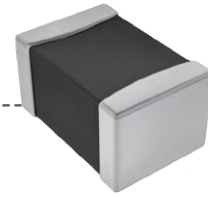


Multilayer Chip Ferrite Inductors—CI Series



FEATURES

- Monolithic Structure for high reliability, Small size inductor.
- No cross coupling due to magnetic shield, Perfect shape for mounting with no directionality.
- Excellent solderability and high heat resistance for reflow soldering or wave soldering.
- OPERATING TEMP: -55°C ~ +125°C

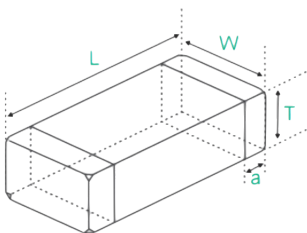
APPLICATIONS

- Widely used in communications, video and audio and equipment, Computer, Remote control, ETC

PRODUCT IDENTIFICATION

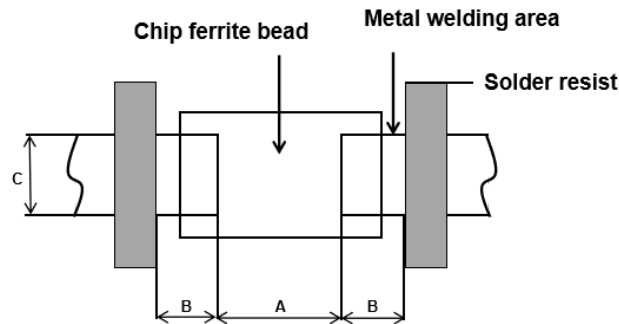
01 ZCI	02 1608	—	03 C	04 2R2	05 K	06 T	07 (f)	
01	Type		02	External Dimensions (LxW)(mm)		05	Nominal Inductance	
ZCI	Chip Ferrite Inductor		1005 [0402]	1.0 x 0.5		Example	Nominal value	
03	Performance Code		1608 [0603]	1.6 x 0.8		2R2	2.2uh	
A,B,C,D			2012 [0805]	2.0 x 1.25		100	10uh	
04	Tolerance		3216 [1206]	3.2 x 1.6		101	100uh	
J	±5%		3225 [1210]	3.2 x 2.5		07	Hazardous Substance Free Products	
K	±10%		06	Packing		(f)		
M	M: ±20%		T	Tape & Reel				

SHAPE AND DIMENSIONS



Part Number	Dimensions(mm)			
	L	W	T	a
ZCI1005 [0402]	1.0±0.15	0.5±0.15	0.5±0.15	0.25±0.1
ZCI1608 [0603]	1.6±0.15	0.8±0.15	0.8±0.15	0.3±0.2
ZCI2012 [0805]	2.0±0.2	1.2±0.2	0.8±0.2	0.4±0.2
ZCI3216 [1206]	3.2±0.2	1.6±0.2	0.8±0.2	0.5±0.3
ZCI3225 [1210]	3.2±0.2	2.5±0.2	1.3±0.3	0.5±0.3

RECOMMENDED PC BOARD PATTERN



Part Number	Dimensions(mm)		
	A	B	C
ZCI1005	0.35	0.6	0.6
ZCI1608	0.6	1.0	0.8
ZCI2012	1.0	1.0	1.0
ZCI3216	2.2	1.1	1.4
ZCI3225	2.2	1.1	2.2

SPECIFICATIONS

● ZCI1005 TYPE

Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZCI1005A47N	0.047	J. K. M	10	50/0.05	220	0.45	25
ZCI1005A68N	0.068		10	50/0.05	210	0.45	25
ZCI1005A82N	0.082		10	50/0.05	200	0.45	25
ZCI1005AR10	0.10		10	25/0.05	200	0.8	25
ZCI1005AR12	0.12		10	25/0.05	165	0.8	25
ZCI1005AR15	0.15		10	25/0.05	140	0.9	25
ZCI1005AR18	0.18		15	25/0.05	120	0.9	25
ZCI1005AR22	0.22		15	25/0.05	110	1.2	25
ZCI1005AR27	0.27		15	25/0.05	95	1.2	25
ZCI1005AR33	0.33		15	25/0.05	85	1.25	18
ZCI1005AR39	0.39		15	10/0.05	70	1.50	20
ZCI1005BR39	0.39		15	10/0.05	85	0.6	20
ZCI1005BR47	0.47		20	10/0.05	80	0.7	15

Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZCI1005BR56	0.56	J. K. M	20	10/0.05	75	0.8	15
ZCI1005BR68	0.68		20	10/0.05	70	0.9	15
ZCI1005BR82	0.82		20	10/0.05	65	0.9	15
ZCI1005B1R0	1.00		20	10/0.05	40	1.00	15
ZCI1005B1R2	1.20		20	10/0.05	35	1.20	15
ZCI1005B1R5	1.50		20	10/0.05	30	1.20	15
ZCI1005B1R8	1.80		20	10/0.05	30	1.45	15
ZCI1005B2R2	2.20		20	10/0.05	28	1.70	10
ZCI1005B2R7	2.70		20	10/0.05	22	2.00	10
ZCI1005B3R3	3.30		20	10/0.05	20	2.35	10
ZCI1005C3R9	3.90		20	10/0.05	18	2.00	3
ZCI1005C4R7	4.70		18	10/0.05	15	2.35	3
ZCI1005D5R6	5.60		18	10/0.05	13	2.00	2
ZCI1005D6R8	6.80		18	10/0.05	11	2.35	2
ZCI1005D8R2	8.20		18	10/0.05	10	2.35	2
ZCI1005D100	10.0		18	10/0.05	9	3.15	2

● ZCI1608 TYPE

Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)	
ZCI1608A47N	0.047	J. K. M	25	50/0.05	320	0.15	300	
ZCI1608A56N	0.056		25	50/0.05	320	0.15	300	
ZCI1608A68N	0.068		25	50/0.05	280	0.20	300	
ZCI1608A82N	0.082		25	50/0.05	280	0.20	300	
ZCI1608AR10	0.10		20	25/0.05	235	0.20	250	
ZCI1608AR12	0.12		20	25/0.05	220	0.25	250	
ZCI1608AR15	0.15		20	25/0.05	200	0.25	250	
ZCI1608AR18	0.18		20	25/0.05	185	0.30	250	
ZCI1608AR22	0.22		20	25/0.05	170	0.30	250	
ZCI1608AR27	0.27		20	25/0.05	150	0.40	250	
ZCI1608AR33	0.33			20	25/0.05	135	0.40	250



Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZCI1608AR39	0.39	J. K. M	25	25/0.05	125	0.50	200
ZCI1608AR47	0.47		25	25/0.05	125	0.50	200
ZCI1608AR56	0.56		25	25/0.05	115	0.60	150
ZCI1608AR68	0.68		25	25/0.05	105	0.65	150
ZCI1608AR82	0.82		25	25/0.05	100	0.70	150
ZCI1608B1R0	1.00		35	10/0.05	70	0.6	50
ZCI1608B1R2	1.20		35	10/0.05	60	0.8	25
ZCI1608B1R5	1.50		35	10/0.05	55	0.8	25
ZCI1608B1R8	1.80		35	10/0.05	50	0.95	25
ZCI1608B2R2	2.20		35	10/0.05	45	1.15	15
ZCI1608B2R7	2.70		35	10/0.05	40	1.35	15
ZCI1608B3R3	3.30		35	10/0.05	38	1.55	15
ZCI1608B3R9	3.90		35	10/0.05	36	1.7	15
ZCI1608B4R7	4.70		35	10/0.05	33	2.1	15
ZCI1608C5R6	5.60		35	4/0.05	22	1.55	5
ZCI1608C6R8	6.80		35	4/0.05	20	1.7	5
ZCI1608C8R2	8.20		35	4/0.05	18	2.1	5
ZCI1608C100	10		35	2/0.05	17	2.55	5
ZCI1608C120	12		35	2/0.05	15	2.1	5
ZCI1608D150	15		20	1/0.05	14	1.7	1
ZCI1608D180	18		20	1/0.05	13	1.85	1
ZCI1608D220	22		20	1/0.05	11	2.1	1
ZCI1608D270	27		20	1/0.05	10	2.75	1
ZCI1608D330	33		20	1/0.05	9	2.95	1

