Specifications for Lightray Products

This table specifies the accuracy of light measurement apps developed by Lightray® Innovation. It applies to all app installations of the products “Photone – Grow Light Meter” and “Lightmeter LM-3000” with a provided default calibration.

Measurement Range	0 – 400000 lux or 0 – 6000 µmol/m²/s
Sensitivity	0.001 lux or 0.00001 µmol/m²/s *
Resolution / Rounding	3 significant digits
Default Calibration	Custom for each device and downloaded on the first app start
Calibration Uncertainty	±5%
Measurement Repeatability	Less than 0.5% **
Non-Linearity	Less than 1% at > 1 lux or 0.01 µmol/m²/s
Measurement Update Frequency	12.5 Hz
Settling Time	5 s
Field of View	180°
Spectral Range	400 – 700 nm
Spectral Mismatch Error	Depends on the light source measured ***
Directional (Cosine) Response	< 1% up to 85° angle of incidence **
Tilt	No error induced from orientation
IP Rating	Depends on the device running the app
Operating Environment	-20° – 40° C; may be submerged under water when following respective guide
Battery Usage	Depends on the device running the app
Operating System Requirements	iOS greater or equal version 15 Android greater or equal version 9
Application Size	< 30 MB

* using Photone on an iPhone 17 — older or lower-end models devices may have less sensitivity

** when used with the Diffuser & Cosine Corrector Accessory

*** app allows selecting the measured light source to minimize the spectral error