



valid until: April 26, 2029

Fraunhofer

TESTED[®] DEVICE

SAMICK PRECISION IND.

LMES10uu

Report No. SA 2308-1446

Single product
Outgassing Behavior
VOC/SVOC

Qualification Certificate

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

SAMICK PRECISION IND. CO., Ltd
Daegu, South Korea

has been awarded a Fraunhofer certificate TESTED DEVICE
bearing the report number SA 2308-1446.

The outgassing behavior of LMES10uu (color: black) at the stated
temperatures was investigated according to ISO 14644-15. Based
on the outgassing rates determined for the specific unit, the
following material classification was made for the corresponding
Contaminant Category:

| Contaminant Category (x) | SER _u ¹⁾ 23 °C [g/unit · s] | ISO ACC _e Class (x) based on 23 °C |
|-----------------------------|--|--|
| VOC | 9.2×10^{-11} | - 10.0 |
| SVOC | 8.8×10^{-10} | - 9.1 |
| Amines | $< 2.8 \times 10^{-13}$ | -- |
| Organophosphates | $< 2.8 \times 10^{-13}$ | -- |
| Siloxanes | $< 2.8 \times 10^{-13}$ | -- |
| Phthalates | $< 2.8 \times 10^{-13}$ | -- |

¹⁾SER_u: Unit-specific emission rate

This document only
applies to the named
product in its original state
and is valid for a period of
5 years from the current
date the 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.

SA 1709-944
Report No. first document

Stuttgart, February 23, 2018
Place, date of first document issued

SA 2308-1446
Report No. current document

Stuttgart, April 26, 2024
Place, current date

on behalf of 
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA