

GOSSEN

MAVOSPEC BASE

Spectral Light Meter For Practitioners

MAVOSPEC BASE - Applications

Development, production of lamps and luminaires

test system implementation, quality control
[open interface, storage, data transmission]



Retail and wholesales of lamps and luminaires

proof, comparison, evaluation of light and color quality



Medical

proof of room classes
surgical and autopsy areas,
examination rooms Ra ≥ 90
dental treatment rooms,
dental laboratories (QS) Ra ≥ 90



Shop lighting

presentation of goods Ra ≥ 90
R9 = check saturated red
fruits, vegetables, meat, sausage
textile / leather



Research human centric lighting

Biological influence of light in
relation of daytime on humans
brightness, color temperature



DIN EN 12464 Light and lighting - Lighting of work places

Monitor, beamer, giant screens

test, calibration, service,
color space



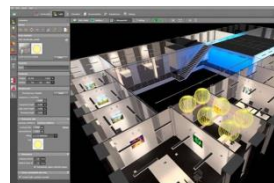
Working place lighting

Color control Ra ≥ 90
Hair care and cosmetics
graphic / chemical industry, wood /
textile / leather / jewelry processing



Interior design lighting design

checking of planned data
selection of lamps and luminaires
proof, comparison, evaluation
of light and color quality



Exhibitions museums, libraries

color rendering
UV / IR parts in spectrum



Studio, stage film lighting

adaptation of different light source,
white balancing, color rendering



MAVOSPEC **BASE** - Target Groups

Manufacturers
of lamps and
luminaires

Importers
of lamps and
luminaires

Trading
of lamps and
luminaires

Medical technicians,
medical service
organizations

Light authorities,
consultants

Manufacturers of
lighting engineering
products



Electrical installation
companies,
electricians

Lighting designer,
electrical planner

Specialists on work
protection and safety

Facility Managers

Energy Consultants

MAVOSPEC **BASE** – Measures



MAVOSPEC **BASE** integrates the performance of a high-end spectrometer into a portable meter with intuitive ring controller operation and a few operating buttons. The high resolution color display represents the values excellent in dark and bright surroundings.

Versatile Applications

- Monitoring of working places, trade association directives and official norms
- Planning, installation and maintenance of illumination systems
- Production and quality assurance of lamps and light fixtures
- Research and development in lighting companies

Measures

- Illuminance E (lx) – Lux
- Color coordinates according CIE 1931 (x,y), CIE 1960 (u,v) and CIE 1976 (u' , v')
- Correlated color temperature CCT
- Color rendering index CRI according CIE 13.3 - Ra (R1...R15)
- Duv
- Peak wavelength λ_{peak} (nm)
- Dominant wavelength λ_{dom} (nm)
- Purity
- Flicker measurement Index, %, Frequency

MAVOSPEC BASE – Key Selling Features



- **Universal application** – suitable for traditional and modern light sources such as LEDs, OLEDs
- **Convenient daily use** – practical one-hand operation with ring controller and a few buttons, easy to read color display with high resolution, compact design, protected transport in high-quality aluminum case
- **Automatic measured value storage** – thousands of light measurements can be stored automatically or manually in CSV format on an 4 GB microSDHC card located in the battery compartment.
- **Simple data transfer** – The integrated USB interface allows easy data exchange with the computer. The data stored in CSV format data can be imported from any programs.
- **Custom System Integration** - The open interface protocol for instrument control and data communication allows the integration into own test systems and
- **Sustainable design concept** – The update capability via USB interface holding the device open for future expansion and modification of the standards. Initial investment with long value retention.
- **Environmentally friendly power supply** – User replaceable lithium-ion battery, charge via USB interface with an external power supply, state of charge and level indicator, continuous operation without shutting down about 8 hours.
- **Extreme battery life** – Extension by reducing the display brightness, auto display and unit shutdown.
- **Made in Germany** – Quality product with calibration certificate from the GOSSEN light laboratory.
- **Very good price / performance ratio - the light meter of the future!**

MAVOSPEC **BASE** – Technical Data



Technical Data

- Spectral range 380–780 nm
- Sensor CMOS, image sensor 256 Bit
- Physical resolution ~ 1,8 nm
- Wavelength reproducibility ± 0,5 nm
- Integration time automatic, manual, 10 ms ... 3000 ms in 10 ms steps
- A/D converter 16 Bit
- Signal-to-noise ratio 1000:1
- Spurious light - 25 dB
- Full width at half maximum FWHM 15 nm
- Measuring uncertainty illuminance ± 3 %
- Measuring uncertainty CCT ± 2 %
- Measuring uncertainty CRI ± 1.5%
- Measuring uncertainty Flicker ± 1.5 %

- Flicker compensation

- Temperature sensor and automatic zero-point correction
- High sensitivity and precise calibration
- Excellent noise reduction

MAVOSPEC BASE – Technical Data



Interfaces & Memory

- | | |
|--|---|
| <ul style="list-style-type: none"> • USB • Interface protocol • Measuring value memory • Data format | <p>USB 2.0
open, development kit available
Auto / manual / microSDHC 4 GB
CSV</p> |
|--|---|

