CABLINE®-UY

The simulation of passing PLUG through hinge

Part No. Plug : 20857-0**T-01

Technical Report

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Rev.	ECN	Date	Prepared by	Checked by	Approved by

CABLINE-UY The simulation of passing PLUG through hinge

1. Purpose

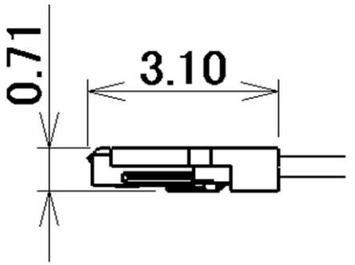
We report the simulation results of the minimum diameter of the hinge that can store the connector(CABLINE-UY Plug) and cable.

2. Simulation conditions

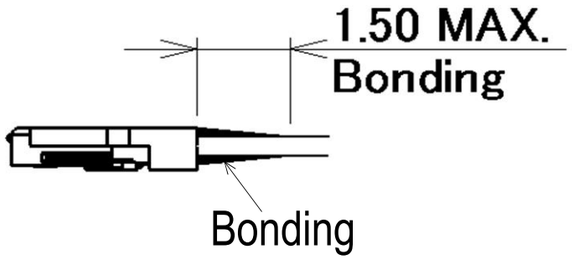
- Connector : CABLINE-UY PLUG CABLE ASS'Y (20857-0**T-01)
- Number of pins : 5P, 10P
- Cable : MICRO-COAX CABLE AWG#42 (See Table.1 for jacket diameter.)
  ※Each simulation is connected to all Pins.
- Bonding : CABLINE-UY recommend bonding cable outlets.
  When bonding, be sure to bend the cable from the end of the bonding.

Table.1 Cable jacket(outer) diameter (mm)

AWG#	Impedance matching	
	45ohm	50ohm
42	0.29	0.33



Without bonding



With bonding

The simulation results presented in this report are not guaranteed. The diameter of the hinge that can be passed through may vary depending on the processing method of the harness and the type of cables used. Please use the results as a reference value. Furthermore, the utilization of bonding is recommended.

3. Simulation result
The simulation results are shown in Table.2 and 3.
※See the next page for details.

Table.2 Minimum hinge inner diameter with bonding (mm)

Cable	Size	AWG#42	
	Impedance matching	45ohm	50ohm
	Jacket diameter	0.29	0.33
Minimum hinge inner diameter	Connector 5P	3.91	
	Connector 10P	5.55	5.56

Table.3 Minimum hinge inner diameter without bonding (mm)

Cable	Size	AWG#42	
	Impedance matching	45ohm	50ohm
	Jacket diameter	0.29	0.33
Minimum hinge inner diameter	Connector 5P	3.91	
	Connector 10P	4.15	4.21

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3. Simulation result
   3.1 With bonding
   Simulation results with AWG #42.
   In the case of 5P(with bonding), the minimum hinge is when the connector is passed through the hinge as shown in Fig.1.

