

CLARIOstar® - Technical specifications

Due to the modularity of the CLARIOstar, all or a combination of the features can be installed at purchase. Most features can be upgraded at a later date. Please contact your local representative for more details or a quote.

Detection modes	Fluorescence Intensity - including FRET Luminescence (flash and glow) - including BRET UV/Vis Absorbance Fluorescence Polarization / Anisotropy Time-Resolved Fluorescence - including TR-FRET AlphaScreen® / AlphaLISA® / AlphaPlex™		
Measurement modes	Top and Bottom reading Endpoint and Kinetic measurements Spectral Scanning (Fluorescence, Luminescence and Absorbance) Well Scanning		
Microplate formats	6- to 1536-well plates, LVis Plate with 16 microspots (2 µL)		
Light sources	High energy xenon flash lamp Dedicated laser for AlphaScreen® / AlphaLISA® / AlphaPlex™		
Detectors	Low noise Photomultiplier Tube (PMT) UV/Vis Absorbance Spectrometer		
Dual LVF Monochromator™	Fluorescence, Luminescence: Top and Bottom Fluorescence Excitation / Emission Spectral Scanning Luminescence Emission Spectral Scanning Spectral Range: 320 - 850 nm (selectable increments from 0.1 to 10 nm) Software Selectable Bandwidths: 8 - 100 nm		
Linear Variable Dichroic Mirror	Spectral Range: 340 - 740 nm (selectable increments of 0.1 nm)		
UV/Vis absorbance spectrometer	Spectral Scanning or up to 8 discrete wavelengths in less than 1 sec / well Spectral Range: 220 - 1000 nm (selectable increments from 1 to 10 nm) Bandwidth: 3 nm		
Optical filters	Top and Bottom for all detection modes, except absorbance Up to 4 excitation filters, 4 emission filters, and 3 dichroic mirrors Spectral Range: 240 - 900 nm		
Sensitivity*	FI LVF Monochromator	Top: < 0.35 pM fluorescein, 384sv, 20 µL (< 7 amol/well) Bottom: < 3.0 pM fluorescein, 384, 50 µL (< 150 amol/well)	
	FI Filters	Top: < 0.15 pM fluorescein, 384sv, 20 µL (< 3 amol/well) Bottom: < 1.0 pM fluorescein, 384, 50 µL (< 50 amol/well)	
	FP	< 0.5 mP SD at 1 nM fluorescein, 384sv, 20 µL	
	TRF	< 20 fM europium, 384, 80 µL	
	HTRF®	HTRF® certified for black and white microplates Reader Control Kit (Eu) after 18h incubation, 384sv, 20 µL > 880 % Delta F for High Calibrator > 30 % Delta F for Low Calibrator < 2.0 % CV for Standard 0	
	LUM	< 0.4 pM ATP, 384sv, 20 µL (< 8 amol/well) Dynamic Range: 9 decades	
	AlphaScreen®	< 100 amol/well P-Tyr100 (384sv, 20 µL)	
	ABS with Spectrometer	Accuracy: < 1% at 2 OD Precision: < 0.5% at 1 OD and < 0.8% at 2 OD Dynamic Range: 0 - 4 OD	
Read times	1 flash:	8 s (96)	15 s (384) 28 s (1536)
	10 flashes:	19s (96)	57 s (384) 184 s (1536)
Reagent injection	Up to 2 built-in reagent injectors with reagent back flushing Individual injection volumes for each well 3 to 500 µL (optional up to 2 mL) Variable injection speed up to 420 µL/s		
Shaking	Linear, orbital, and double-orbital with user-definable time and speed		
Incubation	+3°C above ambient to 45°C (65°C optional)		
Software	Integrated fluorophore library Multi-user software package including Reader Control and MARS Data Analysis Software, FDA 21 CFR Part 11 compliant		
Dimensions	Width: 45 cm, depth: 51 cm, height: 40 cm; weight: 32 kg		
Accessories			
ACU	Actively regulates O ₂ and CO ₂ : 0.1 - 20%		
LVis Plate	Measure 16 low-volume samples (2 µL) and QC standards		
Stacker	Magazines for up to 50 plates - continuous loading feature		

BMG LABTECH's LVF Monochromator includes technology covered under US Patent 6,700,690, for which BMG LABTECH has an exclusive license for the microplate reader market.

*Limit of detection (sensitivity) was calculated according to the IUPAC standard: $3 \times (SD_{blank}) / slope$. Specifications are subject to change without notice.

© 2017 All rights reserved. All logos and trademarks are the property of BMG LABTECH.



Made in Germany