Press Information

New KYOCERA Electronic Connectors Offer World's Highest Mating Tolerance, Withstand up to +125°C

Durable, reliable Board-to-Board connectors support new and emerging applications in automotive electronics

Kyoto/London – May 22nd, 2018. Kyocera yesterday announced its new 5656 Series electronic Board-to-Board connectors, featuring 0.5 mm pitch and a proprietary floating structure that delivers the world's highest mating tolerance[1] with heat resistance up to +125°C. The new connectors appropriate for use in car navigation systems, in-vehicle infotainment and millimeter wave radar, are now available to support manufacturers worldwide.

5656 Series Board-to-Board connectors

Product name	5656 Series Board-to-Board connector
Applications	Automotive, industrial and consumer electronics
Sales target	200,000 units in the first year since the launch

Development Background

Advancements in automotive infotainment and driver-assist technologies are creating new demand for electronic connectors that meet two key requirements. First, they must operate reliably amid high temperatures; and second, they must maintain stable contact position against vibration and shock. Kyocera's new 0.5 mm-pitch Board-to-Board connectors are specifically designed for these requirements, with heat resistance up to +125°C and a proprietary floating mechanism that provides mating tolerance of ±1.0 mm (F/P[2] = 200 %) in both the X and Y directions — 2.2 times larger than Kyocera's conventional connector products. This enhanced mating tolerance ensures reliable connections by compensating for a greater degree of location

[1] Based on Kyocera's research of this class of connector (as of April 30, 2018).

[2] F/P: F=Floating/P=Pitch

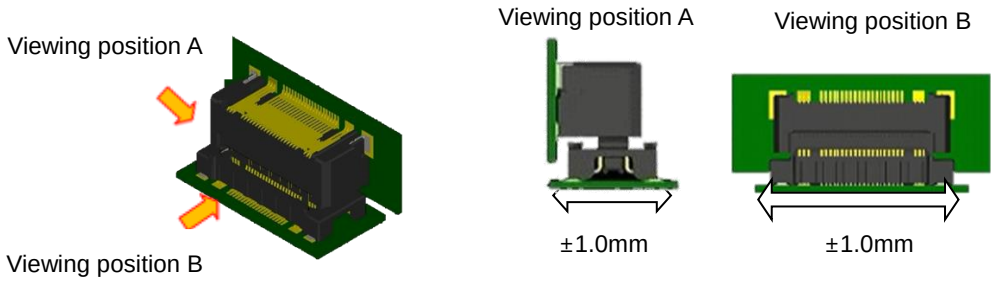
mating error and mounting slippage during assembly, as well as vibration and shock in the operating environment.

Kyocera continues to expand its automotive electronic connector line with new products offering enhanced features and performance. By providing new solutions for emerging requirements, the company aims to contribute to the advancement of the industry.

Main Features

1. Floating structure provides world's highest mating tolerance

Kyocera's proprietary floating structure ensures reliable connections in the mated state even amid movement of up to ±1.0 mm (F/P = 200 %) in both the X and Y directions.



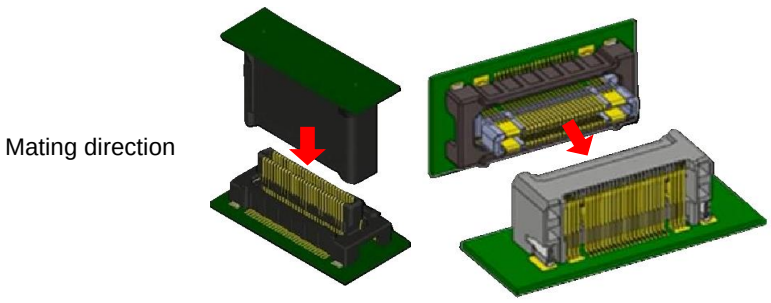
Right-angle type's mated state and floating structure

2. Heat resistant up to +125°C

Kyocera's new 5656 Series connectors feature an operating temperature range of -40°C to +125°C, facilitating use in car navigation system, in-vehicle infotainment and millimeter wave radar.

3. Straight and right-angle configurations enhance design flexibility

The 5656 Series connectors are available in two configurations: a straight type that mounts perpendicular to the circuit board for vertical insertion, and a right-angle type that mounts parallel to the board for horizontal insertion.



Straight type (left) and right-angle type (right)

4. Available with power terminal attached for higher current

Also available are two specialized types that meet with a wide range of requirements: the power terminals attached type accommodates high current such as power supply purpose. Combinations of signal and power pins are also available.

5. Reliable and durable amid foreign materials

The form of the area (terminals) removes foreign materials by wiping ensuring reliable connections.

6. Structure enhances mounting inspection process

The structure enables users to inspect the tail area to mount a board visually from above or by using an optical inspection device thus enhancing operation efficiency.

Specifications

<table>
<tr><td>No. of pins</td><td>40 to 80</td><td rowspan="2">Operating temperature range</td><td rowspan="2">-40 to +125°C (without condensation)</td></tr>
<tr><td>Pitch</td><td>0.5 mm</td></tr>
<tr><td rowspan="2">Floating volume</td><td rowspan="2">±1.0 mm (F/P = 200 %)</td><td>Rated current</td><td>DC 0.5 A/contact</td></tr>
<tr><td>Rated voltage</td><td>DC 30 V/contact</td></tr>
<tr><td rowspan="2">Height in mated state</td><td rowspan="2">17.0 mm (parallel mounting on the board)
*other variations may be available later</td><td>D.W. voltage</td><td>AC 250 Vrms/min.</td></tr>
<tr><td>Materials</td><td>Copper alloy/
heat-resistant resin</td></tr>
<tr><td>Packaging</td><td>400 or 500 per reel</td><td>RoHS and halogen-free</td><td>Compliant</td></tr>
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For more information on KYOCERA: www.kyocera.co.uk

About KYOCERA

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 264 subsidiaries (as of March 31, 2018), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the oldest producers of solar energy systems worldwide, with more than 40 years of experience in the industry.

The company is ranked #522 on Forbes magazine's 2017 "Global 2000" listing of the world's largest publicly traded companies. With a global workforce of over 75,000 employees, Kyocera posted net sales of approximately €12.04 billion in fiscal year 2017/2018. The products marketed by the company in Europe include printers, digital copying systems, microelectronic components, and fine ceramic products. The Kyocera Group has two independent companies in the United Kingdom: Kyocera Fineceramics Ltd. and Kyocera Document Solutions.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at approximately €764,000 per prize category).

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