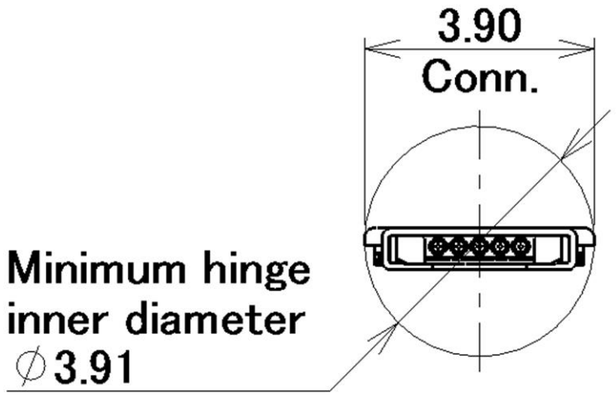

Fig.1 AWG#42 (45,50ohm) 5P
No bend cable

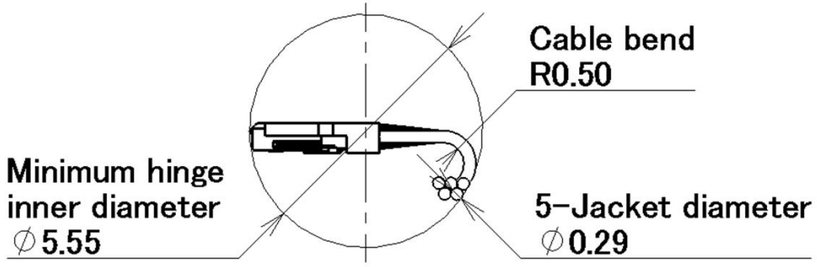

Fig.2 AWG#42 (45ohm) 5P

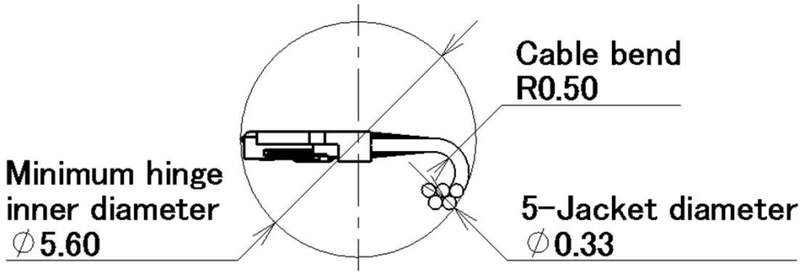

Fig.3 AWG#42 (50ohm) 5P

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3. Simulation result
   3.1 With bonding
   Simulation results with AWG #42.
   In the case of 10P(with bonding), the minimum hinge is when the connector is passed through the hinge as shown in Fig.5,6.

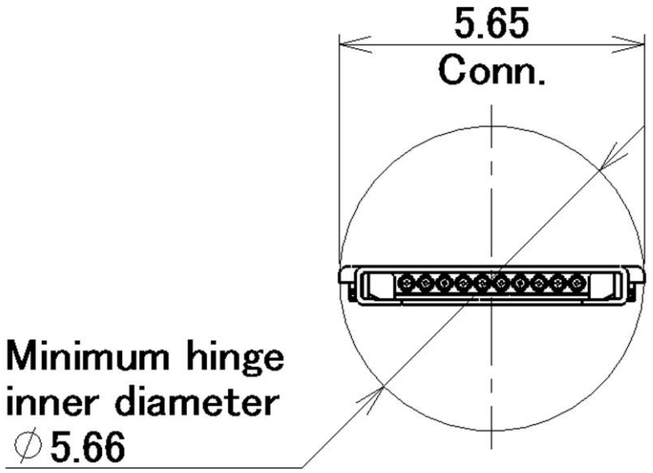

Fig.4 AWG#42 (45,50ohm) 10P
No bend cable

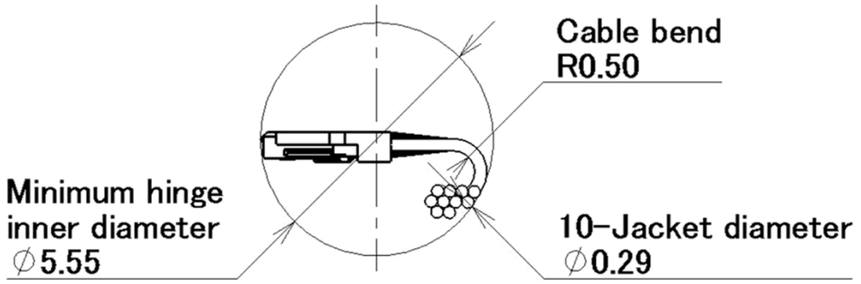

Fig.5 AWG#42 (45ohm) 10P

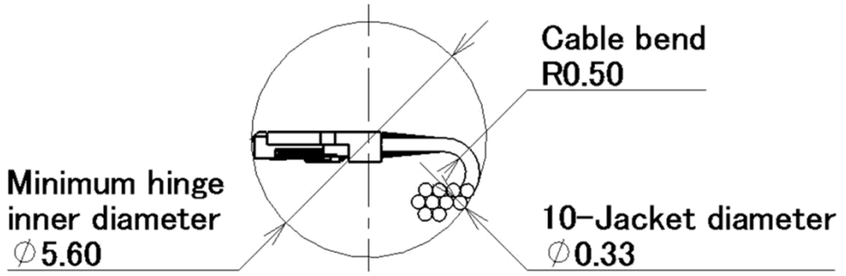

Fig.6 AWG#42 (50ohm) 10P

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3. Simulation result
   3.2 Without bonding
   Simulation results with AWG #42.
   In the case of 5P(without bonding), the minimum hinge is when the connector is passed through the hinge as shown in Fig.7.

