

Optical Density Module

Online Cell Growth Monitoring via Optical Density

Module OD4

Technology

The DASGIP OD4 online monitoring module for optical density, offers easy measurement of biomass and cell growth in up to four bioreactors.

A range of precision machined sensors with different optical path length make the instrument suitable for microbial fermentation and mammalian cell cultivation.

Standard and individually defined process values are automatically calculated from absorption raw signals (AU). The small sensor size and a proprietary signal processing algorithm reducing air bubble induced noise, make the OD4 module the best choice available for small scale operation on the market.

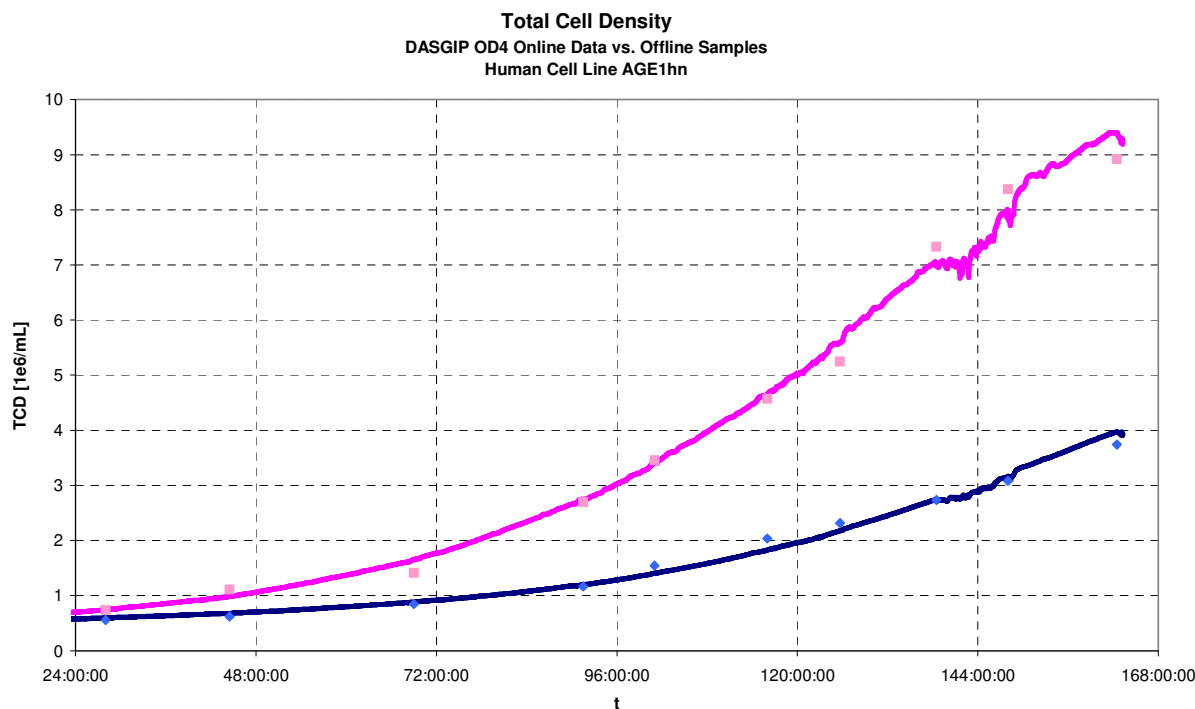
Due to their intelligent design and high quality materials DASGIP OD sensors are maintenance-free.



Application

■ Cell Culture and Microbiology

The OD4 is suitable for applications requiring individual and online measurement about cell growth in multiple vessels. With various optical path lengths (5, 10, and 20 mm) the DASGIP sensors guarantee reliable results in microbiology and cell culture.



Optical Density Monitoring

DASGIP OD4 Module

An easy to use software interface allows configuring the OD4 to correlate the absorption raw signal to a user selected process value. Up to four relations can be defined and stored in the instrument.

■ System Integration and Stand Alone Use

All DASGIP modules are part of the DASGIP Parallel Bioreactor Systems for microbiology and cell culture. One or more modules can also be operated as stand-alone systems. The included software supports automatic data logging and easy definition of correlation relations. Digital and analog interfaces allow seamless integration into 3rd party systems.

■ Laboratory, Production and Quality Assurance

Whether used in laboratories, in production or as part of quality assurance, the Optical Density Monitoring Module fulfills highest demands.

DASGIP systems directly support important programs of the biotech industry such as the FDA's PAT initiative and the Quality by Design approach.

Benefits

The DASGIP OD4 complements the DASGIP system perfectly adding a significant process value with high usability.

Technical Data

Module	
Dimensions (WxDxH)	300 x 320 x 190 mm
Ambient Conditions	5°C to 40°C; max. 80% rH; no outdoor use
Power Supply	110 to 240 V _{AC} 50/60 Hz
Weight in kg	App. 8 kg
Digital Interfaces	RS232/RS485
Sensors	
Sensor Length	120, 225, 320 mm
Optical Path Length	5, 10, 20 mm
Port Connection	Pg 13.5
Range	0 – 5AU
Optical Filter	Infrared

Sensor Inputs	
Count	4
Input Range	0 – 100µA Resolution 25pA
System Integration	
Analog Outputs	0-10 V _{DC} (4 x AU, Process Value)
Comm. Protocol	DTP
Software	
Control & Data Logging	DASGIP OD4 Software
Programming Libraries	ActiveX, COM, .Net