

CDS 3000

High Speed Spectrometers

Ideal for high precision fixed quantity, UV and quantum efficiency measurement



Accurate

The CDS-30x0 Spectrometer is designed to measure critical spectral and optical characteristics of devices with reliability, speed and accuracy specifically in manufacturing environments. Fiber optic connectors easily connect the CDS-30x0 to a variety of measurement devices for both spectroradiometric and photometric measurement. The instrument is ideally suited for high precision fixed quantity UV, quantum efficiency measurement and production line use.

Software

DLL drivers are available for customers to easily create proprietary measurement programs. The DLL drivers seamlessly integrate to your specific measurement instrument.

Value

- Wide dynamic range
- Exceptional measurement sensitivity
- Low stray light
- High reproducibility
- High speed
- Synchronized external trigger

Applications

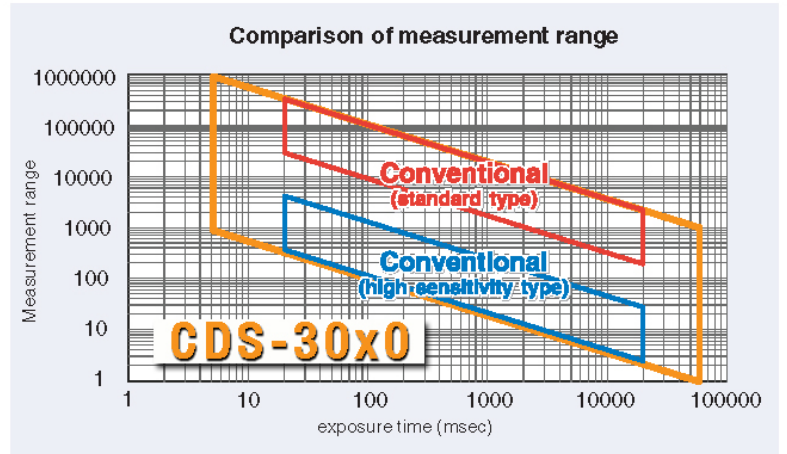
- Luminescence
- In-Line process evaluation
- Reflection/Transmission properties

Measure

- Luminance
- Intensity
- Tristimulus Values
- Chromaticity Coordinates
- Dominant Wavelength
- Peak Wavelength
- Centroid Wavelength
- Correlated Color Temperature
- Color Rendering Properties
- Full Width/Half Max (FWHM)
- Purity (%)

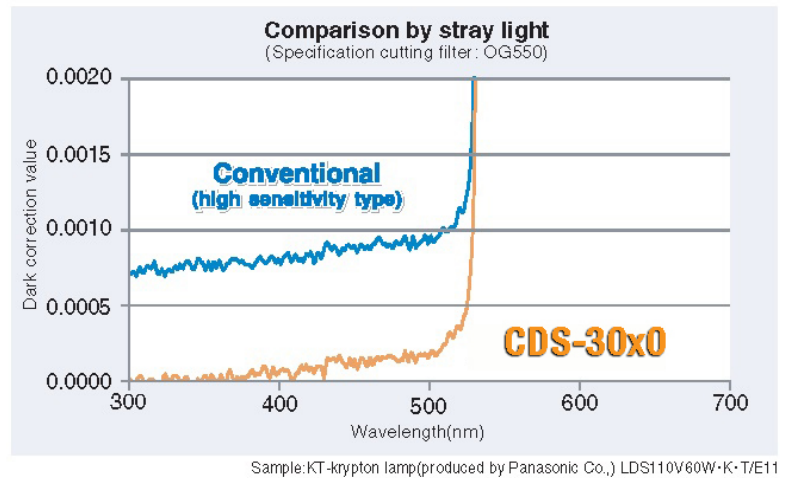
Wide dynamic range

Wide measurement range was achieved by expanding exposure time and combining ND filters.



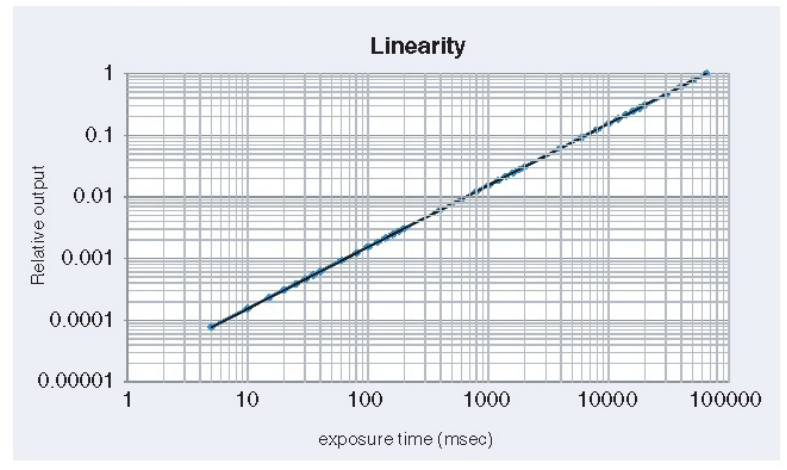
Low stray light function

We can achieved about 1/5 decrease of the stray light effect compared with our conventional model by the lowering stray light function.

