



## ***Leading Solution***

**LG Cable, LG Industrial Systems and LG-Nikko Copper,  
Gaon Cable, E1 and Kukdong City Gas are starting with  
a new name, Leading Solution, LS.**

### **about LS**

Leaping as a leading global company in industrial electric and electronic field and material business, LS Group, separated from LG Group in March 2005 and started as a young company. LS Group is a healthy enterprise providing 'Leading Solution' to our customers, contributing to the society and realizing dreams together with employees. LS Mtron is leading the component and machinery industry. The major affiliate companies of LS including LS Cable, LS Industrial Systems, LS-Nikko Copper, Gaon Cable, E1 and YESCO are No. 1 companies in the industry they each belong to. Now, they pave their way to become the global No. 1, a future-leading company providing 'Leading Solution' from being the No. 1 company in Korea. After its launch, the LS Group concentrates many of its resources to the activities of management innovation to produce synergy between each affiliate and to expand overseas business. The company increasingly invests to establish a global network connecting China, the Middle East, Russia and East Europe. In R&D sector, cooperation and sharing among affiliate companies, together with various activities to develop new growth engine, is systematically going on. LS, leaping as a major group since it started business 3 years ago, leaves no stone unturned to establish a unique corporate culture. With the belief and respect toward family, LS Group will always be with you as a true company contributing to the society, where talented, professional and passionate employees would grow together with the company. The dream of your customers will be realized in LS Group.

### **Your No.1 Creative Partner**

Your No. 1 creative partner in providing creative solutions. With this vision, LS Mtron fortifies its image of taking customer satisfaction first. "Trust, Passion and Challenge", are three words we take to heart. We want to grow together with you and create more success for both our companies. "Trust" is very important in recognizing each person as a unique individual within the organization. It is a core value accumulated through belief and cooperation among juniors, seniors and colleagues. "Passion" is a characteristic that helps us achieve a certain goal with a sense of ownership and tenacity for the given duties through devotion, perseverance and responsibility.

Passion provides a motive for each individual and teams to devote themselves to their work. With this, we believe that we can develop and grow together. "Challenge" showcases the progressive attitude of LS Mtron to overcome limitations to enhance individual's competence through high goals, confidence and action on the belief that "I can do it". LS Mtron is an enterprise that lives by trust, passion and challenge. To be the No. 1 company relied upon by our customers; LS Mtron is your No. 1 Partner providing the best solutions required by customers as we both build our future success.

## **LS MTRON**

**YOUR** Partner you can rely on to grow with today and tomorrow.

**NO. 1** LS Mtron is customer-trusted No. 1 global partner recognized all over the world.

**CREATIVE** Creative thinking and problem-solving capability that satisfy customer's needs.

**PARTNER** Partnership with customers to reach goals by relying and cooperating with each other.

# LS Connector

New Application and Defect-free Connections



## LS Connector

We are opening the new possibilities of electronic components!

Since 1985, as a part of non-cable business fields, we had made a technology-introduction contract with JAE who is one of the biggest connector manufacturers in Japan to produce electronic connectors for home appliances. In 1986, we started self-production and sales with 17 items.

Nowadays, IT (Information Technology) in the infocomindustry has been developing toward the information revolution which is called "Ubiquitous." Electronic appliances feature multi-functions. For that reason, the customer has been focusing on the technology improvement for the digital convergence such as Mobile Phone, Digital Display, Home Network System, DMB(Digital Multi-media Broadcasting) and so on.

To respond to customer's demands, LS Mtron's connectors for electronic appliances as the digital convergence include I/O connectors, SIM connectors, infinitesimal Board to Board connectors, FPC connectors, Memory card connectors, Micro USB connectors, Sliding Hinge, Board-to-Wire connectors and so on. We can also provide various kinds of custom-designed products to satisfy the customer's demands.