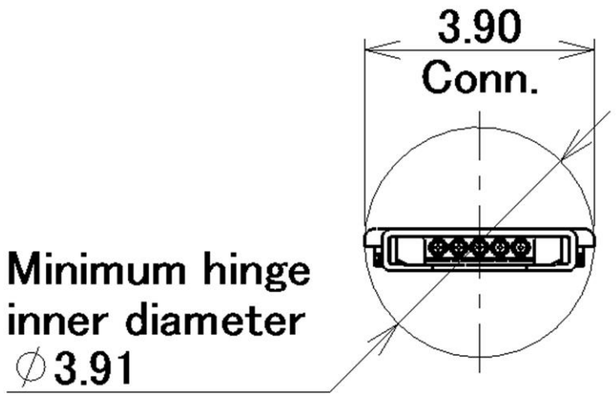

Fig.7 AWG#42 (45,50ohm) 5P
No bend cable

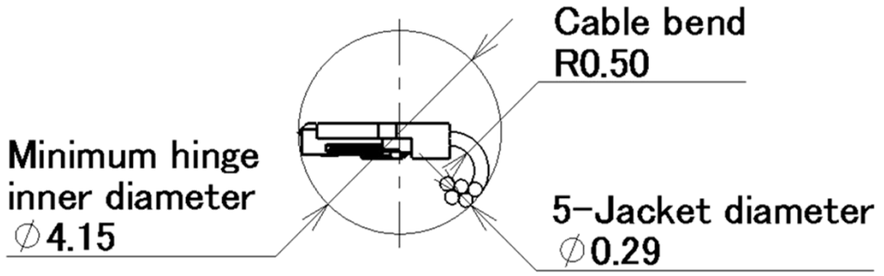

Fig.8 AWG#42 (45ohm) 5P

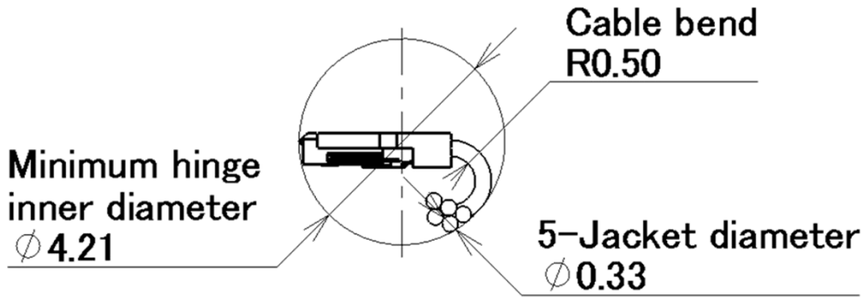

Fig.9 AWG#42 (50ohm) 5P

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3. Simulation result
3.2 Without bonding
Simulation results with AWG #42.
In the case of 10P(without bonding), the minimum hinge is when the connector is passed through the hinge as shown in Fig.11,12.

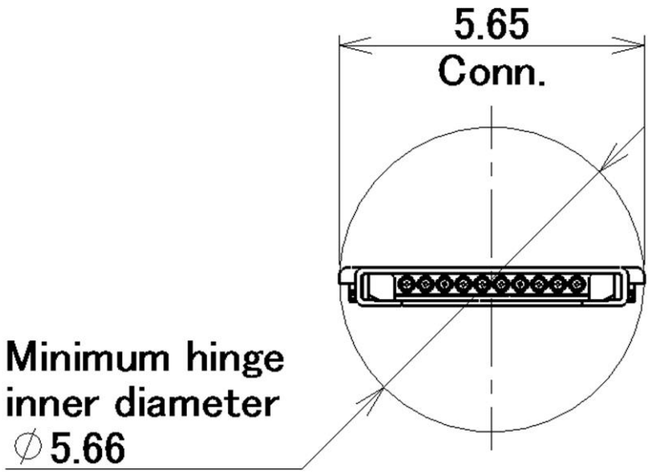

Fig.10 AWG#42 (45,50ohm) 10P
No bend cable

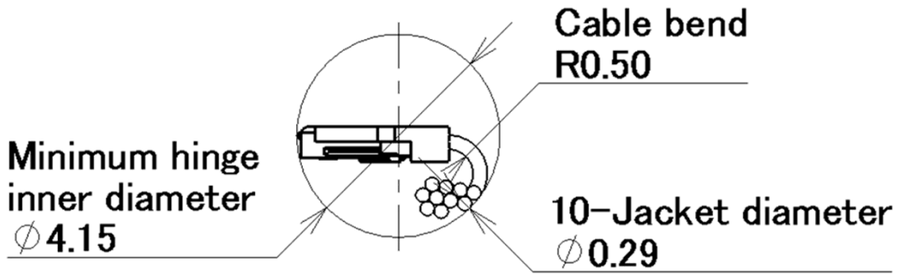

Fig.11 AWG#42 (45ohm) 10P

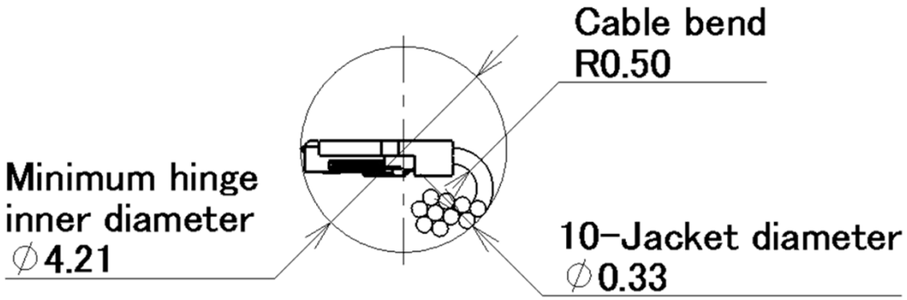

Fig.12 AWG#42 (50ohm) 10P

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