

# REFERENCE CUVETTE SPECTRAL REFERENCE

Spectral transmission standards with Polycarbonate reference material.

**REFERENCE CUVETTE with integrated Spectral Reference** for the Liquid Scanner is a high transmittance reference material with superior performance fully comparable to the best laboratory instruments, making it ideal for use as spectral transmission standards.

The Spectral Reference is easy to use, for verifying the wavelength measurement accuracy of Spectral Engines Liquid Scanner.



HIGH-PERFORMANCE AND COMPACT SPECTRAL REFERENCE

## Key Benefits

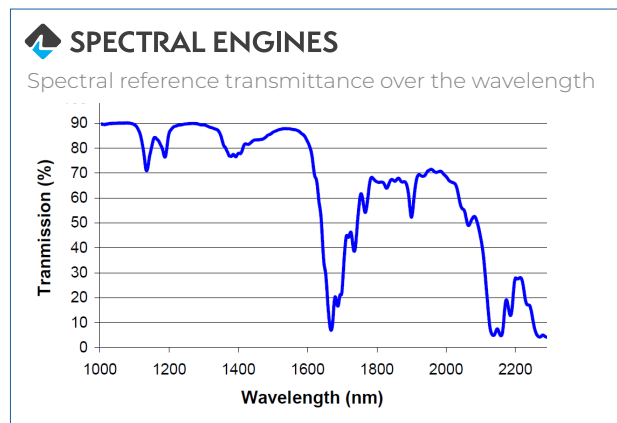
- High-tech spectral transmission standard integrated into a 5mm glass cuvette.
- High transmittance over a wide wavelength range
- Resistant to UV light, high temperature and humidity
- Unique spectral features (peaks and valleys) in the range of 1000nm to 2300nm
- The durability and robustness makes it ideal to be used in challenging environments

## Advanced Technology

The reference cuvette with the integrated spectral reference material needs to be inserted correctly in the Liquid Scanner, to perform valid spectral measurements. The reference cuvette holds the spectral reference material, providing a spectra with a transmittance of 10% to 90%. The spectral reference material is Polycarbonate transparent material, that is resistant to heat and humidity. The reference cuvette with the integrated spectral reference material is periodically measured to verify the wavelength measurement accuracy of the MEMS based Liquid Scanner.

The result of the spectral reference measurement is used to monitor that the Liquid Scanner is operating correctly.

If the reference cuvette becomes dirty or damaged, the spectral reference measurements are corrupted, and the device measurement results are unreliable. Although the material is very durable, care should be taken to prevent contaminants such as finger oils from contacting the materials surface. Best way to prevent contamination is to wear clean gloves when handling the spectral reference.



## Example Applications

- Spectral transmission standards for verifying the wavelength measurement accuracy
- Verifying the wavelength measurement accuracy of MEMS based spectral sensors and spectrometers
- Environment test targets
- Spectral sensor characteristic and behavior

## Technical Specifications

SPECIFICATIONS	VALUE
Product	Reference Cuvette (with integrated Spectral Reference)
Material	Polycarbonate Reference Material
Operation and storage temperature range	-10°C to 60°C
Operation and storage humidity range	5% to 95% (hydrophobic)
Spectral range	1000 nm - 2300 nm
Transmittance	In the range of 10 % to 90 %
Tolerance of the features (peaks and valleys) in the spectra	+/- 1nm
Features (peaks and valleys)	Unique spectral features in the range of 1000nm to 2300nm (see chart and optional table)

## Handling recommendations

Polycarbonate is a clear transparent material with a very smooth surface and it is sensitive to scratches and contamination from organic based substances, such as oils (fingerprints). Reference material plain surface can not be touched while using the reference cuvette. Do not open the sealed reference cuvette to disassemble the spectral reference material for cleaning purposes. Please only clean the exterior surfaces of the reference cuvette. Tissues and other paper products should not be used to contact the material as they may leave behind residual particles that can scratch the surface of the material. The only liquids that may safely contact the material are clean water (distilled water recommended) and optical grade Isopropyl alcohol.

For correct disposal of the old, contaminated materials either send them back to your supplier or dispose them according to the respective government regulations for organic polymer.

SPECTRAL ENGINES® GMBH  
Weisskirchener Str. 2-6  
61449 Steinbach, GERMANY  
sales@spectralengines.com

[WWW.SPECTRALENGINES.COM](http://WWW.SPECTRALENGINES.COM)

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