In particular, LS Mtron connectors for electronic appliances in Ubiquitous world excel in performance and function, and are evaluated as products of the utmost credibility. In addition, due to the rational and automated production processes with strict quality management, our products are highly esteemed in terms of quality, function, delivery and price.

Based on its accumulated technologies, LS Mtron always focuses on providing the product with a greater variety of custom-designed products for the customer with greater convenience. We will make every effort to offer the best technology and services available.



## Applications

These products are used in many electronic appliances, such as VCRs, TVs, audio sets, telephones, OA equipment, faxes, computers, cookers, medical equipment, measuring instrument, communication PDAs, PSC & mobile phone devices, LCDs, monitors, computer & peripherals, automatic vending machines and broadcasting equipment.

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# Manufacturing Process Products Naming Method

## PCB to PCB

It is a general term for the connector that connects PCB with PCB within a set. There are 1~3 piece types available, with pitches varying from 0.35 to 0.4mm.

## PCB to Wire

It is a general term for the connector that connects the PCB with the cable within a set.

Methods of wiring pin header include crimping, IDC(Insulation Displacement Connection), Soldering, and Wire Wrapping.

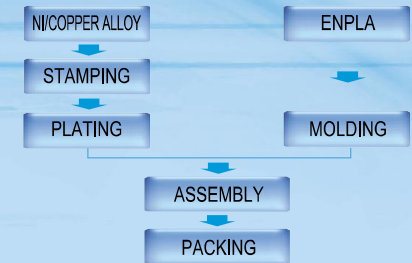
## FFC/FPC

It is a general term for the connector that connects the PCB with FPC/FFC, with pitches varying from 0.3 to 1.0mm.

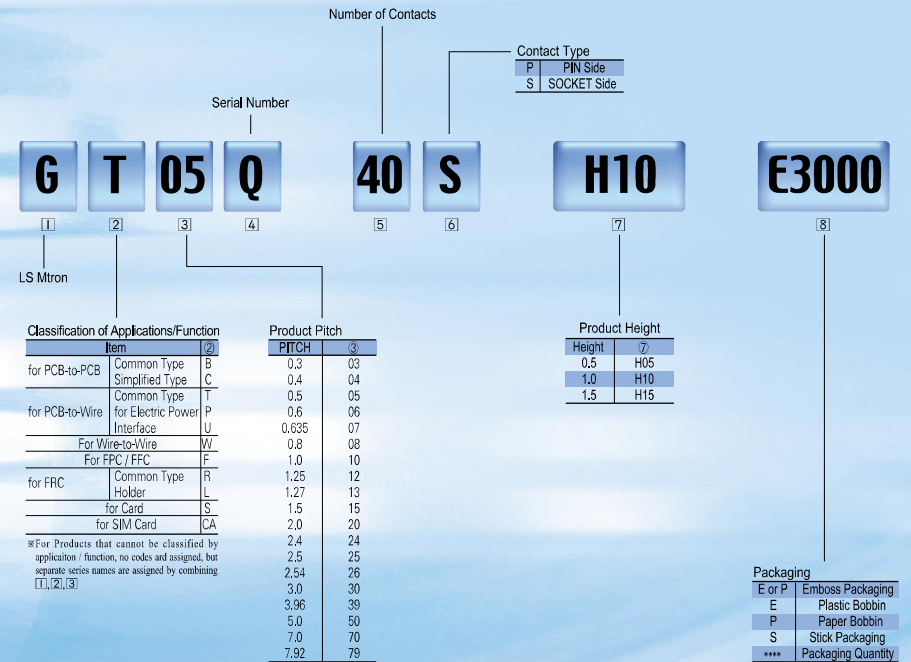
There are various kinds of products available, including ZIF(Zero Insertion Force), and LIF(Low Insertion Force). ZIF type is further subdivided into Flip type(Easy On Type) and Slider type, plus Semi-Slider type.