● ZCI2012 TYPE

Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZCI2012A47N	0.047	J. K. M	15	50/0.05	320	0.20	300
ZCI2012A56N	0.056		20	50/0.05	300	0.20	300
ZCI2012A68N	0.068		15	50/0.05	280	0.20	300
ZCI2012A82N	0.082		15	50/0.05	255	0.20	300
ZCI2012AR10	0.10		20	25/0.05	235	0.30	250



Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZCI2012AR12	0.12	J. K. M	20	25/0.05	220	0.30	250
ZCI2012AR15	0.15		20	25/0.05	200	0.40	250
ZCI2012AR18	0.18		20	25/0.05	185	0.40	250
ZCI2012AR22	0.22		20	25/0.05	170	0.50	250
ZCI2012AR27	0.27		20	25/0.05	150	0.50	250
ZCI2012AR33	0.33		20	25/0.05	145	0.55	250
ZCI2012AR39	0.39		25	25/0.05	135	0.65	200
ZCI2012AR47	0.47		25	25/0.05	125	0.65	200
ZCI2012BR56	0.56		25	25/0.05	115	0.75	150
ZCI2012BR82	0.82		25	25/0.05	100	1.	150
ZCI2012B1R0	1.00		45	10/0.05	75	0.40	50
ZCI2012B1R2	1.20		45	10/0.05	65	0.50	50
ZCI2012B1R5	1.50		45	10/0.05	60	0.50	50
ZCI2012B1R8	1.80		45	10/0.05	55	0.60	50
ZCI2012B2R2	2.20		45	10/0.05	50	0.65	30
ZCI2012B2R7	2.70		45	10/0.05	45	0.75	30
ZCI2012B3R3	3.30		45	10/0.05	41	0.80	30
ZCI2012B3R9	3.90		45	10/0.05	38	0.90	30
ZCI2012B4R7	4.70		45	10/0.05	35	1.00	30
ZCI2012C5R6	5.60		50	4/0.05	32	0.90	15
ZCI2012C6R8	6.80		50	4/0.05	29	1.00	15
ZCI2012C8R2	8.20		50	4/0.05	26	1.10	15
ZCI2012C100	10		50	2/0.05	24	1.15	15
ZCI2012C120	12		50	2/0.05	22	1.25	15
ZCI2012D150	15		30	1/0.05	19	0.80	5
ZCI2012E150	15		30	1/0.05	19	0.65	100
ZCI2012D180	18		30	1/0.05	18	0.90	5
ZCI2012D220	22		30	1/0.05	16	1.10	5
ZCI2012D270	27		30	1/0.05	14	1.15	5
ZCI2012D330	33		30	1/0.05	13	1.25	4
ZCI2012D390	39		30	2/0.05	8	2.90	4
ZCI2012E470	47		30	2/0.05	7.5	3.00	4



