





1. About this specification

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2. General introduction

The Cylon colorimeter has been designed to operate in areas where colour reproduction is extremely important and where long term stability needs to be guaranteed without the need for periodic calibrations. Colours are measured according to the human eye (CIE1931). The Cylon uses XYZ interference filter based technology which guarantees long term stability and consistency among devices. The light source is stabilised through an optical feedback loop. It can measure up to 10,000 colour points per second.

2.1. Cylon highlights

- 45° circumferential lighting/0° measurement
- Large measurement spot.
- Measure colour : XYZ, Yxy, Yu'v', CIEL*a*b*, LCH ...
- Stabilised light source, white LED.
- Non- contact.
- High stability.

2.2. Fields of application

- Fabrics
- Powders
- Paper
- Food
- Plastics
- Paints





3. General specification

Interfaces	
USB 2.0	USBTMC compliant, SCPI command set, high speed device
RS232	Same command set as USB
Ethernet	Same command set as USB
Trigger input and Trigger output	5V compliant

Measurement system	
Photo detector	Silicon photo diodes using interference based XYZ filters
Spectral response	Approximates CIE 1931 2 degree colour matching functions
Colour systems	XYZ, Yxy, CIEL*a*b*, Luv, LCH, dE (CIE1976, CIE1994, CIE2000, CMC)
Optical system	45° circumferential lighting, 0° measurement, specular component excluded
Measurement speed	sample mode: 10.000 colour points per second average mode: 20 measurements per second
Measurement spot	15-45mm, choose when ordering
Working distance	20mm

Size	
LxWxH	140x140x211 mm
Mounting	Numerous options
Weight	5kg

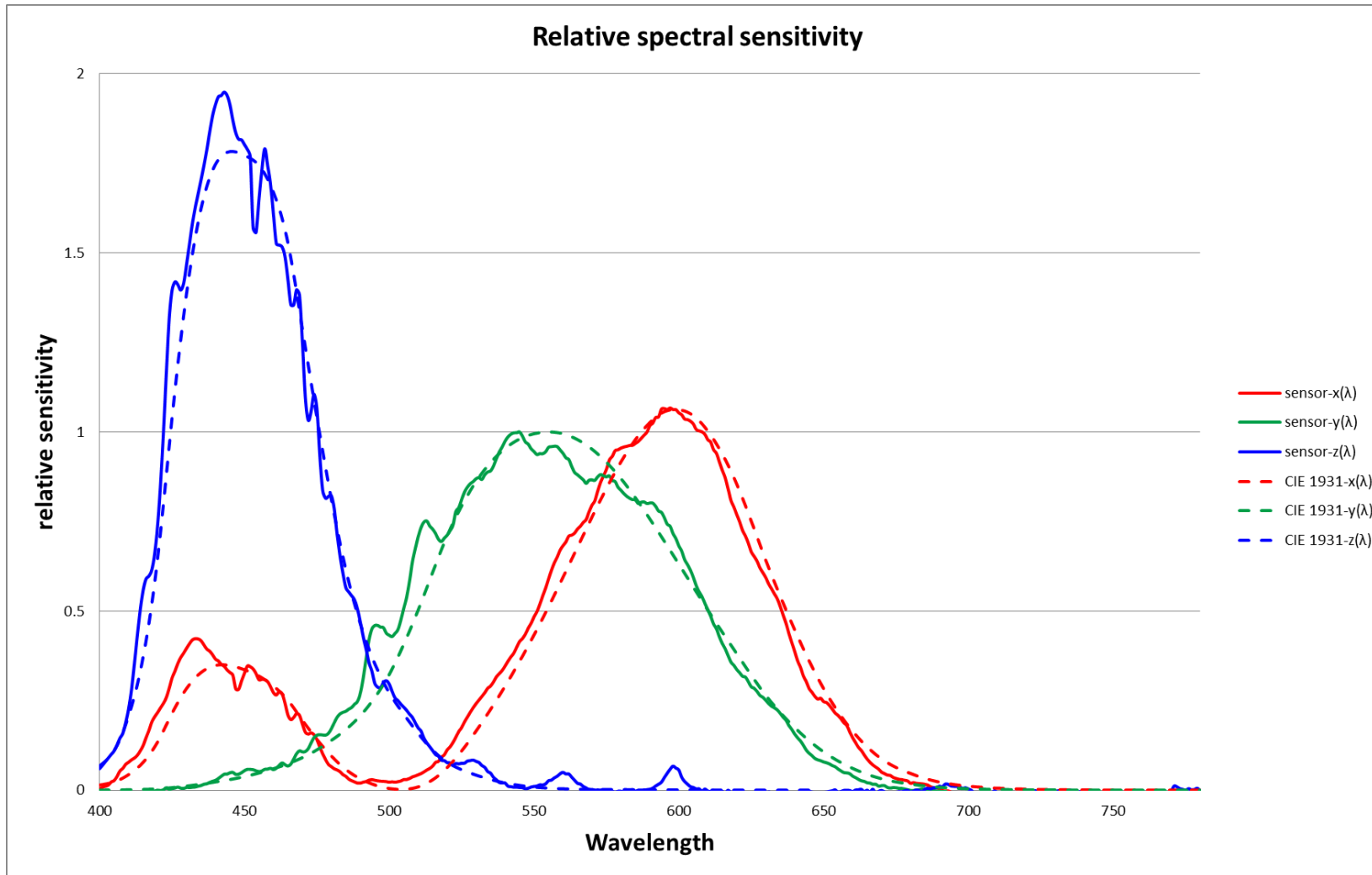


4. Colorimeter specification

Colorimeter specification			
Parameter	Range	Accuracy	Repeatability
Resolution	16 bit for X, Y and Z	>60dB without averaging	
light source output (Y)	White LED is optically stabilised	Within 0.3% over full lifetime	±0.1% (internal stability)
Illuminant	D65, D50, C, etc		
Inter instrument agreement	Delta E < 1.5		
Delta E	> 0.05	0.1	±0.1 (CIE 1976)
Absolute accuracy	Delta E <0.5 (measured on grey tiles of gretag chart) Delta E < 3 (average of 24 measurement on the gretag chart)		Delta E is 0.2
Operating temperature	10-40° C		



5. Typical spectral sensitivity





6. Mechanical dimensions