Operation

- | | |
|---|--|
| <ul style="list-style-type: none"> • Display • Keyboard | <p>2.1" color TFT, 240 x 320 pixel
3 keys, ring controller</p> |
|---|--|

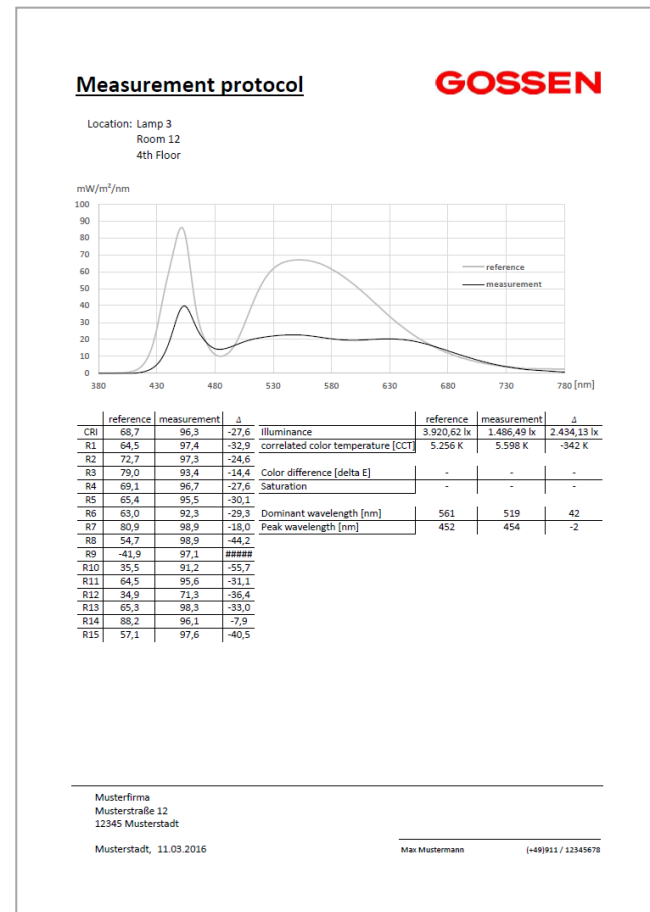
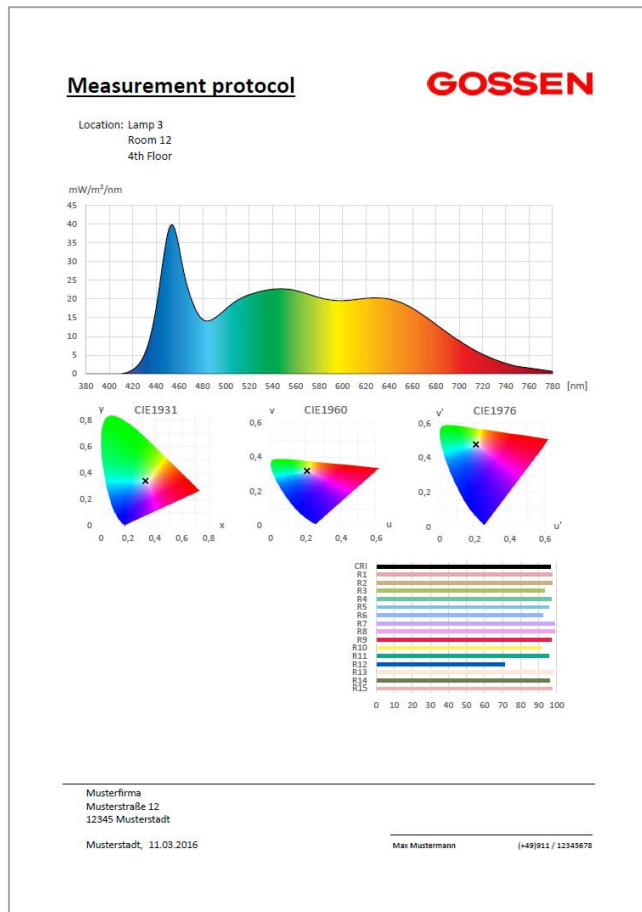
Miscellaneous

- | | |
|--|---|
| <ul style="list-style-type: none"> • Operating System • Power supply via USB port • Power pack | <p>Embedded
< 640 mA
Mains power pack 100 ... 240 V, 50/60 Hz, 0.15A
Output 5 V, 1 A</p> |
| <ul style="list-style-type: none"> • Rechargeable battery • Rechargeable battery life • Charging time with charger • Operating temperature | <p>Li-Ion battery 3,7 V 890 mAh, removable
≥ 8 h
approx. 1.5 h
5° - 40° C</p> |

MAVOSPEC **BASE** – Overview



MAVOSPEC BASE – EXCEL Protocols



Excel file with standard protocols, data can be filled in by selecting files from device or memory.

Delivery Contents, List Price, Rollout



Article number

M521G

Delivery contents

Spectrometer, rechargeable battery, power pack, carrying strap, USB cable, 4 GB micro SD card, instructions, aluminum transport case, neoprene wallet

Excel file with standard protocols, data can be filled in by selecting files from device or memory.

List price

1899.- € plus VAT

Market introduction

March 2016 – light & building

Start of delivery

21. July 2016