

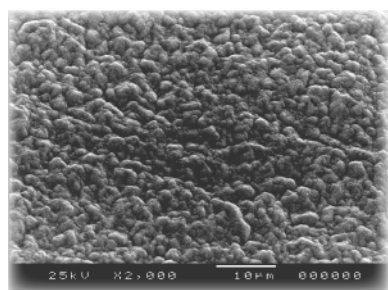
電解  
銅箔  
ED  
Copper

# CF-T4M-HD

超低粗度電解銅箔  
Ultra Very Low Profile ED Copper Foil

圧延銅箔と同等の屈曲性を誇る再結晶型の低粗度電解銅箔  
Low profile ED copper foil proud of equivalent flexibility as RA foil

## 粗化処理面 SEM Matte Side SEM



## 粗化処理イメージ Roughness Image

ラミネート面  
Laminated Side



レジスト面 Resist Side

**POINT**  
加熱後に結晶構造が変化し、屈曲性を発現！  
Changed crystal structure realizes higher flexibility.

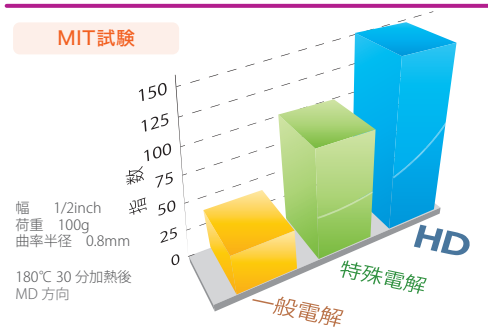
## 代表特性 Typical Properties

製品名 Product Name	公称厚さ Nominal thickness $\mu\text{m}$	質量厚さ Thickness weight $\text{kg}/\text{m}^2$	伸び率 Elongation		抗張力 Tensile Strength		粗面粗さ matte side roughness RzJIS $\mu\text{m}$
			常態 A	加熱後 After heated	常態 As received	加熱後 After heated	
			%	%	$\text{N}/\text{mm}^2$	$\text{N}/\text{mm}^2$	
CF-T4M-HD-12	12	0.107	6	20	490	280	2.0
CF-T4M-HD-18	18	0.153	9	25	480	270	2.5

加熱条件 180°C-1h

## POINT 7

### 圧延銅箔と同等の高い屈曲性 High bendability

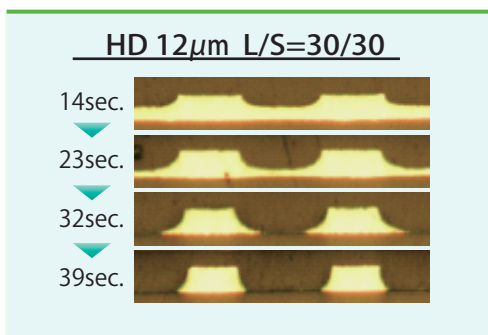


「HD」は加熱後に結晶構造が変化する再結晶型であり、加熱後には圧延銅箔に匹敵する高い屈曲性を発現するFPCに最適な電解銅箔です。

HD is re-crystalizing type which means that crystal structure changes after heat treatment and most suitable electrolytic copper foil for FPC having as high flexibility as that of rolled foil after heat treatment.

## POINT 2

### 微細配線を可能にする低粗度粗面 Very Low profile matte side



大きな密着面積を確保しながら粗度に殆ど影響を与えないサブミクロンの極微細粗化処理により、RzJIS2.5 $\mu$ mを実現。原箔光沢面側に粗化処理を施すことで更なる低粗度化も可能です。

Submicron ultra fine treatment with influencing hardly no affects on profile securing large bond area realized RzJIS 2.5 microns Additional treatment on raw foil shiny side enables lower profile.

## POINT 3

### 鉛フリーはんだにも対応した高い耐熱性 High Heat Resistance



粗化処理面は高い耐熱性を有しており、はんだフローやはんだリフロー時におけるCCLの膨れなどの不具合は一切ありません。

Mat side treatment has high heat resistance and would not have any defects such as blisters of CCL on flow soldering or reflow soldering