Product Flyer

GT50 Series

HIROSE ELECTRIC AMERICAS

Applications

Lidar

Robotics

Display & HUD

Space-Saving | High Reliability | 125℃ High Temp

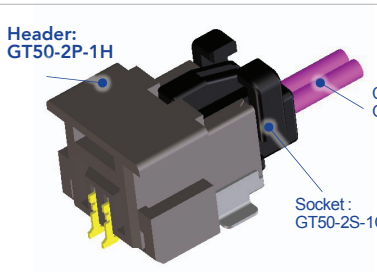
Introducing Hirose's GT50 Series, a revolution in compact wire-to-board connector technology.

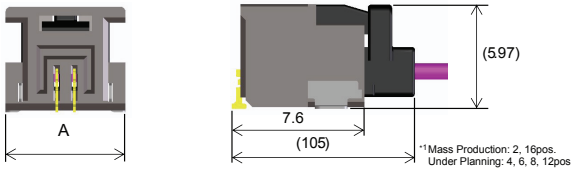
Uniquely designed to be both small in size and high in reliability, this connector outperforms competitors who fall short in delivering this invaluable combination. With its ability to withstand heat, resist vibration, and offer a secure, robust connection, the GT50 Series is primed to meet the demanding requirements of various automotive applications and more.

- Contributes to space-saving and weight reduction
- High heat resistance up to 125°C
- Stabilizer reduces contact wear and enables high vibration resistance
- Robust design for cable routing that resists disconnecting
- User-friendly lock design

Contributes to Space-Saving and Weight Reduction

Compact and Low Profile





*1 Mass Production: 2, 16pos.
Under Planning: 4, 6, 8, 12pos

No. of Pos.*1	2	4	6	8	12	16
Dimension A	6.81	8.81	10.81	12.81	16.81	20.81

Switching from the conventional product to GT50 enables application weight reduction.

Unit: mm

	Applicable Cable
Conventional Product 2mm pitch	0.3sq, 22 AWG
GT50	0.08sq, 28 AWG

When comparing weight of 0.3sq and 0.08sq cables, GT50 enables

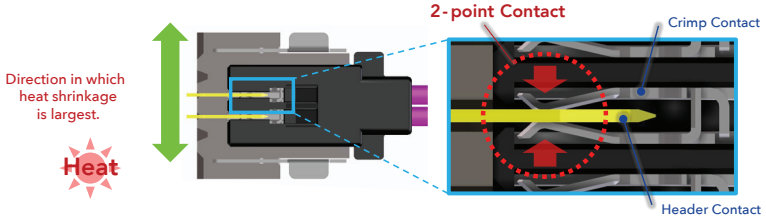
Approx. 75%*2 Weight Reduction

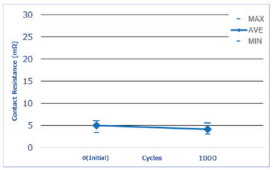
*2 Weight comparison with generic cables

High Heat Resistance Up to 125°C

2-point Contact Enclosed Between Two Springs

Reliable contact from both sides where heat shrinkage is at its greatest.





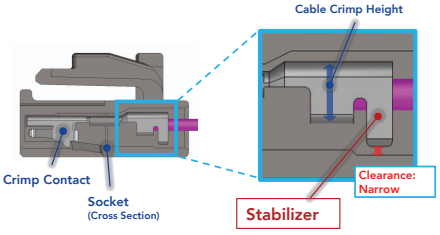
Contact Resistance After Thermal Shock Testing*

*Thermal Shock Test Method Temperature:
-40°C → Room temperature → +125°C → Room temperature
Time: 30 → 5 → 30 → 5 minutes for 1,000 cycles
(Excludes cable conductor resistance)
Dry heat test (+125°C, 1,000h) results also satisfied the product specifications.

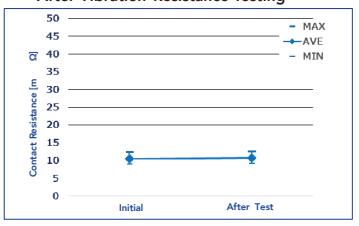
High Vibration Resistance

Stabilizer Suppresses Outside Vibration

Reduces wear in the contact area between header and crimp contacts due to vibration.



Contact Resistance After Vibration Resistance Testing*



*Vibration Resistance Test Method
Frequency 5 to 600Hz
(5 to 14.9Hz:16.5mm(p-p), 14.9 to 600Hz:73.0m/s²),
8 hours each in 3 directions (Excludes cable conductor resistance)

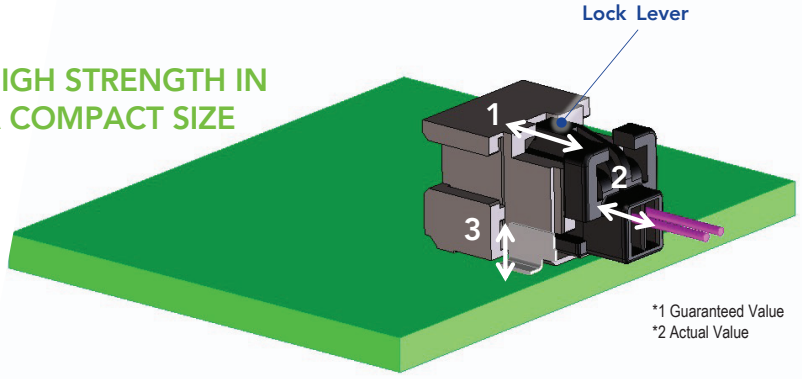
Robust Design

1. Lock Performance: 25N *1
Prevents connector breakage during assembly.

2. Cable Retention Force: 12N *2
Prevents cable disconnect during wiring.

3. Peel-off Strength from PCB: 25N *2
High retention force secures connector to the board.

HIGH STRENGTH IN
A COMPACT SIZE



*1 Guaranteed Value
*2 Actual Value

Specifications

MATERIAL AND FINISH

Component		Material	Finish, Remarks
Header	Housing	LCP	UL94V-0, Black
	Male Contact	Brass	Contact Area and SMT Lead: Gold Plated over Nickel Underplating
	Retention Tab	Brass	Tin Plated over Nickel Underplating
Socket	Housing	PBT	UL94V-0, Black
Crimp Contact		Copper Alloy	Contact Area: Gold Plated over Nickel Underplating

PERFORMANCE CHARACTERISTICS

Rated Current	2, 4pos.	2A
	6, 8, 12, 16pos.	1.5A
Rated Voltage		60V AC/DC
Operating Temperature		-40 to +125^ *1
Contact Resistance	Initial	30mΩ Max.*2
	After Environment Test	50mΩ Max.*2
Withstand Voltage		300V AC for 1 min. 500MΩ
Insulation Resistance		Min. (100V DC) 10 times
Mating Durability		

*1 Includes temperature rise due to current flow.
*2 Excludes cable conductor resistance.

@RoHS2 compliant
@No. of Pos.: 2/16pos. (Mass Production), 4/6/8/12pos. (Under Planning)
- Applicable Cable: 0.08sq (ø0.127mm×7), 28 AWG, Jacket Outer Diameter ø0.7-0.8mm

For additional information please go to
https://www.hirose.com/product/series/GT50
Specifications herein are subject to change without notice.
Contact Hirose for latest specifications, drawings, or availabilities.

STAY CONNECTED