## Manufacturing Process



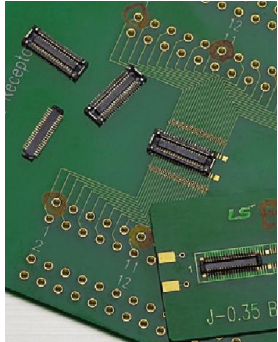
## Products Naming Method



# GB030 series

0.35mm Pitch Board to FPCB Connector

GB030 Series | Receptacle & Embossed Tape Assembly



## Features

- GB030 Series Connector is 0.9mm Height and 0.35mm pitch usually suitable for board to FPCB connection in mobile sets.
- The stable contact reliability by dual contact structure.
- Improve the contact reliability against flux because of dimple structure.
- 22% Size reduction compared with LSM GB042 Series (40pins)
- Improve the Durability during the mating, be strong against the damage by external force, and increase soldering intensity because of receptacle hold down structure.

## Applications

- Mobile phone
- Compact portable devices, etc

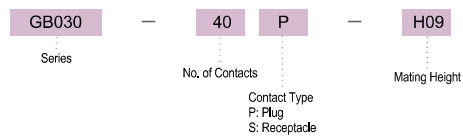
## Materials & Finishes

	Parts	Materials / Finishes	
Receptacle	Insulator	Heat Resistant Plastic	UL94V-0
	Contact	Copper Alloy	Au Plating
	Hold down	Copper Alloy	Ni Plating
Plug	Insulator	Heat Resistant Plastic	UL94V-0
	Contact	Copper Alloy	Au Plating

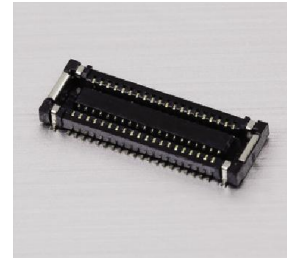
## Specifications

No. of Contacts	40
Contact Spacing	0.35mm
Current Rating	AC/DC 0.25A/Pin
Voltage Rating	AC/DC 60V/Pin
Dielectric Withstanding Voltage	AC 150V(for 1 minute)
Operating Temp.	-25°C ~ +85°C

## Ordering Information

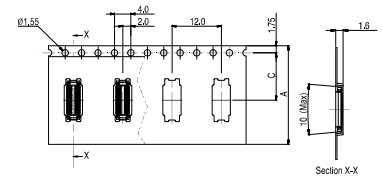
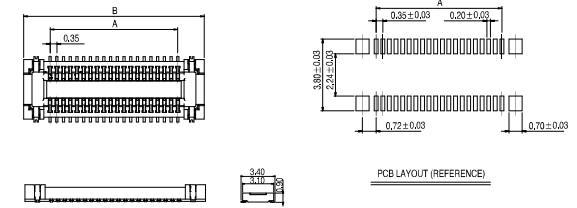
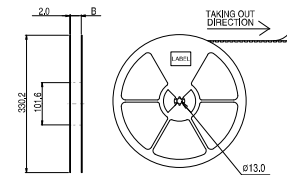


## Receptacle



## Embossed Tape Assembly

### Bobbin



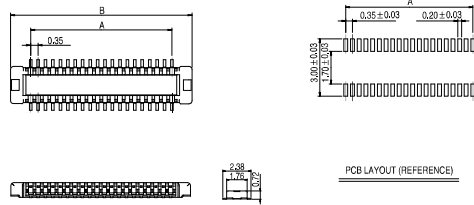
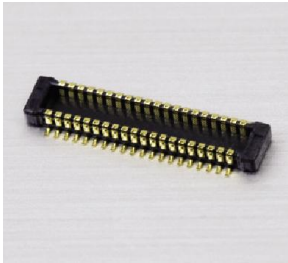
No. of Pin	Part Number	Receptacle		Embossed Tape Assembly			
		A	B	A	B	C	D
40	GB030-40S-H09-E3000	6.65	9.40	24.0	26.0	11.5	-

