

SPECIFICATIONS.

Sunrise™ Microplate Absorbance Reader.



The tables below list the specifications# for the Sunrise absorbance reader.

General Specifications.

| Parameters | Characteristics |
|-------------------|--|
| Detection mode | Absorbance |
| Light source | Halogen lamp 20 W |
| Plate type | 96-well plate format |
| Measurement modes | Single or dual wavelength measurements, 3 different measurement modes (normal, accuracy, center) |
| Optical system | 12 measurement channels, 1 reference channel |
| Filters | up to 6 |
| Wavelength range | 340 to 750 nm |

Measurement Specifications.

| Parameters | 4-Filter (Standard, 4F) and 6-Filter (6F) Optics | Tuneable Wavelength (TW, Gradient Filter) |
|--|---|---|
| Measurement time Dual wavelength Single wavelength | 8 seconds 6 seconds | 16 seconds 8 seconds |
| Wavelength range | Standard filter: 340 - 750 nm | Standard filter: 340 - 399 nm & 700 - 750 nm Gradient filter: 400 - 700 nm |
| Measurement range 340 - 399 nm 400 - 750 nm | 0 - 3.000 OD 0 - 4.000 OD | 0 - 3.000 OD 0 - 4.000 OD |
| Resolution | 0.001 OD | 0.001 OD |
| Accuracy | (492 nm) 0.000 - 2.000 OD: < (1.0 % + 0.010 OD) * (492 nm) 2.000 - 3.000 OD: < (1.5 % + 0.010 OD) * | (492 nm) 0.000 - 2.000 OD: < (1.5 % + 0.010 OD) * |
| Precision | (492 nm) 0.000 - 2.000 OD: < (0.5 % + 0.005 OD) * (492 nm) 2.000 - 3.000 OD: < (1.0 % + 0.005 OD) * | (492 nm) 0.000 - 2.500 OD: < (1.0 % + 0.005 OD) * |
| Linearity | (340 - 399 nm) 0.000 - 2.000 OD: < 2 %; R ² >= 0.999 (400 - 750 nm) 0.000 - 2.000 OD: < 1 %; R ² >= 0.999 (400 - 750 nm) 2.000 - 3.000 OD: < 1.5 %; R ² >= 0.999 | (492 nm) 0.000 - 2.500 OD: < 2 %; R ² >= 0.999 |
| Wavelength selection | Standard filter: Narrow band interference filters. Up to four filters can be mounted in a filter carriage. The instrument can use up to eight different filter carriages. | Gradient filter: Special gradient filter any wavelength between 400 and 700 nm in 1 nm steps. The instrument can use up to eight different filter carriages. |
| Filter wavelength accuracy | Central wavelength +/- 2 nm | Central wavelength +/- 2 nm |
| Filter bandwidth at 50% transmission | 10 +/- 2 nm | 450 nm: 8.5 - 16 nm 550 nm: 10 - 15 nm 650 nm: 10 - 18 nm |



Additional Features and Software.

| Parameters | Characteristics |
|---|---|
| Computer interface | Serial RS-232C (remote control)/parallel |
| Shaking | Linear shaking in 4 different modes |
| Software for reader control and data analysis | a) Magellan Standard b) Magellan Tracker (21 CFR Part 11 functionality for GxP labs) |
| Colors | White (standard), red, blue |

Option Temperature Control (TC).

| Parameters | Characteristics |
|-------------------|--|
| Temperature range | Room temperature up to 42°C in increments of 0.1°C |
| Accuracy | Typical +/- 0.2°C (max. +/- 0.5°C) The Sunrise specification of the temperature control unit (typical accuracy +/- 0.2°C) applies if everything (reader, microplate, reagents, samples) has already target temperature. |
| Preheating time | 30 min |

Dimensions and operating conditions.

| Parameters | Characteristics |
|---------------------------------|---|
| Main power input | 100 - 120 & 220 - 240 V, 50/60 Hz (Auto sensing) |
| Outside dimensions | Width: 28.5 cm (11.22 inch) Depth: 34.0 cm (13.39 inch) Height: 14.5 cm (5.71 inch) |
| Weight max. (incl. all options) | 8.6 kg |
| Operating conditions | Ambient temperature: Operation: 15°C to 35°C (59°F to 95°F); Storage: -20°C to 60°C (-4°F to 140°F) Relative humidity: Operation: 20 % to 90 %; Storage: 5 % to 95 % |

Instrument Accessories.

The list below contains the available optional accessories for the Sunrise, which can be ordered additionally:

- Supplementary filters
- QC Pac™ 2 (quality control tool)

Available Product Versions.

Sunrise (GP) #30087502

Sunrise RC/ST EVOLYZER #30087504

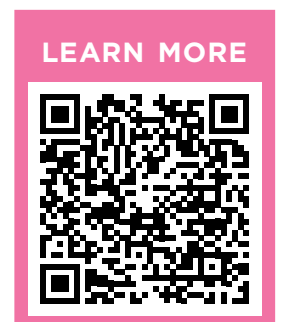
Sunrise RC/6F EVOLYZER #30087505

Sunrise RC/TW EVOLYZER #30087506

Specifications are valid for all instruments of the Sunrise family.

* better than x % of measurement value plus corresponding OD value.

Note: All deviations from the measurement value are meant in positive and negative direction.



For further information and availability in your country please contact your local Tecan sales representative.

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