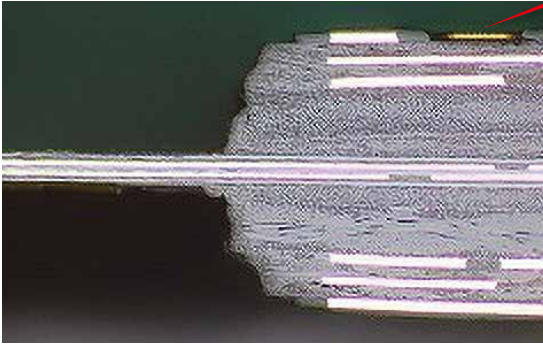


## Flex board FPC characteristics

### ① Less Flatness (processing technology)

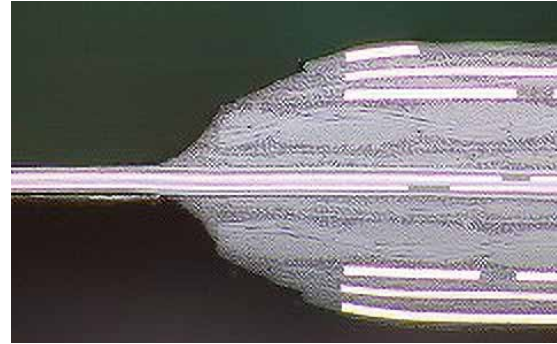
Improved mounting of PAD near by the flex boundary!

made in DAISHO



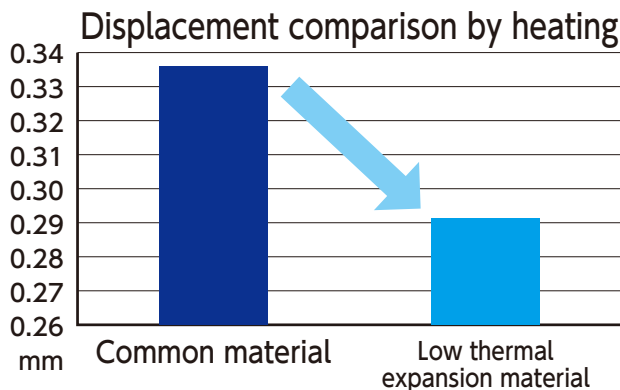
Flatness (coplanarity) 10um

Common FPC

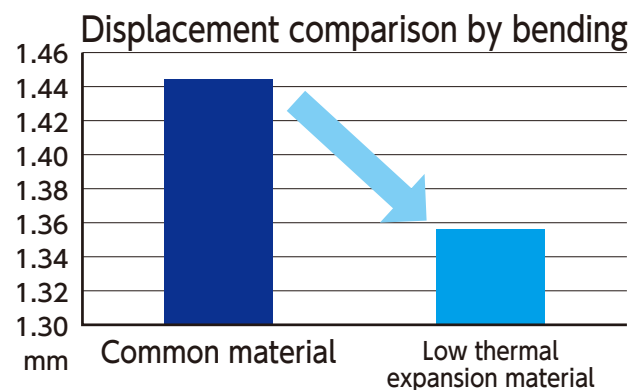


Flatness (coplanarity) 25um

### ② No stretchiness and no bending (material arrangement)

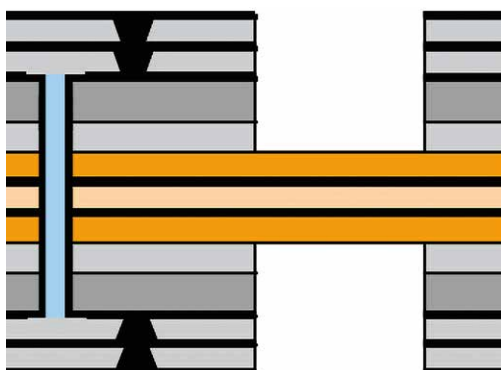


12% reduction in material change rate even heated up!



6% reduction in bending rate even heated up!

### ③ High reliability (even with a combination of dissimilar materials)



- ① Cu foil (3 types)
  - ② Common PP
  - ③ PP for flex
  - ④ Low expansion core
  - ⑤ Cover-ray
  - ⑥ adhesive
  - ⑦ Polyimide
- ⇒ Processing with 7 types of different materials

Qualified by 3,000 cycles!

