

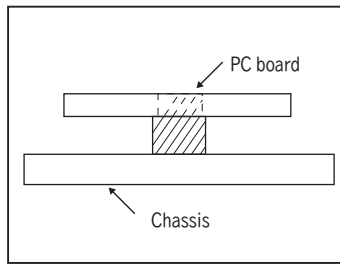
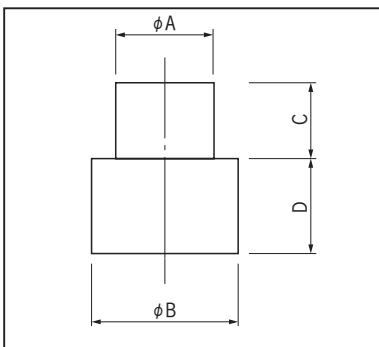
Pin of dissipating heat "Netsutorimushi"

CLB series (1000pcs/pack)

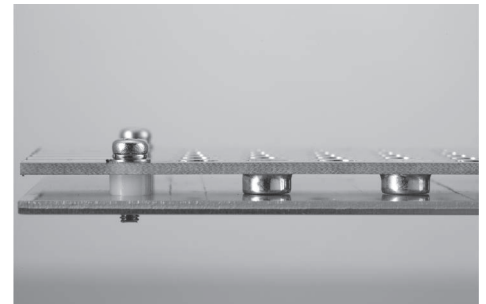
- This is a pin for dissipating heat from a PC board to a chassis.
- For better heat transmission, heat dissipation gel sheet (CLS series) is available.
- This can be used for contact points, etc.
- This is available for PC board thickness of t1.0 and t1.6
- Material: Copper
- Finish: Tin plating over nickel base



Dimension



Example of usage



Part No.	A	B	C	D	Fitting hole
CLB-10-2-1	2.0	3.0	1.0	1.0	φ 2.1 TH φ 4 Land
CLB-10-2-1.5	2.0	3.0	1.0	1.5	
CLB-10-2-2	2.0	3.0	1.0	2.0	
CLB-10-2-2.5	2.0	3.0	1.0	2.5	
CLB-10-2-3	2.0	3.0	1.0	3.0	
CLB-10-3-1	3.0	4.0	1.0	1.0	φ 3.1 TH φ 5 Land
CLB-10-3-1.5	3.0	4.0	1.0	1.5	
CLB-10-3-2	3.0	4.0	1.0	2.0	
CLB-10-3-2.5	3.0	4.0	1.0	2.5	
CLB-10-3-3	3.0	4.0	1.0	3.0	
CLB-10-4-1	4.0	5.0	1.0	1.0	φ 4.1 TH φ 6 Land
CLB-10-4-1.5	4.0	5.0	1.0	1.5	
CLB-10-4-2	4.0	5.0	1.0	2.0	
CLB-10-4-2.5	4.0	5.0	1.0	2.5	
CLB-10-4-3	4.0	5.0	1.0	3.0	
CLB-10-5-1	5.0	6.0	1.0	1.0	φ 5.1 TH φ 7 Land
CLB-10-5-1.5	5.0	6.0	1.0	1.5	
CLB-10-5-2	5.0	6.0	1.0	2.0	
CLB-10-5-2.5	5.0	6.0	1.0	2.5	
CLB-10-5-3	5.0	6.0	1.0	3.0	
CLB-10-6-1	6.0	7.0	1.0	1.0	φ 6.1 TH φ 8 Land
CLB-10-6-1.5	6.0	7.0	1.0	1.5	
CLB-10-6-2	6.0	7.0	1.0	2.0	
CLB-10-6-2.5	6.0	7.0	1.0	2.5	
CLB-10-6-3	6.0	7.0	1.0	3.0	

Part No.	A	B	C	D	Fitting hole
CLB-16-2-1	2.0	3.0	1.6	1.0	φ 2.1 TH φ 4 Land
CLB-16-2-1.5	2.0	3.0	1.6	1.5	
CLB-16-2-2	2.0	3.0	1.6	2.0	
CLB-16-2-2.5	2.0	3.0	1.6	2.5	
CLB-16-2-3	2.0	3.0	1.6	3.0	
CLB-16-3-1	3.0	4.0	1.6	1.0	φ 3.1 TH φ 5 Land
CLB-16-3-1.5	3.0	4.0	1.6	1.5	
CLB-16-3-2	3.0	4.0	1.6	2.0	
CLB-16-3-2.5	3.0	4.0	1.6	2.5	
CLB-16-3-3	3.0	4.0	1.6	3.0	
CLB-16-4-1	4.0	5.0	1.6	1.0	φ 4.1 TH φ 6 Land
CLB-16-4-1.5	4.0	5.0	1.6	1.5	
CLB-16-4-2	4.0	5.0	1.6	2.0	
CLB-16-4-2.5	4.0	5.0	1.6	2.5	
CLB-16-4-3	4.0	5.0	1.6	3.0	
CLB-16-5-1	5.0	6.0	1.6	1.0	φ 5.1 TH φ 7 Land
CLB-16-5-1.5	5.0	6.0	1.6	1.5	
CLB-16-5-2	5.0	6.0	1.6	2.0	
CLB-16-5-2.5	5.0	6.0	1.6	2.5	
CLB-16-5-3	5.0	6.0	1.6	3.0	
CLB-16-6-1	6.0	7.0	1.6	1.0	φ 6.1 TH φ 8 Land
CLB-16-6-1.5	6.0	7.0	1.6	1.5	
CLB-16-6-2	6.0	7.0	1.6	2.0	
CLB-16-6-2.5	6.0	7.0	1.6	2.5	
CLB-16-6-3	6.0	7.0	1.6	3.0	