**GB030 Series** Plug & Embossed Tape Assembly

# GB040 series

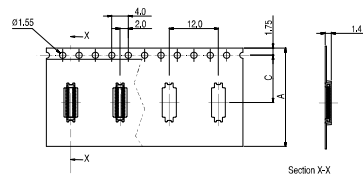
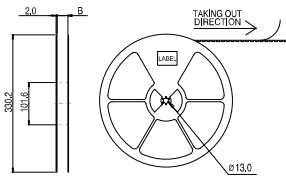
## 0.4mm pitch PCB to PCB Connector

### Plug

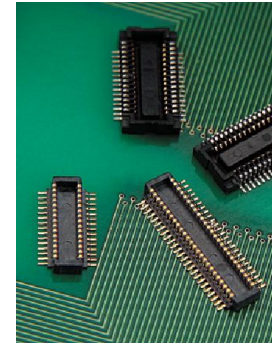


### Embossed Tape Assembly

#### Bobbin



No. of Pin	Part Number	Receptacle		Embossed Tape Assembly			
		A	B	A	B	C	D
40	GB030-40P-H09-E3000	6.65	8.54	24.0	26.0	11.5	-



### Features

- GB040 series Connector is 0.4 mm pitch, low profile PCB to PCB SMT type connector.
- Bellows contact structure with high contact reliability.
- Solder wicking prevention structure with insert molding technology and nickel barrier.

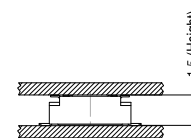
### Applications

- Mobile phone
- Compact portable devices, etc

### Materials & Finishes

Parts	Materials / Finishes	
Insulator	Heat Resistant Plastic	UL94V-0
Contact	Plug	Copper Alloy Au Plating
	Recep.	Copper Alloy Au Plating

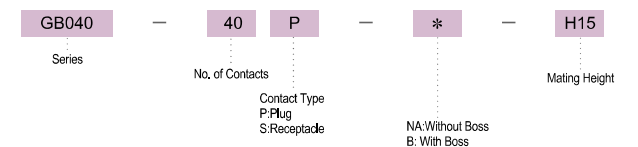
### Mating Diagram



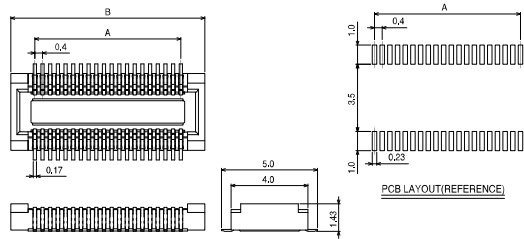
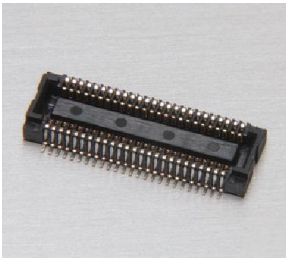
### Specifications

No. of Contacts	20~80
Stacking Height	1.5mm
Contact Spacing	0.4mm
Current Rating	0.5Amps/Pin
Voltage Rating	AC, DC 50V
Dielectric Withstanding Voltage	AC 250V r.m.s.(for one minute)
Insulation Resistance	1000MΩ
Contact Resistance	70mΩ
Operating Temp.	-25°C ~ +85°C

### Ordering Information

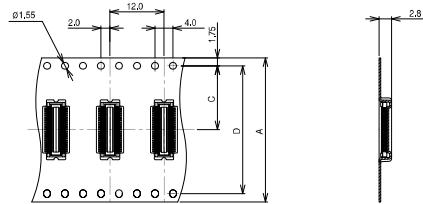
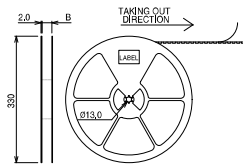


