■ Features

- Shielded construction.
- Compact design with low DCR and high inductance.
- Capable of handling high transient current spikes without saturation.
- Equipped with strong resistance to electromagnetic interference and ultra-low noise.
- 100% Lead(Pb)-free and RoHS compliant.

■ Applications

- Isolated converters, such as flyback converters.
- Step-down, step-up, Sepic, Zeta, CUK converter.
- A switching regulator with a second,unregulated output voltage.

■ Product Identification

YLSC □□□□□ – □□□ □

(1) (2) (3) (4)

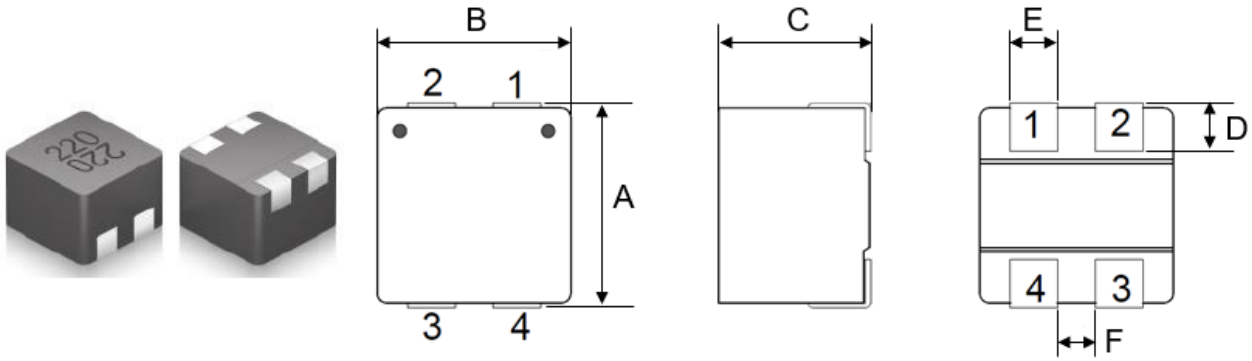
(1)： Type

(2)： Dimensions

(3)： Inductance value

(4)： Inductance Tolerance： N=±30%,M=±20%

■ Shapes and Dimensions (Unit： mm)



TYPE	A Max.	B	C Max.	D	E	F
YLSC1090V	11.5	10.2±0.2	9.0	2.0±0.3	2.5±0.2	1.9±0.2

■ Electrical Characteristic

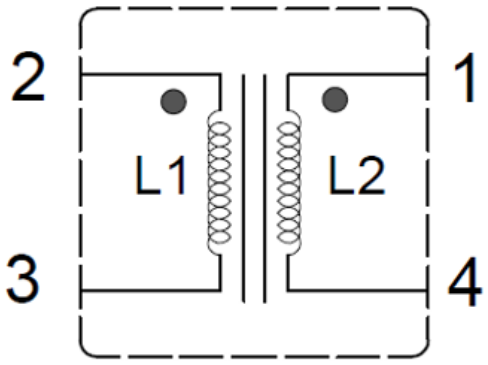
Part Number	Inductance (uH) @100KHz		DCR (mΩ) Typ.		DCR (mΩ) Max.		Heat Rating Current (A)	Saturation Current (A)
	L(1-2)	L(3-4)	R(1-2)	R(3-4)	R(1-2)	R(3-4)		
YLSC1090V-1R0M	1.0	1.0	4.6	4.6	5.6	5.6	17.0	43.5
YLSC1090V-1R5M	1.5	1.5	8.7	8.7	9.4	9.4	12.5	34.0
YLSC1090V-2R2M	2.2	2.2	10.6	10.6	12.5	12.5	11.5	29.5
YLSC1090V-3R3M	3.3	3.3	23.3	23.3	26.0	26.0	7.5	28.2
YLSC1090V-4R7M	4.7	4.7	36.2	36.2	40.0	40.0	7.0	24.2
YLSC1090V-6R8M	6.8	6.8	46.1	46.1	51.5	51.5	6.5	21.2
YLSC1090V-8R2M	8.2	8.2	56.3	56.3	63.0	63.0	6.0	18.5
YLSC1090V-100M	10.0	10.0	31.0	31.0	36.0	36.0	5.5	18.0
YLSC1090V-150M	15.0	15.0	73.0	73.0	87.0	87.0	5.0	22.0
YLSC1090V-220M	22.0	22.0	91.0	91.0	106.0	106.0	4.0	18.0
YLSC1090V-330M	33.0	33.0	121.5	121.5	145.0	145.0	3.5	10.0
YLSC1090V-470M	47.0	47.0	218.0	218.0	240.0	240.0	2.3	6.0