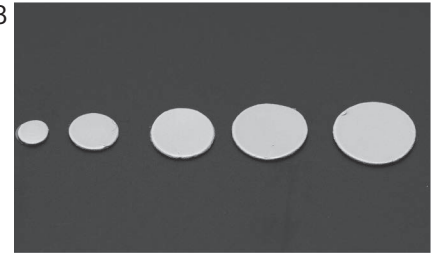
Instructions for use

Please confirm the effect of use by testing.

Heat dissipation gel sheet for "Netsutorimushi" CLB series

CLS series (100sheets/pack)

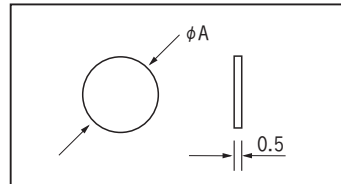
- The heat dissipation effect will be better by inserting CLS series in between CLB series, the chassis, and the radiator to eliminate the clearance.
- Material: λ Gel [λ Gel is the registered trade mark of TAICA Corporation.]
- Thickness: 0.5mm



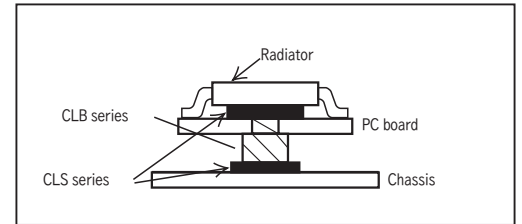
■ Part No.

Part No.	φ A
CLS-0.5-4	4
CLS-0.5-6	6
CLS-0.5-8	8
CLS-0.5-9	9
CLS-0.5-10	10

■ Dimension



■ Example of usage

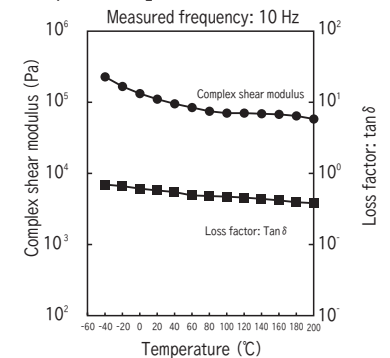


■ Properties

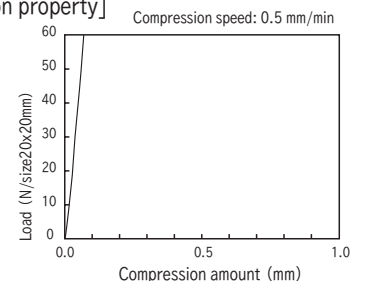
Property item		Property value	Remarks
Thermal conductivity (W/m · k)	Measurement method at TAICA Corporation	6.5	—
	Hot wire method (*1)	2.1	JIS R 2616
Hardness (penetration: 1/10 mm)		45	JIS K 2207
Appearance		Gray	—
Specific gravity		2.9	JIS K 6249
Tensile strength (MPa)		0.35	JIS K 6249
Volume resistivity (Ω · cm)		7.1×10^{13}	JIS K 6249
Dielectric breakdown strength (kV/mm)		12.5	JIS K 6249
Elongation (%)		68	JIS K 6249
Compression permanent set (%)		72	JIS K 6249
Dielectric constant	(50Hz)	5.6	JIS K 6249
	(1 kHz)	5.0	JIS K 6249
	(1 MHz)	5.5	JIS K 6249
Dielectric loss tangent	(50Hz)	0.006	JIS K 6249
	(1 kHz)	0.002	JIS K 6249
	(1 MHz)	0.0004	JIS K 6249
Low-molecular siloxane content Σ D4-10 (ppm)	Solvent extraction method	13	—
	Head space method (*2)	0.1 or less	—
Incombustibility		V-0	UL94
Ten RoHS restriction substance		Not contained	—
Operating temperature range (°C) (*3)		- 40 to 150	—



