

# PREMOSYS<sup>®</sup>

Productportfolio

lights

LED- AND LIGHT MEASUREMENT  
OPTIMIZED FOR PRODUCTION AND  
LABORATORY

colors

INLINE COLOR MEASUREMENT  
SYSTEMS  
ALL SURFACE STRUCTURES FROM  
INHOMOGENEOUS TO GLOSSY

electronics

ELECTRONIC MODULES  
CUSTOMIZED PCB AND MODULE  
DEVELOPMENT

analytics

MEDICAL TECHNOLOGY  
OPTICAL MEASUREMENT TECHNOLOGY AND  
REGULATION ELECTRONICS

liquids

SPECTRAL MEASUREMENT  
SYSTEMS  
AUTOMATED LIQUID ANALYSIS

agrar

SENSOR TECHNOLOGY FOR  
CULTIVATION DEVICES  
SYSTEMS FOR PLANT DIFFERENTIATION  
AND WILDLIFE DETECTION



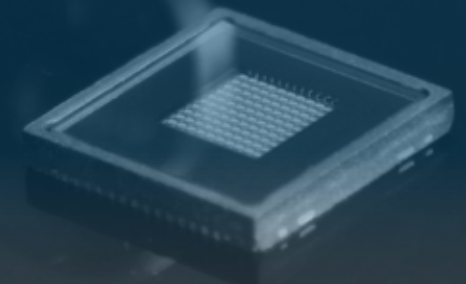
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# PREMOSYS<sup>®</sup>

## COLOR SENSOR CHIP



**NANOS+**

beyond color measurement

The high-resolution color and spectral sensor systems by **PREMOSYS®** provide features that meet the highest demands of a wide range of industries worldwide. The sophisticated sensor technology is characterized by its process-safe and reliable long-term stability, even under constantly changing environmental conditions. They are easy to integrate in any application and due to their durable, maintenance-free characteristics, the compact systems optimally fit into existing as well as new processes.

In addition to the development and production of innovative systems for professional color detection and measurement, **PREMOSYS®** has succeeded, after many years of research, in developing a worldwide unique color sensor chip that combines the advantages of existing technologies and elevates them to a completely new level.

## QUANTUM LEAP IN OPTOELECTRONICS

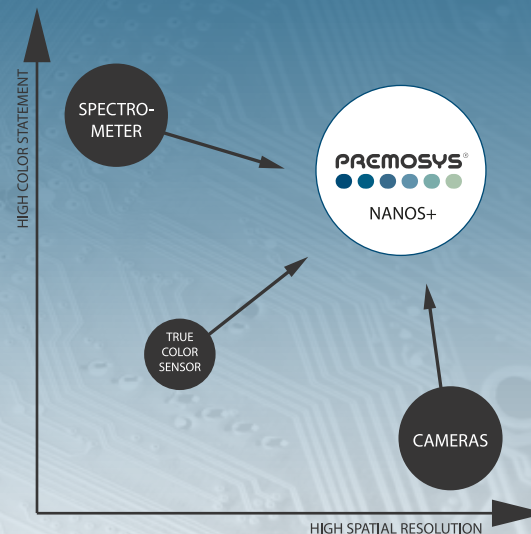
This worldwide unique color sensor chip is considered a quantum leap in technology. It's very high spatial resolution, comparable to cameras in the upper price range, as well as very high color precision, open entirely new possibilities for any kind of application.



## SENSOR CHIP TECHNOLOGY

- Filtering of specific wavelengths using nanostructures directly located on the sensor chip
- 1.600 spectral data on 16mm<sup>2</sup> sensor area with a resolution of 1 nm
- Optical filter structures smaller than the wavelength of light
- Broadband and very fine scaled evaluation from visible light (VIS) to the near infrared range (NIR) via analog outputs, I2C-, SPI- and UART-ports

## TECHNOLOGICAL GAP CLOSURE

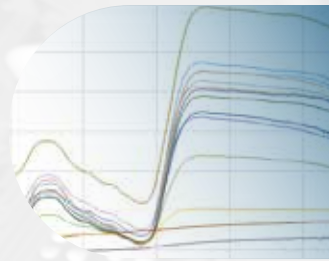


The **PREMOSYS®** NANOS+ closes the technological gap between high-resolution camera technology, XYZ color sensor chips and spectrometers.

1.600 color channels on an area of 16mm<sup>2</sup> allow an unprecedented, pixel-precise and highly accurate color statement, far beyond existing systems.

## PREMOSYS® REAL-TIME COLOR DIFFERENTIATION

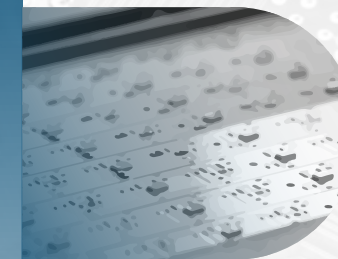
High processing speed coupled with high spatial and color resolution make it possible to precisely differentiate individual plants in fields and arable land at driving speeds of up to 25km/h. This enables precise, selective mechanical, chemical or thermal measures.



## PREMOSYS® DUAL SENSOR TECHNOLOGY

Due to the 1.600 color channels on 16mm<sup>2</sup>, in addition to color measurements, it is possible to carry out function tests with pinpoint accuracy.

This not only enables one to accurately determine color temperature, but also the number of lit LED's.



## PREMOSYS® OPTICAL DEFECTIVE PART DETECTION

The high spatial resolution of the **PREMOSYS®** NANOS+ allows the fully automated detection of defective part. Therefore, light, color and presence tests can be carried out in one process step.