● ZCI3216TYPE

Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
CI3216A47N	0.047	J. K. M	20	50/0.05	320	0..15	300
CI3216A68N	0.068		20	50/0.05	280	0..25	300
CI3216A82N	0.082		20	50/0.05	255	0..25	250
CI3216AR10	0.10		20	25/0.05	235	0.25	250
CI3216AR12	0.12		20	25/0.05	220	0.30	250
CI3216AR15	0.15		20	25/0.05	200	0..30	250
CI3216AR18	0.18		20	25/0.05	185	0.40	250
CI3216AR22	0.22		20	25/0.05	170	0.40	250
CI3216AR27	0.27		20	25/0.05	150	0.50	250
CI3216AR33	0.33		20	25/0.05	145	0.50	250
CI3216AR39	0.39		25	25/0.05	135	0..50	200
CI3216AR47	0.47		25	25/0.05	125	0.60	200
CI3216AR56	0.56		25	25/0.05	112	0..70	150
CI3216AR68	0.68		25	25/0.05	102	0..80	150
CI3216AR82	0.82		25	25/0.05	100	0.90	150
CI3216B1R0	1.00		45	10/0.05	75	0.40	100
CI3216B1R2	1.20		45	10/0.05	65	0..50	100
CI3216B1R5	1.50		45	10/0.05	60	0.50	50
CI3216B1R8	1.80		45	10/0.05	55	0..50	50
CI3216B2R2	2.20		45	10/0.05	50	0.60	50
CI3216B2R7	2.70		45	10/0.05	45	0.60	50
CI3216B3R3	3.30		45	10/0.05	41	0.70	50
CI3216B3R9	3.90		45	10/0.05	38	0.80	50
CI3216B4R7	4.70		45	10/0.05	35	0.90	50
CI3216C5R6	5.60		50	4/0.05	32	0..70	25
CI3216C6R8	6.80		50	4/0.05	29	0..80	25
CI3216C8R2	8.20		50	4/0.05	26	0.90	25
CI3216C100	10		50	2/0.05	24	1.00	25
CI3216C120	12		50	2/0.05	22	1.05	15
CI3216D150	15		35	1/0.05	19	0.70	5
CI3216D180	18	35	1/0.05	18	0.70	5	



Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
CI3216D220	22	J. K. M	35	1/0.05	16	0.90	5
CI3216D270	27		35	1/0.05	14	0.90	5
CI3216D330	33		35	1/0.05	13	1.05	5
CI3216D390	39		40	2/0.05	11	3.00	5
CI3216D470	47		40	2/0.05	10	3.40	5

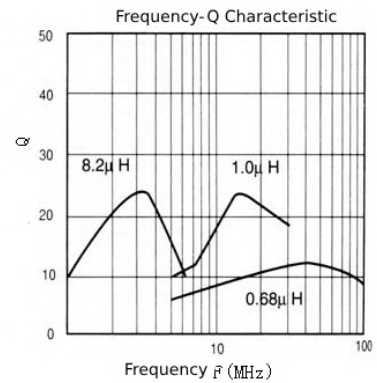
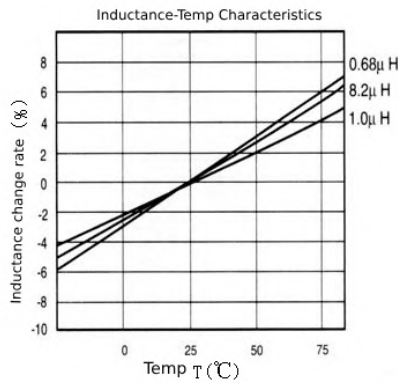
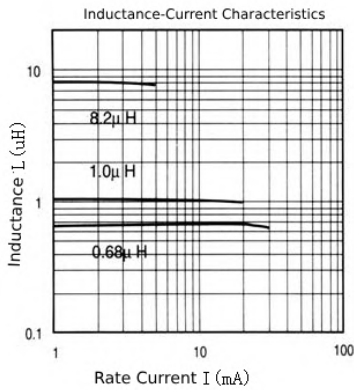
● ZCI3225 TYPE

Part Number	Inductance (uH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZCI3225B1R0	1.00	J. K. M	40	10/0.05	70	0.20	600
ZCI3225B1R5	1.50		40	10/0.05	70	0.30	500
ZCI3225B1R8	1.80		40	10/0.05	70	0..30	500
ZCI3225B2R2	2.20		40	10/0.05	50	0.30	500
ZCI3225B2R7	2.70		40	10/0.05	50	0.30	500
ZCI3225B3R3	3.30		40	10/0.05	50	0.40	500
ZCI3225B3R9	3.90		40	10/0.05	30	0.40	500
ZCI3225B4R7	4.70		40	10/0.05	30	0.50	500
ZCI3225C5R6	5.60		35	4/0.05	30	0..60	450
ZCI3225C6R8	6.80		35	4/0.05	20	0..60	450
ZCI3225C8R2	8.20		35	4/0.05	20	0.70	400
ZCI3225C100	10		35	2/0.05	20	0.70	400
ZCI3225C120	12		35	2/0.05	20	0.70	400
ZCI3225D150	15		35	1/0.05	20	0.70	300
ZCI3225D180	18		35	1/0.05	10	0.70	300
ZCI3225D220	22		35	1/0.05	10	0.75	250
ZCI3225D270	27		35	1/0.05	10	0.75	250
ZCI3225D330	33		35	1/0.05	10	0.80	250
ZCI3225D390	39		35	1/0.05	10	0.80	250
ZCI3225D470	47		35	1/0.05	10	1.00	200
ZCI3225D680	68		35	1/0.05	5	1.30	150
ZCI3225D820	82		35	1/0.05	5	1.40	150
ZCI3225D101	100		35	1/0.05	5	1.50	150