[Temperature dependence]



[Compression property]



[Thermal resistance property]

Transistor: TO-3
Applied voltage: 20W

Thermal resistance (°C/W)		
Compression rate: 10%	20%	30%
0.14	0.10	0.06

Hot wire method (*1) Note1: Using the quick thermal conductivity meter of Kyoto Electronics Manufacturing Co., Ltd., QTM-500

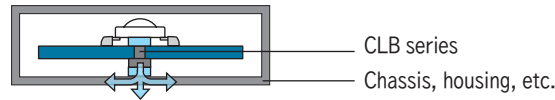
Head space method (*2) Note2: Measured at 70°C at Panasonic Electric Works Analysis Center Co., Ltd

Operating temperature range (*3) Note3: This is judged by the values measured for thermal conductivity and the hardness variations and it is not the guaranteed value. Please confirm the durability under the actual use conditions.

[Reference] Thermal conductivity effect of CLB series

- By using CLB series, the heat generated from a device is transmitted to the chassis, housing, etc. and dissipated to the outside of the case.

Image of heat dissipation by CLB series



- As CLB series have conductive property, the parts with a ground terminal on a PC board side can be operated without changing the ground level.
- Please use CLB series for insulation and thermal conductivity.
- It is convenient to use CLS series for connecting a chassis and CLB series. Due to the high flexibility and adhesion, connection is easier than using grease.

Measurement result

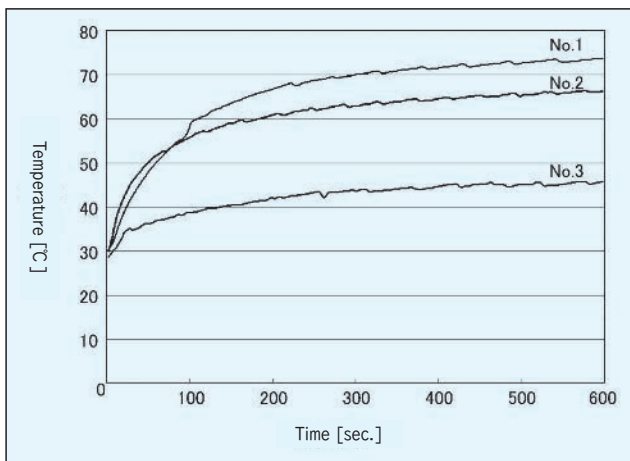


Figure: Graph of the measurement result

- Measurement result (final temperature after 600 seconds)

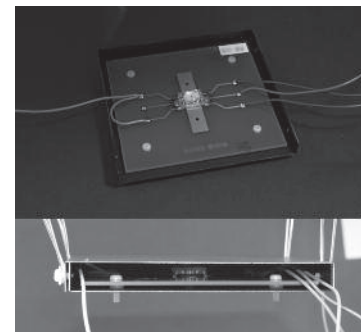
No.1 73.6 [°C]
 No.2 66.3 [°C]
 No.3 45.6 [°C]

- Measurement conditions

Ambient temperature 28 [°C]
 Ambient humidity 40 [%]
 No wind
 Measurement time 600 [sec]

- Used Device

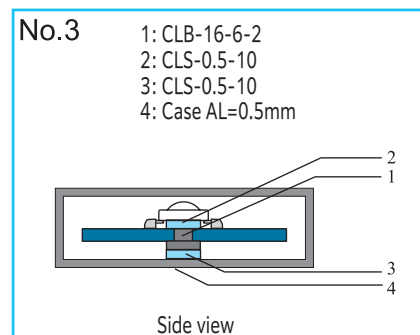
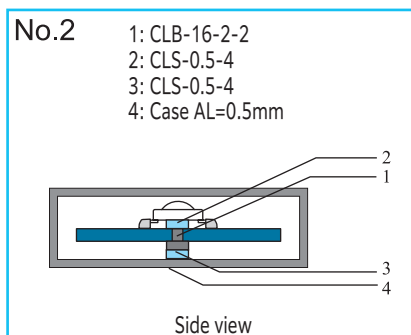
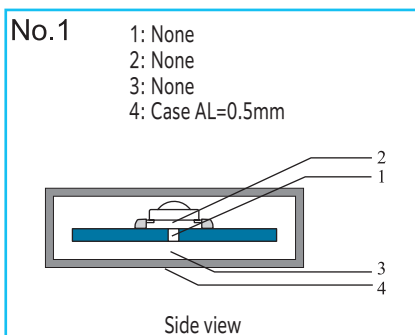
1.6W LED 5V, 160mA



Measurement sample piece

Measurement sample piece configuration

Configuration of the sample piece used for measurement is as follows.



⚠ The contents on this page are reference examples.

⚠ The measurement result is according to the result measured by us. This does not guarantee the properties for your use.