Receptacle



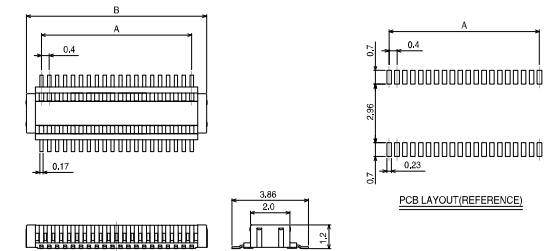
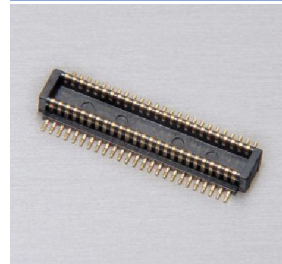
Embossed Tape Assembly

Bobbin



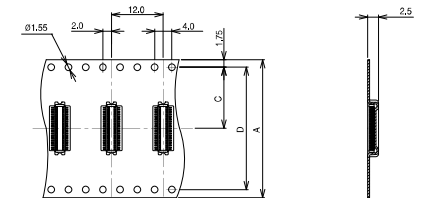
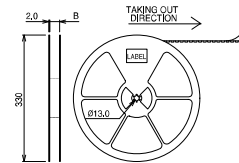
No. of Pin	Part Number	Receptacle		Embossed Tape Assembly			
		A	B	A	B	C	D
20	GB040 - 20S - * - H15 - E2000	3.6	6.1	24.0	26.0	11.5	-
24	GB040 - 24S - * - H15 - E2000	4.4	6.9				
28	GB040 - 28S - * - H15 - E2000	5.2	7.7				
30	GB040 - 30S - * - H15 - E2000	5.6	8.1				
34	GB040 - 34S - * - H15 - E2000	6.4	8.9				
40	GB040 - 40S - * - H15 - E2000	7.6	10.1				
44	GB040 - 44S - * - H15 - E2000	8.4	10.9				
50	GB040 - 50S - * - H15 - E2000	9.6	12.1	32.0	34.0	14.2	28.4
54	GB040 - 54S - * - H15 - E2000	10.4	12.9				
60	GB040 - 60S - * - H15 - E2000	11.6	14.1				
70	GB040 - 70S - * - H15 - E2000	13.6	16.1				

Plug



Embossed Tape Assembly

Bobbin

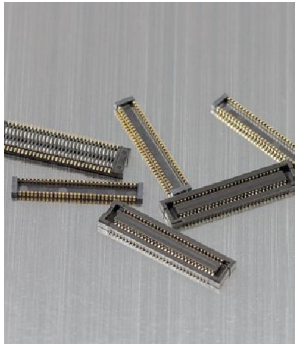


No. of Pin	Part Number	Plug		Embossed Tape Assembly			
		A	B	A	B	C	D
20	GB040 - 20P - * - H15 - E2000	3.6	5.1	24.0	26.0	11.5	-
24	GB040 - 24P - * - H15 - E2000	4.4	5.9				
28	GB040 - 28P - * - H15 - E2000	5.2	6.7				
30	GB040 - 30P - * - H15 - E2000	5.6	7.1				
34	GB040 - 34P - * - H15 - E2000	6.4	7.9				
40	GB040 - 40P - * - H15 - E2000	7.6	9.1				
44	GB040 - 44P - * - H15 - E2000	8.4	9.9				
50	GB040 - 50P - * - H15 - E2000	9.6	11.1	32.0	34.0	14.2	28.4
54	GB040 - 54P - * - H15 - E2000	10.4	11.9				
60	GB040 - 60P - * - H15 - E2000	11.6	13.1				
70	GB040 - 70P - * - H15 - E2000	13.6	15.1				

# GB042 series

0.4mm pitch PCB to PCB Connector

GB042 series | Receptacle & Embossed Tape Assembly



### Features

- GB042 series Connector is 0.4 mm pitch, low profile PCB to PCB SMT type connector.
- Improved contact reliability with plug and receptacle contacting at 2 point simultaneously.
- Stable unmating mechanism preventing receptacle contact from being deformed.

