



# Fraunhofer

## TESTED<sup>®</sup> DEVICE

TM Tech Co., Ltd.  
T-FLEX (SM-R-XXX)  
Report No. TM 1612-863

### Particle Emission

### Qualification Certificate

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

**TM Tech Co., Ltd.**  
Gyeonggi-do, Korea

has been awarded a Fraunhofer certificate TESTED DEVICE  
bearing the report number TM 1612-863.

When operated under the specified test conditions, the cable  
system T-FLEX (SM-R-XXX) (sleeve color: white) 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                     |
| $v_3 = 2.0 \text{ m/s}; a_3 = 4.0 \text{ m/s}^2$ | 3                     |
| Overall result                                   | 3                     |

The validity of this certificate  
applies only to the mentioned  
product in this particular  
condition for a duration of  
5 years.  
Further information:  
[www.tested-device.com](http://www.tested-device.com)

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

Stuttgart, January 18, 2017

on behalf of   
Frank Bürger, Project manager Fraunhofer IPA