※ The saturation current value is the DC current value having inductance decrease down to 30%.(at 20℃)

※ The temperature rise current value is the DC current value having temperature increase up to 40℃. (at 20℃)

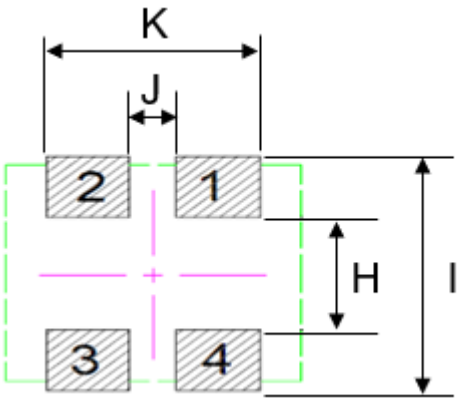
※ The rated current is the DC current value that satisfies both of current value saturation current value and temperature rise current value.

■ Schematic Drawing



Equivaient Circuit

■ Pcb Pattern

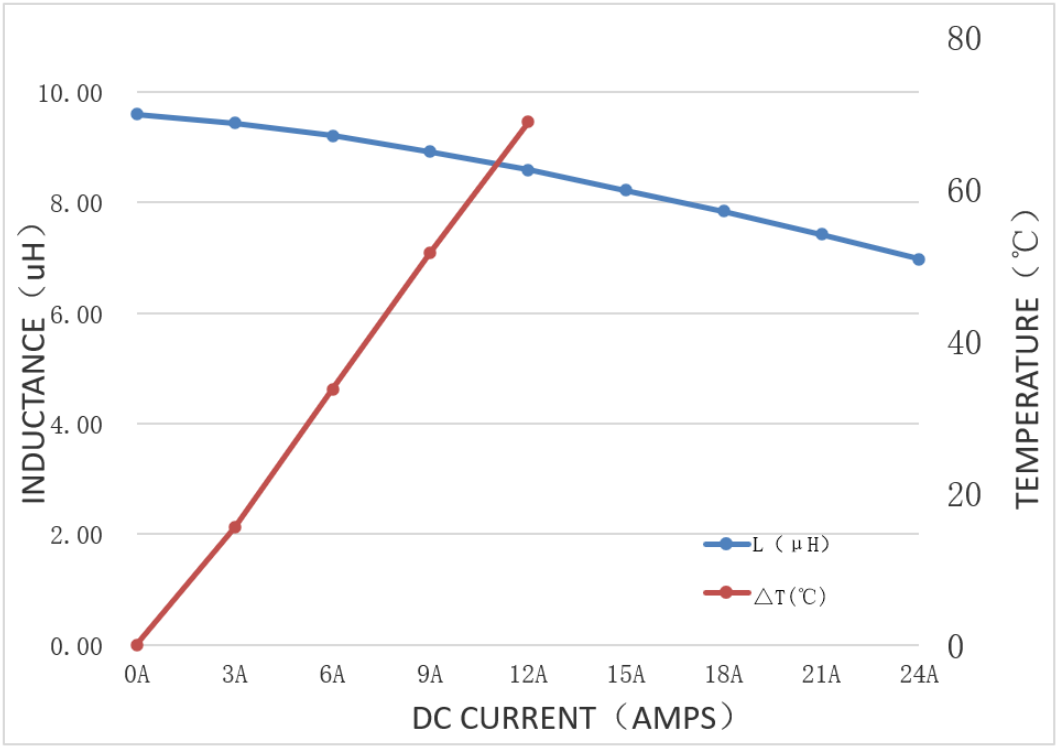


Unit:mm

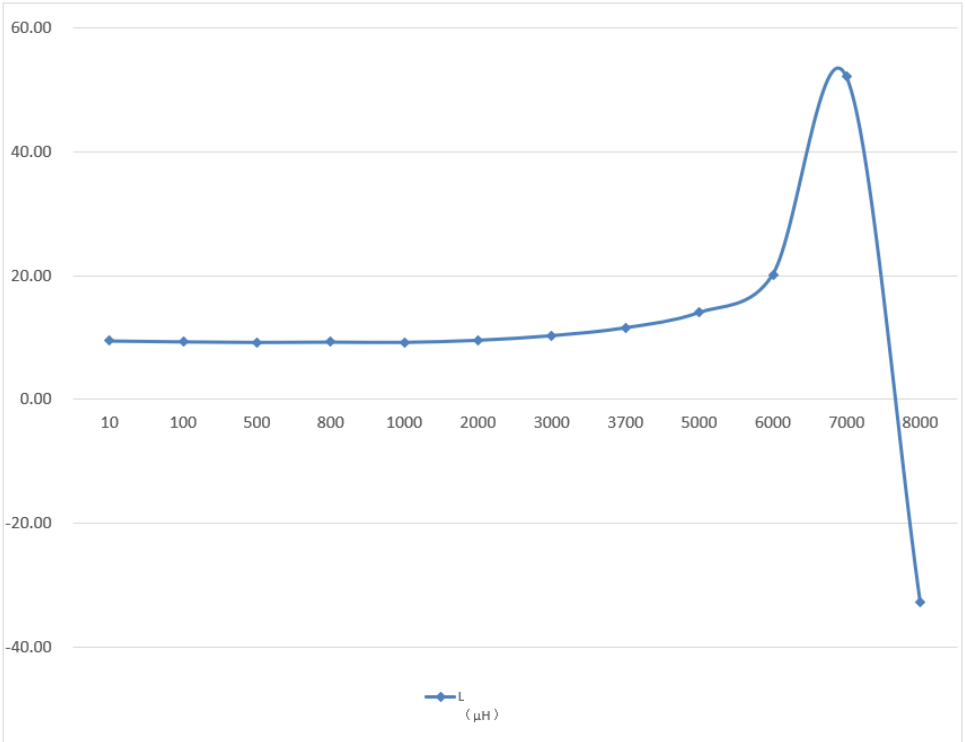
H Ref.	I Ref.	J Ref.	K Ref.
6.0	11.6	1.8	7.6

Typical electrical characteristics

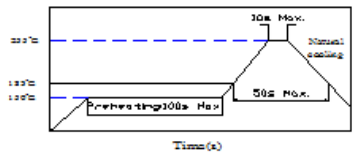
Inductance VS Current @100KHz/1.0V



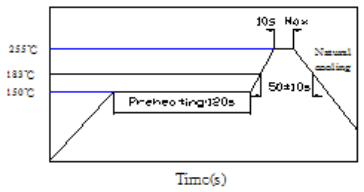
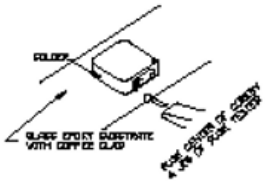
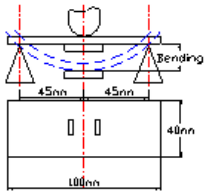
L Frequency characteristics



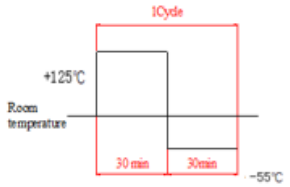
■ Electrical Performance Test

TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS
