



valid until: February 6, 2031

Fraunhofer

TESTED[®] DEVICE

Shin Kwang Electronics.co., Ltd.
KCL-5A 1LAYER SM-FLEX
Report No. SH 2601-1713

Single product Particle Emission in Cleanroom (atmospheric)

Qualification Certificate

This is to certify that the product mentioned above, provided by

Shin Kwang Electronics.co., Ltd.
Seoul, Republic of Korea

has been awarded a Fraunhofer certificate TESTED DEVICE bearing the report number SH 2601-1713.

The cable SM FLEX CLEAN CABLE: KCL-5A 1LAYER SM-FLEX (color: white) was assessed in compliance with ISO 14644-14. When operated under the specified test conditions (room temperature: $22\text{ °C} \pm 0.5\text{ °C}$; relative humidity: $45\% \pm 5\%$), it is suitable for use in cleanrooms fulfilling the specifications of the following Air Cleanliness Classes according to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
$v_1 = 0.5\text{ m/s}; a_1 = 1.0\text{ m/s}^2$	1
$v_2 = 1.0\text{ m/s}; a_2 = 2.0\text{ m/s}^2$	1
$v_3 = 2.0\text{ m/s}; a_3 = 4.0\text{ m/s}^2$	1
Overall result	1

Please note: Transport damages, incorrect installation, aging behavior etc. can influence the test result.

SH 2601-1713
Report No. first document

Stuttgart, February 6, 2026
Place, date of first document issued

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Report No. current document

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Place, current date

on behalf of 
Dr.-Ing. Frank Bürger, head of business unit Testing and Certification

This document only applies to the named product in its original state and is valid for a period of 5 years from the date the first document was issued. The document can be verified under www.tested-device.com.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.