

High-Temperature Resistant / Oil Resistant FPC

Features

- A liquid crystal polymer (LCP) is used for base materials and cover materials.
- Offers a long-term heat resisting property of 230°C.
- An oil resisting property is provided for engine oil, a brake pedal, and ATF.

Unit : μm

50	LCP
18	Copper foil
50	LCP





No adhesive
exists between
LCP and copper foil.

Can be used for the electric wiring
in an engine room or gasoline tank meter!

Long-term high-temperature shelf test

Leave a specimen as it is in a high-temperature bath of 230°C for 240 hours and check the appearance and insulation resistance value before and after a test.

[Appearance check]

	Before test	After test
LCP products (without adhesive)		
Polyimide products (with adhesive)		

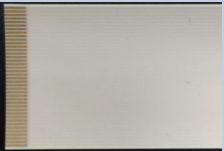
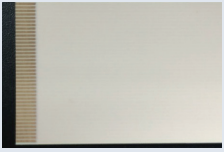

[Measurement of insulation resistance value (n = 3)]
(Standard value: $5.0 \times 10^8 \Omega$ or more)

No.	Before test	After test
1	$1.1 \times 10^{11} \Omega$	$6.5 \times 10^{11} \Omega$
2	$1.0 \times 10^{11} \Omega$	$7.2 \times 10^{11} \Omega$
3	$1.0 \times 10^{11} \Omega$	$6.5 \times 10^{11} \Omega$
4	$1.1 \times 10^{11} \Omega$	$6.7 \times 10^{11} \Omega$

Oil resistance test

Immerse and leave a specimen as it is in each heat medium of 150°C for 50 hours and check the conductor peel strength, insulation resistance value, and appearance.

[Appearance check]

Heat medium	After test	Result
Engine oil		No blistering and peeling
Brake oil		No blistering and peeling
ATF		No blistering and peeling

[Conductor peel strength (Mean value of n = 3)]
Standard value: 0.49 N/mm or more (See JIS C 5017.)

Heat medium	Peel strength (N/mm)
Engine oil	0.567
Brake oil	0.993
ATF	0.797

[Measurement of conduction resistance value (Mean value of n = 3)]

Heat medium	Before test (Ω)	After test (Ω)	Change rate (Ω)
Engine oil	0.794	0.794	0.0%
Brake oil	0.766	0.785	2.4%
ATF	0.794	0.796	0.2%