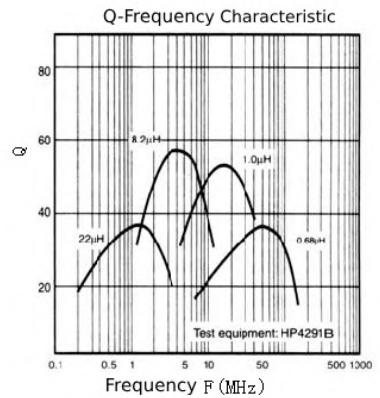
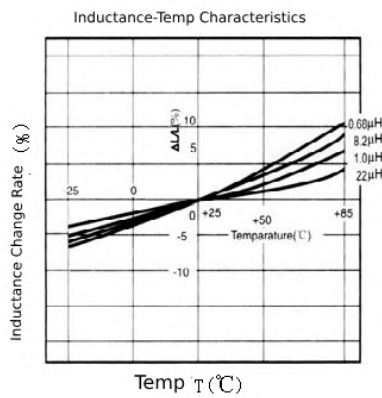
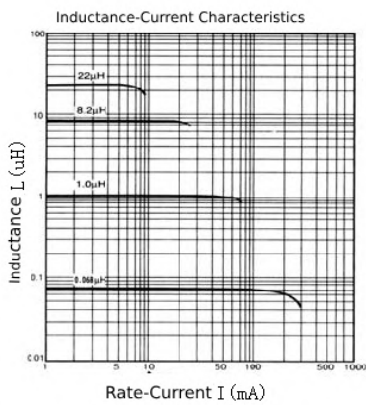


DETAIL ELECTRICAL CHARACTERISTICS

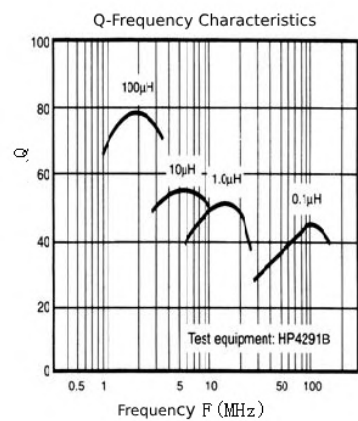
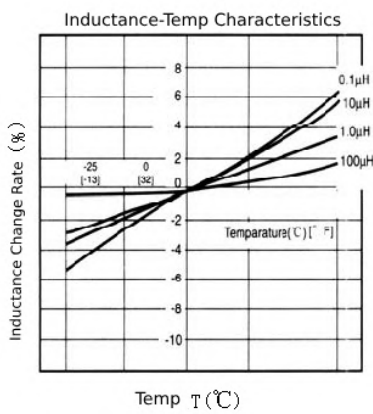
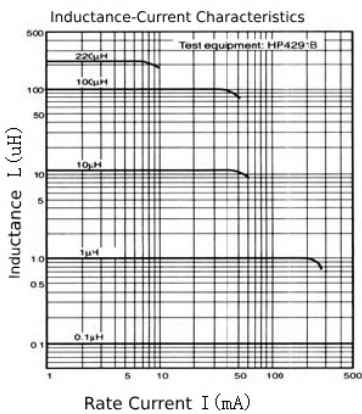
● ZCI1005



