



**MORE LIGHT**

JENOPTIK GRYPHAX® SUBRA

Explore your micro universe in full HD.

Camera properties

Sensor Size	● ● ● ○
Sensitivity	● ● ● ○
Frame Rate	● ● ● ○
Resolution	● ○ ○ ○



color



uncooled



active

Recommended: Applications

Life & Medical Science	● ● ○ ○
Education Life & Medical Science	○ ○ ○ ○
Material & Manufacturing	● ● ○ ○
Education Material & Manufacturing	○ ○ ○ ○
Fluorescence	● ● ● ○
Education Fluorescence	○ ○ ○ ○

Contrast techniques

BF	● ● ● ●
DF	● ● ● ○
DIC	● ● ○ ○
Ph	● ● ● ○
Pol	● ● ● ●

# JENOPTIK GRYPHAX® SUBRA - technical data

## Exclusive solution for fluorescence applications

### IMAGE SENSOR

Type Square Utilised sensor diagonal	SONY back-illuminated CMOS 1/1.2" 13.3 mm
Pixel dimensions	5.86 x 5.86 µm
Color or monochrome	Color
Transfer method   shutter mode	All pixel scan   global shutter

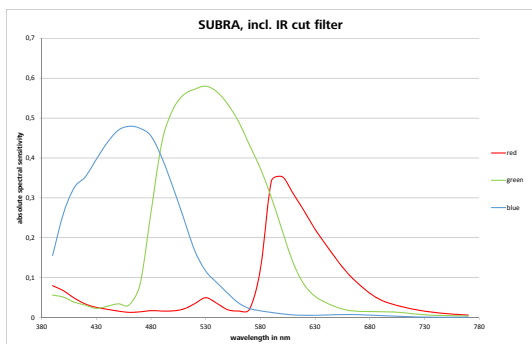
### CAMERA

Camera resolution & speed in LIVE mode	1920 x 1200 pixel   30 fps
Camera resolution in RECORD mode	1920 x 1200 pixel
Camera resolution & speed in VIDEO mode	FULL HD - 1920 x 1200 pixel up to 25 fps
Exposure time LIVE min. - max.	26 µs - 1 s
Exposure time RECORD min. - max.	26 µs - 30 s
Gain	Max. 30
Cooling	NO
A/D conversion   digital output	12 bit (4096 grey values)   16 bit
Absolute sensitivity threshold*	5.5 e-
Quantum Efficiency @ 532 nm (green)*	0.57 QE (λ)
Dark Noise [DN / e-]*	1.6 DN / 5 e-
Saturation capacity*	12.500 e-
Dynamic range*	67 dB
Filter	IR cut   optional clear-glass
Power consumption	Appr. 4.5 W
Hardware Trigger	OUT
Weight	Appr. 400 g
Power switch	Yes
Optical interface	C-mount
Dimensions	85 mm x 75 mm x 50 mm
Storage options	-20°C up to 70°C
Operating temperature	+10°C up to + 35°C non condensing
Warranty	24 months
Conformity to CE / WEEE / RoHS / China RoHS	Yes

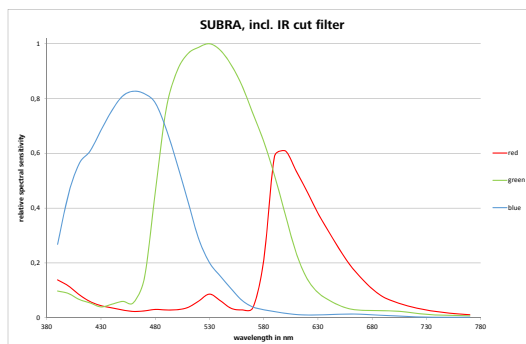
### RECOMMENDED SYSTEM REQUIREMENTS

Personal computer	Intel i7 Quad-Core (min. 3.0 GHz) processor   8 GB RAM
Operating system -64 Bit	Win 7 SP1 / Win 8.1 / Win 10   MacOS High Sierra / Mojave   Linux Ubuntu 16.04 LTS
Data interface	USB 3.0 integrated, no extra power supply needed
Monitor resolution	1920 x 1200 or higher
Software (included in the package)	Microscope software - GRYPHAX APP / Twain APP / DirectX APP / Software development kit

## Measured spectral sensitivity\*: Absolute



## Relative



\*based on EMVA 1288 standard compliance guidelines

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