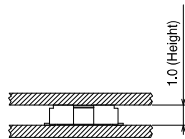
### Applications

- Mobile phone
- Compact portable devices, etc

### Materials & Finishes

Parts		Materials / Finishes	
Insulator		Heat Resistant Plastic	UL94V-0
Contact	Plug	Copper Alloy	Au Plating
	Recep.	Copper Alloy	Au Plating

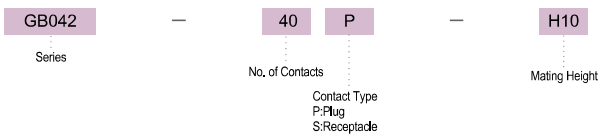
### Mating Diagram



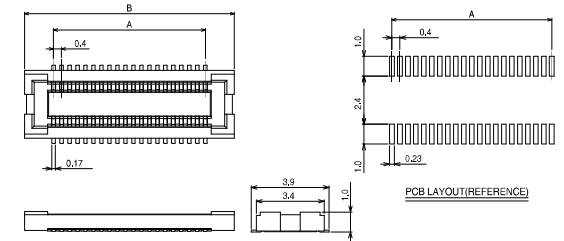
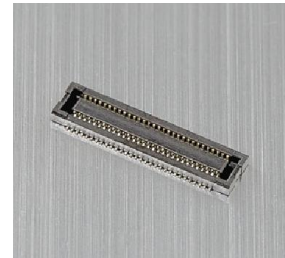
### Specifications

No. of Contacts	10~80
Stacking Height	1.0mm
Contact Spacing	0.4mm
Current Rating	AC, DC 0.3A/pin
Voltage Rating	AC, DC 50V
Dielectric Withstanding Voltage	AC 250V r.m.s.(for one minute)
Insulation Resistance	1000MΩ
Contact Resistance	70mΩ
Operating Temp.	-25°C ~ +85°C

### Ordering Information

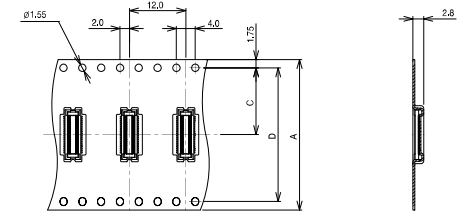
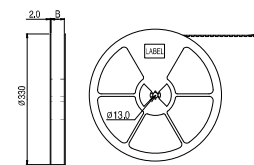


### Receptacle



### Embossed Tape Assembly

#### Bobbin



No. of Pin	Part Number	Receptable		Embossed Tape Assembly			
		A	B	A	B	C	D
10	GB042 - 10S - * - H10 - E3000	1.6	4.5				
20	GB042 - 20S - * - H10 - E3000	3.6	6.5	16.0	18.0	7.5	-
24	GB042 - 24S - * - H10 - E3000	4.4	7.3				
28	GB042 - 28S - * - H10 - E3000	5.2	8.1				
30	GB042 - 30S - * - H10 - E3000	5.6	8.5				
34	GB042 - 34S - * - H10 - E3000	6.4	9.3				
40	GB042 - 40S - * - H10 - E3000	7.6	10.5	24.0	26.0	11.5	-
44	GB042 - 44S - * - H10 - E3000	8.4	11.3				
50	GB042 - 50S - * - H10 - E3000	9.6	12.5				
54	GB042 - 54S - * - H10 - E3000	10.4	13.3				
60	GB042 - 60S - * - H10 - E3000	11.6	14.5				
64	GB042 - 64S - * - H10 - E3000	12.4	15.3	32.0	34.0	14.2	28.4
70	GB042 - 70S - * - H10 - E3000	13.6	16.5				