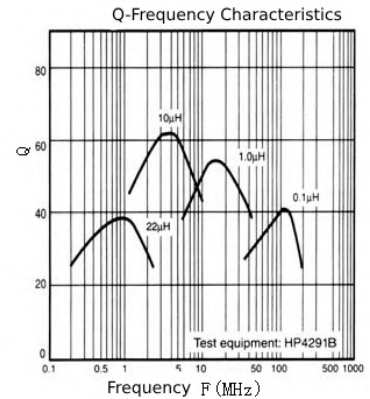
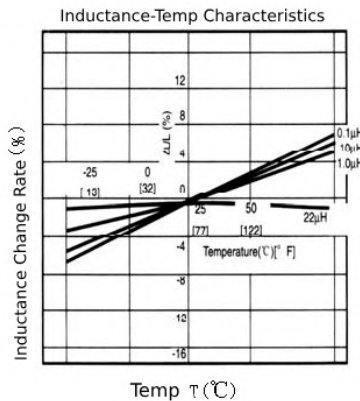
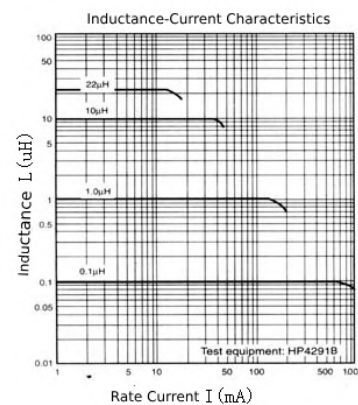
● ZCI1608



● ZCI2012



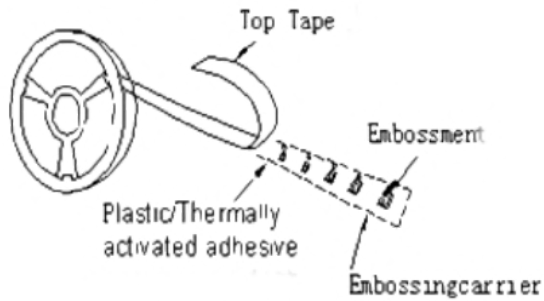
● ZCI3216



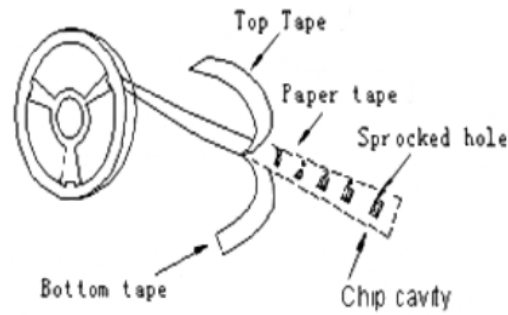
PACKAGING STYLE

• Taping Material

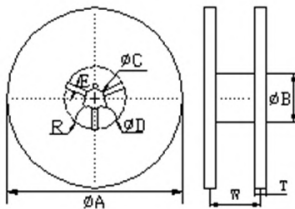
Embossing Tape



Paper Tape



• Reel Dimensions(mm)



Tape Width	A	B	C	D	E	W	T	R
8mm	178±2	60±1	13±0.5	21±0.8	2±0.5	10±1	1.5±0.5	1
12mm	178±2	60±1	13±0.5	21±0.8	2±0.5	14±1	1.5±0.5	1

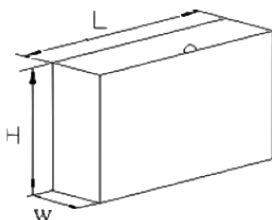
STORAGE

• Quantity

Type	PCS/REEL	PCS/INNERBOX	PCS/OUTERBOX
1005	10000	50000	250000
1608	4000	20000	100000
2012	4000	20000	100000
3216	4000	20000	100000
3225	2000	10000	50000

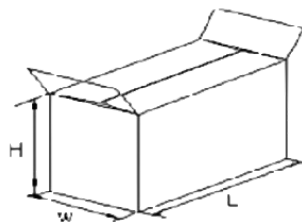
• Packing Dimensions(mm)

Inner Box Dimensions



L	W	H	THICK
180±3	70±3	190±3	2±0.8

Outer Box Dimensions



L	W	H	THICK
370±3	200±3	210±3	2±0.8

• Storage

Please be sure to the parts at 40°C, or less, 70%RH or less, and isolate the parts from sulphic and chloric atmosphere.