L	REFER TO STANDARD ELECTRICAL CHARACTERISTIC LIST.	MICROTEST6377
DCR		TH2511
RATED CURRENT		APPLIED THE CURRENT TO COILS THE IDUCTANCE CHANGE SHOULD BE LESS THAN 30% TO INITIAL VALUE AND TEMPERATURE RISE SHOULD NOT BE 40℃ TYPICAL
TEMPERATURERISE TEST	40℃ MAX (△t)	1. APPLIED THE ALLOWED DC CURRENT FOR 4 HOURS. 2. TEMPERATURE MEASURE BY DIGTAL SURFACE THERMOMETER.
OVER LOAD TEST	NO EVIDENCE OF ELECTRICAL DAMAGE	APPLIED 1.5 TIMES OF RATED ALLOWED DC CURRENT TO INDUCTORS FOR A PERIOD OF 5 MINUTES.
MECHANICAL PERFORMANCE TEST		
SOLDER HEAT RESISTANCE	1. INDUCTORS SHOULD HAVE NO EVIDENCE OF ELECTRICAL AND MICHANICAL DAMAGE 2. INDUCTANCE SHOULD NOT HANGE MORE THAN±10%	PREHEAT:150℃ 100s Max. SOLDER TEMPERATURE: 255±5℃ DIP TIME:10s Max. 
VIBRATION TEST (LOW FREQUENCY)		1.AMPLITUDE: 1.5 mm 2.FREQUENCY: 10-55-10HZ / 1 MIN 3.DIRECTION: X, Y, Z 4.DURATION: 2 HRS/X, Y, Z
SHOCK TEST		INDUCTORS SHOULD BE DROPPED 10 TIMES FROM A HEIGHT OF 1m ONTO 3cm WOODEN BOARD.