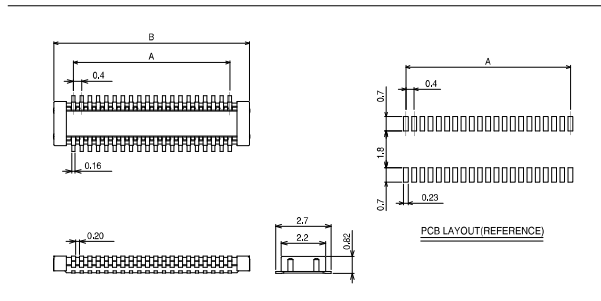
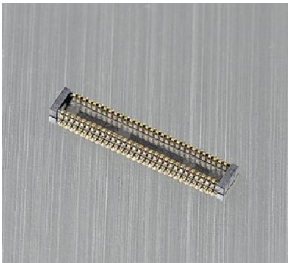


GB042 series | Plug & Embossed Tape Assembly

# GB044 series

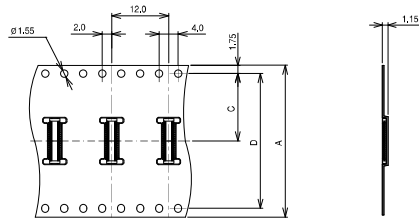
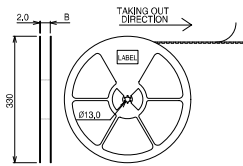
0.4mm pitch PCB to PCB Connector

### Plug

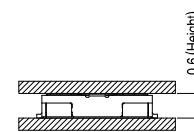


### Embossed Tape Assembly

#### Bobbin



### Mating Diagram



### Features

- GB044 Series Connector is 0.4 mm pitch, low profile PCB to PCB SMT Type Connector
- Improved contact reliability with plug and receptacle contacting at 2 point simultaneously.
- Stable unmating mechanism preventing receptacle contact from being deformed.
- The locking structures provided for the hold down improve the unmating force.

### Applications

- Mobile phone
- Compact portable devices, etc

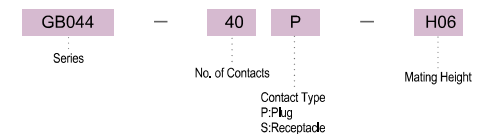
### Materials & Finishes

	Parts	Materials / Finishes	
		Insulator	Contact
Receptacle	Insulator	Heat Resistant Plastic	UL94V-0
	Contact	Copper Alloy	Au Plating
	Hold down	Copper Alloy	Ni Plating
Plug	Insulator	Heat Resistant Plastic	UL94V-0
	Contact	Copper Alloy	Au Plating
	Hold down	Copper Alloy	Ni Plating

### Specifications

No. of Contacts	40
Stacking Height	0.6mm
Contact Spacing	0.4mm
Current Rating	AC, DC 0.3A/pin
Voltage Rating	AC/DC 50V/Pin
Dielectric Withstanding Voltage	AC 250V r.m.s(for 1 minute)
Insulation Resistance	1000MΩ
Contact Resistance	90mΩ
Operating Temp.	-25°C ~ +85°C