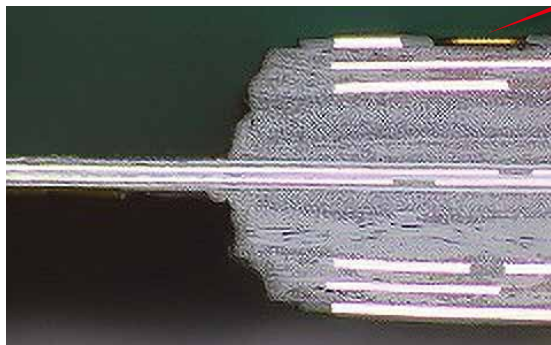
# 大昌電子フレキ基板FPCの特徴

## ①凹凸が少ない(加工技術)

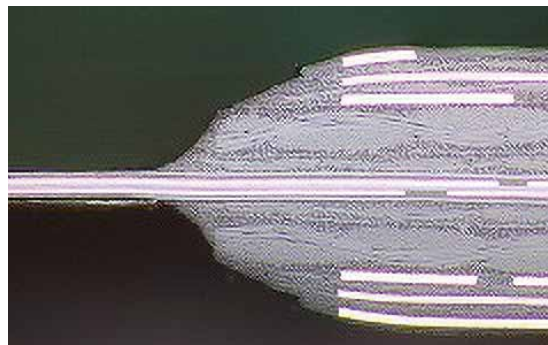
フレキ境界線近くの  
PADの実装性向上!!

made in DAISHO

一般基板



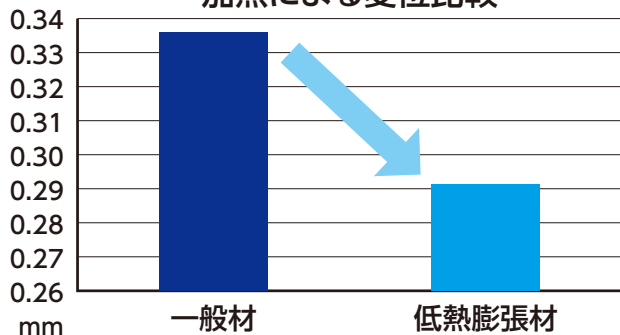
平坦(コプラナリティ)10um



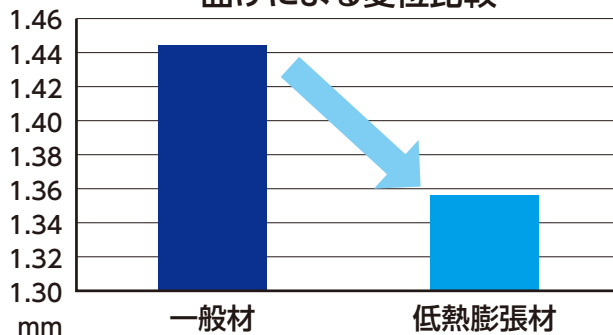
平坦(コプラナリティ)25um

## ②伸びない曲がらない(材料アレンジ)

加熱による変位比較



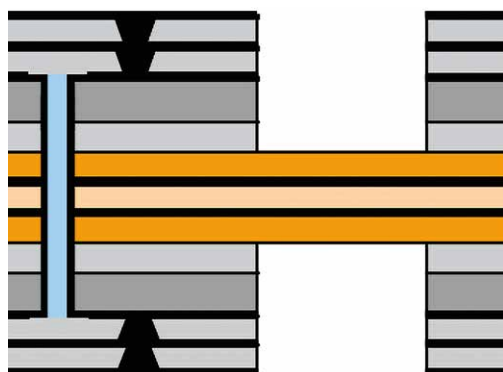
曲げによる変位比較



熱をかけても基材変化率12%減!

熱をかけても曲げが6%減!

## ③高信頼性(異種材組合せでも高信頼性)



- ①銅箔(3種類)
  - ②一般プリプレグ
  - ③フレキ用プリプレグ
  - ④低膨張コア材
  - ⑤カバーレイ
  - ⑥接着剤
  - ⑦ポリイミド
- ⇒7種類の異種材を加工

3,000サイクルまで合格!