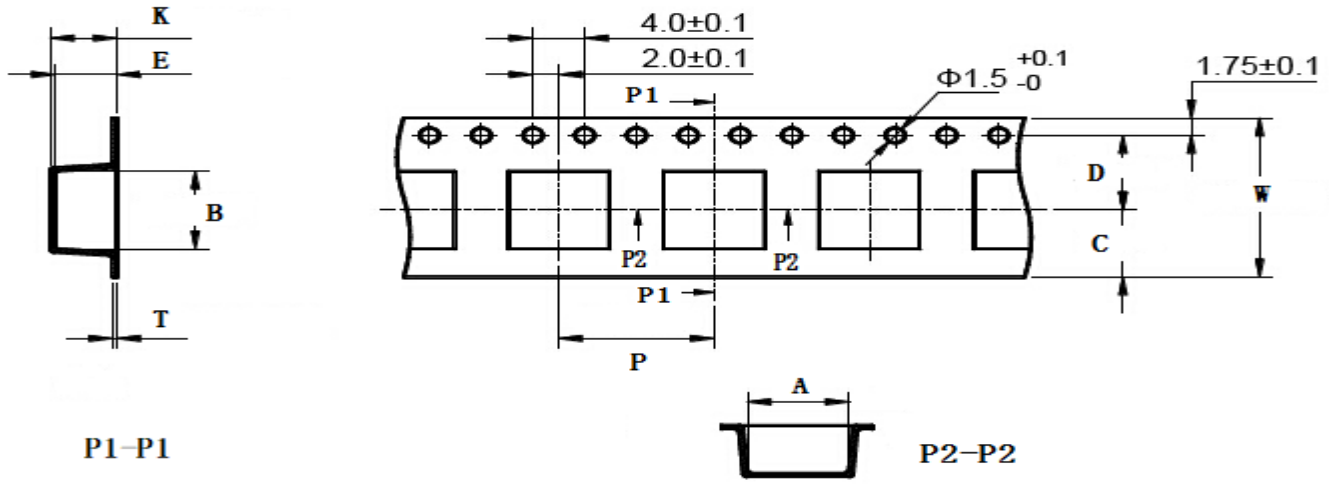
■ Mechanical Performance Test

TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS
SOLDERABILITY TEST	MORE THAN 90% OF TERMINAL ELECTRODE SHOULD BE COVERED WITH SOLDER.	PREHEAT:150℃ 120x SOLDER BATH AT 255±5℃ DIP TIME:10s Max. 
COMPONENT ADHESION (PUSH TEST)	1.5Kg Min	THE DEVICE SHOULD BE REFLOW SOLDERED (255±5℃ FOR 10 SECONDS) TO A TINNED COPPER SUBSTRATE. A DYNOMETER FORCE GAUGE SHOULD BE APPLIED TO THE SIDE OF THE COMPONENT. THE DEVICE MUST WITH- STAND A MINIMUM FORCE OF 1.5Kg WITHOUT AILURE OF THE TERMINATION . 
COMPONENT ADHESION (PULL TEST)	1.5Kg Min	1.INSERT 10cm WIRE INTO THE REMAINING OPEN EYE BEND THE ENDS OF EVEN WIRE LENGTHS UPWARD AND WIND TOGETHER 2. TERMINAL SHALL NOT BEREMARKABLY DAMAGED 
FLEXTURE STRENGTH	THE FORCES APPLIED SHOULD NOT DAMAGE THE DIELECTRIC.	SOLDER A CHIP ON A TEST SUBSTRATE, BEND THE SUBSTRATE BY 2mm AND RETURN. 
RESISTANCE TO SOLVENT TEST	THERE SHOULD BE NO CASEDEFORMATION, CHANGE IN APPEARANCE OR BITERATION OF MARKING	INDUCTERS SHALL WITHSTAND 6 MINTES OF ALCOHOL