### Ordering Information



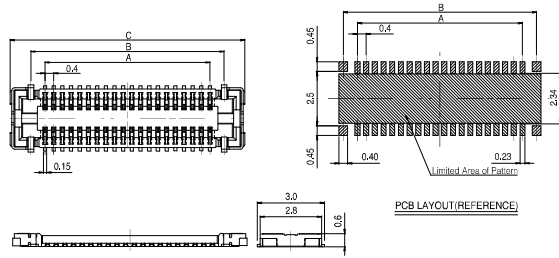
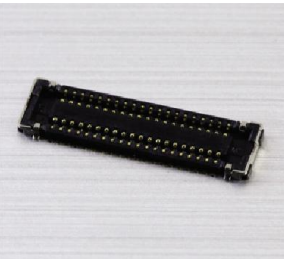
No. of Pin	Part Number	Plug		Embossed Tape Assembly			
		A	B	A	B	C	D
10	GB042 - 10P - - H10 - E3000	1.6	3.5				
20	GB042 - 20P - - H10 - E3000	3.6	5.5	16.0	18.0	7.5	-
24	GB042 - 24P - - H10 - E3000	4.4	6.3				
28	GB042 - 28P - - H10 - E3000	5.2	7.1				
30	GB042 - 30P - - H10 - E3000	5.6	7.5				
34	GB042 - 34P - - H10 - E3000	6.4	8.3	24.0	26.0	11.5	-
40	GB042 - 40P - - H10 - E3000	7.6	9.5				
44	GB042 - 44P - - H10 - E3000	8.4	10.3				
50	GB042 - 50P - - H10 - E3000	9.6	11.5				
54	GB042 - 54P - - H10 - E3000	10.4	12.3				
60	GB042 - 60P - - H10 - E3000	11.6	13.5				
64	GB042 - 64P - - H10 - E3000	12.4	14.3				
70	GB042 - 70P - - H10 - E3000	13.6	15.5				



**GB044 series** | Receptacle & Embossed Tape Assembly

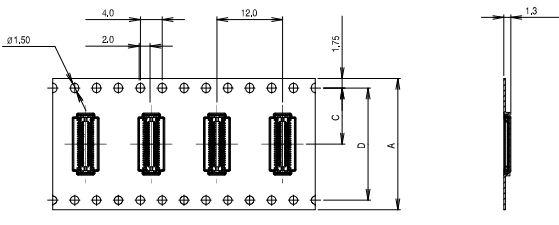
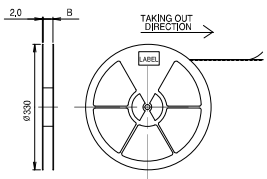
**GB044 series** | Plug & Embossed Tape Assembly

**Receptacle**



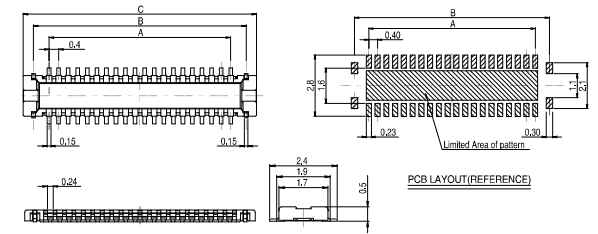
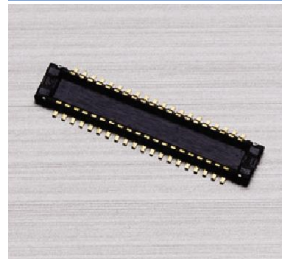
**Embossed Tape Assembly**

**Bobbin**



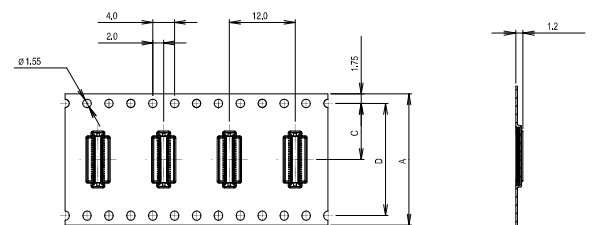
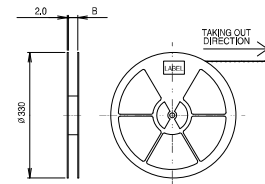
No. of Pin	Part Number	Receptacle			Embossed Tape Assembly			
		A	B	C	A	B	C	D
40	GB044 - 40S - * - H06 - E3000	7,6	8,9	10,8	24	26	10,3	20,5

**Plug**



**Embossed Tape Assembly**

**Bobbin**



No. of Pin	Part Number	Plug			Embossed Tape Assembly			
		A	B	C	A	B	C	D
40	GB044 - 40P - * - H06 - E3000	7,6	8,9	9,8	24	26	10,3	20,5