

GENERAL

Detection modes

UV-Vis absorbance
Fluorescence intensity
Luminescence

Read methods

Endpoint, kinetic, spectral scanning, well area scanning

Microplate types

Monochromator: 6- to 384-well plates
Imaging: 6-to 1536 well plates

Other labware supported

Microscope slides, Petri and cell culture dishes, cell culture flasks (T25), counting chambers (hemocytometer)
Take3 Micro-Volume Plates

Temperature control

4-Zone incubation to 65 °C with Condensation Control;
 ± 0.2 °C at 37 °C

Shaking

Linear, orbital, double orbital

Software

Gen5™ Microplate Reader and Imager
Software included
Gen5 Image+ and Image Prime software available for full image analysis
Gen5 Secure for 21 CFR Part 11 compliance (option)

IMAGING - WIDEFIELD MICROSCOPE

Imaging mode	Fluorescence, phase contrast, brightfield, high contrast brightfield and color brightfield
Imaging method	Single color, multi-color, montage, time lapse, z-stacking
Image processing	Z-projection, digital phase contrast, stitching
Camera	Sony CMOS, 16-bit grayscale, standard or WFOV
Objective capacity	6-position automated turret for user-replaceable objectives
Objectives available	1.25x, 2.5x (2.25x eff), 2.5x (2.75x eff), 4x, 10x, 20x, 40x, 60x
Phase objectives available	4x, 10x, 20x, 40x
Image filter cube capacity	4 user-replaceable fluorescence cubes plus brightfield channel

Imaging filter cubes available	DAPI, CFP, GFP, YFP, RFP, Texas Red, CY5, CY7, Acridine Orange (ACR OR), CFP-YFP FRET, propidium, Iodide, chlorophyll, phycoerythrin, CY5.5, TagBFP, Alexa568, Ex377 / Em647
Imaging LED cubes available	365 nm, 390 nm, 465 nm, 505 nm, 523 nm, 590 nm, 623 nm, 655 nm, 740 nm
Automated functions	Autofocus, auto LED intensity, auto exposure
Autofocus method	Image-based autofocus User-trained autofocus Laser autofocus (option)
Positional controls	Software control Joystick control (option)
Image collection rate	<p>Image-based autofocus: 96 wells, 1 color (DAPI), 4x, 6 minutes 96 wells, 3 colors, 4x, 12 minutes</p> <p>Laser autofocus: 96 wells, 1 color (DAPI), 4x, <3 minutes 96 wells, 3 colors, 4x, <7 minutes, 30 seconds Burst Mode: 10 fps, single well, single color at <= 50ms integration time</p>
Image Analysis	Gen5 Image+: Image analysis Gen5 Image Prime: Advanced image analysis

Software option

Gen5 Secure: 21 CFR Part 11 compliant features

FLUORESCENCE INTENSITY

Light source

Xenon flash

Detector

PMT for monochromator system
~~PMT for filter system~~

Wavelength selection

Quad monochromators (top/bottom)
~~Filters (top)~~

Wavelength range

Monochromators: 250 - 700 nm (900 nm option)
~~Filters: 200 - 700 nm (850 nm option)~~

Monochromator bandwidth

Variable, from 9 nm to 50 nm in 1 nm increments

Dynamic range

7 decades

Sensitivity

Filters:
Fluorescein 0.25 pM (0.025 fmol/well, 384-well plate)

Quad Monochromator:
Fluorescein 2.5 pM (0.25 fmol/well, 384-well plate) - top
Fluorescein 4 pM (0.4 fmol/well, 384-well plate) - bottom

Reading speed
(kinetic)

96 wells: 11 seconds
384 wells: 22 seconds

LUMINESCENCE

Wavelength range

300 - 700 nm

Dynamic range

>6 decades

Sensitivity

Monos: 20 amol ATP (flash)

ABSORBANCE

Light source

Xenon flash

Detector

Photodiode

Wavelength selection

Monochromator

Wavelength range

230 - 999 nm, 1 nm increment

Monochromator bandwidth

4 nm (230 - 285 nm), 8 nm
(>285 nm)

Dynamic range

0 - 4.0 OD

Resolution

0.0001 OD

Pathlength correction	yes
Monochromator wavelength accuracy	± 2 nm
Monochromator wavelength repeatability	± 0.2 nm
OD accuracy	<1% at 2.0 OD <3% at 3.0 OD
OD linearity	<1% from 0 to 3.0 OD
OD repeatability	<0.5% at 2.0 OD
Stray light	0.03% at 230 nm
Reading speed (kinetic)	96 wells: 11 seconds 384 wells: 22 seconds

PHYSICAL CHARACTERISTICS

Power	250 Watts maximum consumption.
Dimensions	16.4" W x 17.5" H x 20.2" D (41.6 cm x 44.5 cm x 51.4 cm)
Weight	80 lbs (36.3 kg)

REGULATORY

Regulatory

CE and TUV marked. RoHS Compliant. Models for In Vitro Diagnostic use are available.