■ Climatic Test

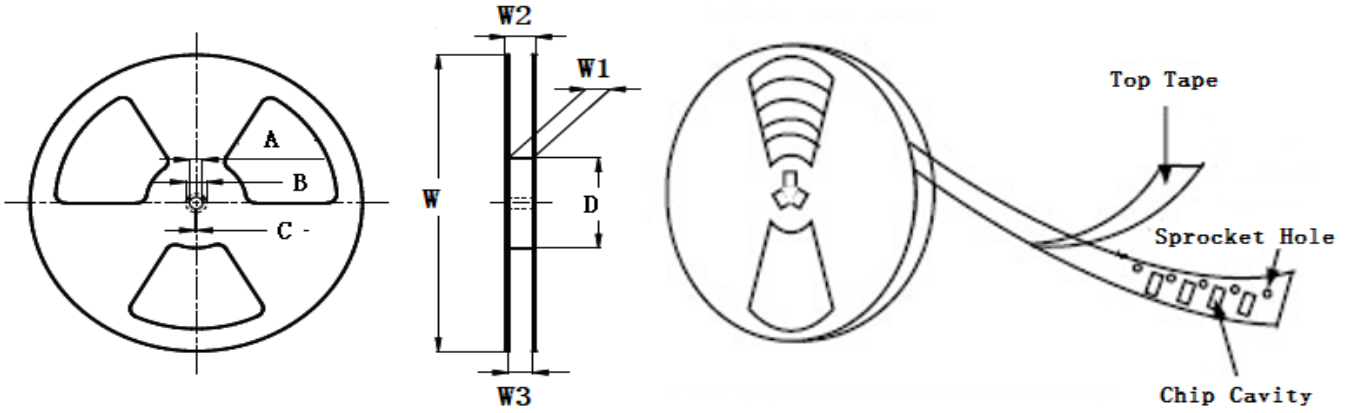
TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS
TEMPERATURE CHARACTERISTIC	1.APPEARANCE:NO DAMAGE 2.INDUCTANCE:WITHIN±10% OF INITIAL VALUE.	-55℃ ~ +125℃
HUMIDITY TEST		60℃±2℃ / 500 HOURS R.H:90-95%RH
LOW TEMPERATURE STORAGE		1.TEMPERATURE:-55℃±2℃ 2.TIME: 1000 HOURS
THERMAL SHOCK TEST		1.-55±5℃ FOR 30 MINUTES. +125±5℃ FOR 30 MINUTES. 2.TOTAL: 100 CYCLES 
HIGH TEMPERATURE STORAGE		1.APPLIED CURRENT: MAX RATED CURRENT 2.TEMPERATURE:125℃±2℃
NOTE：INDUCTORS ARE TO BE TESTED AFTER 2 HOUR AT ROOM TEMPERATURE.		
LIFE TEST		
HIGH TEMPERATURE LOAD LIFE TEST	INDUCTORS SHOULD BE NO EVIDENCE OF SHORT OR OPEN CIRCUIT	1. TEMPERATURE: 125±2℃ 2. TIME: 1000 HOURS 3. LOAD: ALLOWED DC CURREN
HUMIDITY LOAD LIFE TEST		1. TEMPERATURE: 60±2℃ 2. R.H.: 90-95% 3. TIME: 1000 HOURS 4. LOAD: ALLOWED DC CURREN

■ Taping Dimensions(Unit:mm)



