	W/m·K	0.16	
Dimensional stability	IPC-TM-650	After etching MD direction	%	0.00±0.10	
		After etching TD direction		0.00±0.10	
Flammability	UL	A + E-168/70	-	94V-0	

The sample thickness is film 25 μm, copper foil 12 μm.

Our Halogen-free materials are based on JPCA-ES-01-2003 standard and others. 当社ハロゲンフリー材料は、JPCA-ES-01-2003などの定義によるものです。The above data are typical values and not guaranteed values. 上記データは当社測定による代表値であり、保証値ではありません。

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