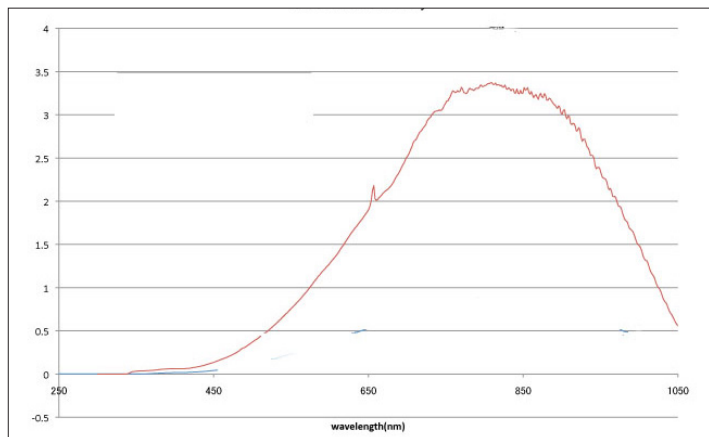


Speed-up of exposure time and high repeatability

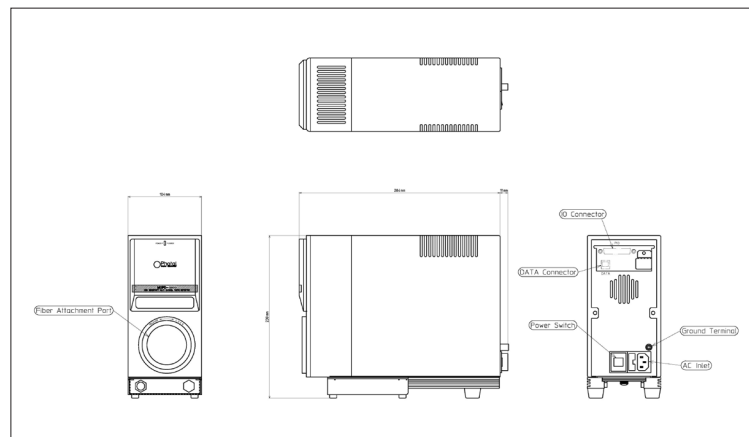
Speed-up by shorter than ever exposure time of 5msec was achieved. Moreover, high repeatability is achieved at wide exposure time up to 65 sec.



CDS-30x0 Sensitivity



CDS-30x0 Dimensions



Product Properties and Performance

Spectrometer

	CDS-3020	CDS-3030
Detector: (*1)	TE Cooled 1024 x 122 CCD	TE Cooled 1024 x 122 CCD
Spectral Range:	350 - 830 nm	360 - 1100 nm
Spectral Resolution:	3 nm	3 nm
Grating:	f= 85.8 mm 448grooves/mm	f= 85.8 mm 303grooves/mm
Gate-Time:	5 msec to 20 sec (option 5 msec to 65 sec)	5 msec to 20 sec (option 5 msec to 65 sec)
ND Filter:	OD0-2	OD0-2
Data Point Interval:	0.5 nm*	0.5 nm*
Wavelength Accuracy:	± 0.3 nm	± 0.5 nm
Stray Light:		
(Illuminant A with Y50 cut on filter)	0.97%	0.97%
(Laser 633 nm)	1.8E-5 (450 - 550)	1.8E-5 (450 - 550)
Dynamic Range:	1000000:1	1000000:1
Linearity:	± 0.5%	± 0.5%
A/D Converter:	16 bit	16 bit
A/D Rate:	1 MHz	1 MHz
PC Interface:	USB 2.0	USB 2.0
Weight:	6 kg (18 lbs)	6 kg (18 lbs)
Dimensions: (W x H x D)	105 x 230 x 282 mm	105 x 230 x 282 mm

Installation Environment

Temperature:	20 - 35 C; no sharp temperature change
Relative Humidity:	30 - 80%, no condensation
Ambient Atmosphere:	No corrosive atmosphere, good ventilation
Supply Voltage:	AC100 to 230V 50/60Hz No sharp load fluctuation No nearby serious noise source

Footnotes

(*1) Detector: Converted to 512ch in order to increase speed to calculate chromaticity. A/D conversion speed 1 ms:512ch, more than 2 ms:1024ch.

* 1 nm with MtrX-SPEC