



## COOPERATION OFFER

### GENERAL DESCRIPTION

**Title** USB powered film characterization at the point-of-need

#### Summary

A Greek SME active in the design and manufacturing of advanced optical instrumentation, is offering a unique turn-key solution for accurate & precise optical characterization of transparent and semi-transparent single films or stack of films. The system is USB powered and capable to perform reflectance measurements for films in the 350-1000nm spectral range, at the point-of-need. Industrial partners are sought for a commercial agreement with technical assistance.

#### Description

The Greek SME is a spin-off of a famous research centre that focuses on the design and manufacturing of optical metrology tools for the characterization of thin and thick films, based on a methodology developed in-house. It provides a wide range of turn-key optoelectronic characterization tools for semiconductors, organic electronics, PV, materials, plastics & polymers, chemicals, paints & coatings, optics and the glass industry.

The system is a unique turn-key, portable and miniaturized solution for accurate & precise optical characterization of transparent and semi-transparent single films or stack of films. It is capable to perform reflectance measurements for films in the 350-1000nm spectral range without any need for large lab space requirements since it is just USB powered. It is built around a miniature 3648 pixel, 16bit resolution spectrometer and a high stability hybrid light source that combine incandescent lamp and LEDs. The average light source's life time is 20 000h, and all its features, such as optical power, emission spectrum, stability etc., are controlled through the embedded micro-controller. The compact design including the customized design of its reflection probe, guarantee high accuracy and repeatability of the performed measurements.

The system can be either mounted on the supplied stage or can be easily transformed to a hand-held thickness measurement tool to be placed over the sample under characterization. This way, the system could be a reliable optical characterization tool in the field applications.

It is controlled through specially developed Windows software, performing the data acquisition for thickness and optical properties of films. It acquires in real time Absorbance, Transmittance, Reflectance spectra, and performs very fast computations thanks to the state of the art algorithms implemented in Visual C++. It runs a special algorithm developed by the Greek company reassuring accurate calculations of film thickness & optical properties of free-standing and supported (over transparent or partially/fully reflective substrates) stack of (<10 layers) films. The entire system (hardware – software) is shipped ready to use.

The SME is looking for industrial partners from the semiconductor, organic electronics, PV, materials, plastics & polymers, chemicals, paints & coatings, optics and the glass industry, to conclude a commercial agreement with technical assistance.

### Advantages and Innovations

Powered through USB, no-power cable is required

-Really portable, the probe comes over the sample

-Suitable for a variety of apps at the point of need

-Its small footprint brings film characterization in the office

-Low cost solution in comparison with competition

-The special software is modular and capable for fast computations thanks to the state of the art algorithms implemented in Visual C++.

-Reliability, versatility and accuracy of measurements

-Can be easily used by anyone with basic computer skills without any deep knowledge of optics.

### Current Stage of Development\*

Under development /laboratory tested

Available for demonstration

Already on the market

Field tested / evaluated

Prototype available for demonstration

Concept stage

Comments Regarding Stage of Development:

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### Intellectual Property Rights Status\*:

Patent(s) applied for but not yet granted

Granted patents

Copyright

Design rights

Secret know-how

Exclusive rights

Trade Marks

Others (registered design, plant variety, etc.)

Comments Regarding IPR Status: (e.g. countries for which protection has been granted or applied for)

Preferred Countries for Dissemination:

### DETAILS OF YOUR OWN ORGANISATION/COMPANY

Type\*  Industry  R&D Institution  University  Private Inventor

Other: please specify

Comments:

Organisation/Company Size\* (please tick one box)

< 10 employees  11-50 employees

51-250 employees

251-500 employees

> 500 employees

Year Established:

Turnover (only for business profiles):  < 1 mio

1 – 10 mio

10 – 20 mio

20 – 50 mio

50 - 100 mio

Already Engaged in Trans-National Cooperation  Yes

No



**Experience Comments:**

**Certification Standards:**

**Languages Spoken:**

## **COLLABORATION DETAILS**

**Type of partnership considered:**

### **Technology Offers**

Commercial Agreement with technical assistance (an agreement arranging the acquisition of a product/technology paired with the provision of a number of services in support of a transfer of technology)

Joint Venture Agreement

License Agreement

Technical co-operation agreement

Research co-operation agreement

### **Business Offers**

Distribution services agreement

Acquisition agreement

Franchise agency agreement

Manufacturing agreement

Outsourcing agreement

Subcontracting

Financial agreement

Services Agreement

**Type and Role of Partner Sought\*:**

The company is looking for industrial partners from the semiconductors, organic electronics, PV, materials, plastics & polymers, chemicals, paints & coatings, optics and the glass industry, to conclude a commercial agreement with technical assistance.

**Size and Type of Partner Sought (e.g. industry, research):**

**Additional information** (pictures)



## CONTACT

Please contact the RespiceSME coordinator Samantha Michaux for the contact data of the company.

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