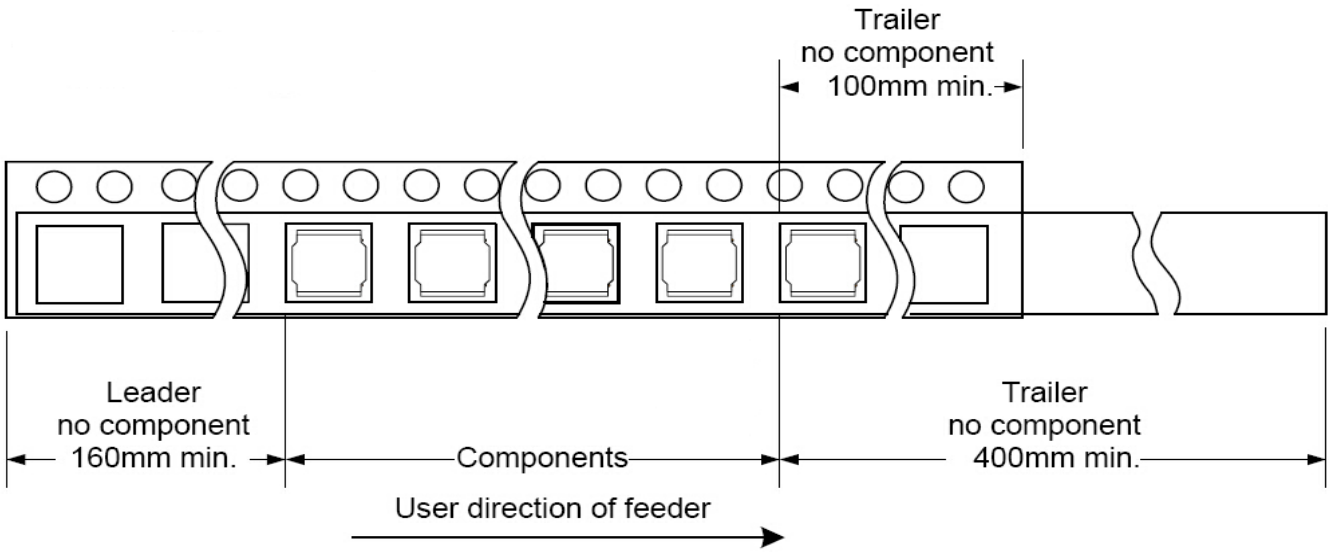
TYPE	W	A	B	C	D	E	P	K Ref	T	MPQ
YLSC1090V	24±0.3	10.6±0.1	12.0±0.1	10.75	11.5±0.1	8.5±0.1	16±0.1	9.2	0.40±0.05	300

■ Reel Dimensions(Unit:mm)

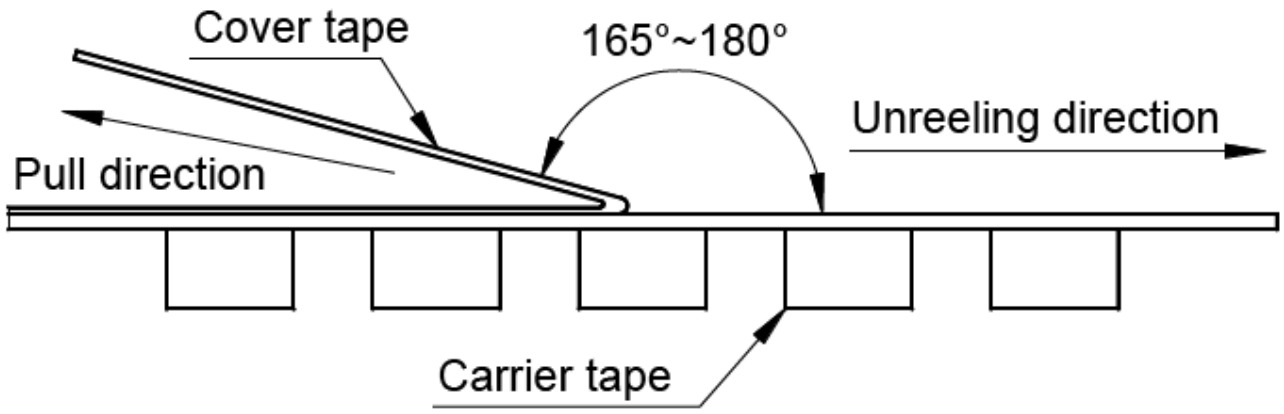


TYPE	W	W1	W2	W3	A	B	C	D
YLSC1090V	330±2.0	24.4±1.5	30.4MAX	23.9 Min	13.0±0.50	21.0±0.80	2.0±0.50	100 Min

■ Direction of rolling



■ Cover tape peel off condition



Cover tape peel force shall be 0.1N to 1.3N.

Reference peel speed 300±10mm/min.