Cube XT

PRIMES

- Fiber and disc laser
- Diode laser
- Ultrashort pulse laser
- CO_2 laser

The Cube XT is highly accurate, reliable and portable.
Your power meter of choice for high power lasers and large area beams.

- Caustic
- Raw beam
- Power
- Beam profile
- Pointing stability
- Vector
- Focus shift

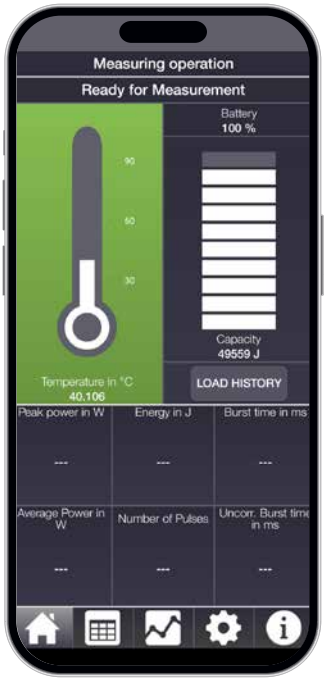
POWER RANGE	1 500 – 150 000 W
ACCURACY	± 3 %
BEAM DIAMETER	up to 120 mm
HIGHLIGHT	Large absorber for very high power and large area beams
INTERFACES	Bluetooth, Micro-USB

Engineered for Precision

Built to meet the demands of tomorrow's laser systems, the Cube XT is capable of measuring massive power levels up to 150 kW. Thanks to its enlarged absorber, it can also handle beam diameters of up to 120 mm—making it the ideal solution for today's high-performance lasers and oversized beams. This makes it the perfect tool to keep pace with the laser market's trend toward ever-higher power outputs—delivering precise and reliable measurements both now and in the future. Designed in the familiar style of the PRIMES Cube family, the Cube XT uses the calorimetric measurement principle and combines simplicity, speed, and reliability with groundbreaking performance. It's ready to use in just moments and fits seamlessly into your workflow—whether in production, service, or R&D environments. Review measuring results instantly on the display or on your computer or mobile device. The Cube XT stores results internally so they can be analyzed later using the Cube App or LaserDiagnosticsSoftware (LDS). The intuitive one-button control also lets you access previous measurements directly on the device display.

Ideal for validating your machine's power output and identifying fluctuations, helping you maintain performance, perform adjustments, and ensure consistent part quality. A must-have for every machine operator and field service professional!

Forget the fine-tuning. Just irradiate the absorber – we'll take care of the accuracy.



With the PRIMES Cube App for Android™, operating any Cube model becomes even easier. Use your smartphone or tablet to wirelessly connect via Bluetooth, control your measurements, and monitor results in real time. The user-friendly interface allows you to preset entire measurement series and send them to the Cube with a single tap. The app displays laser power, pulse duration, and energy per pulse graphically — along with standard deviations for deeper insight. The PRIMES Cube App is available on the Google Play Store.

Prefer using a PC? Simply connect the Cube via micro-USB or Bluetooth and use our advanced LaserDiagnosticsSoftware LDS for extended control options, data analysis, and secure backups.

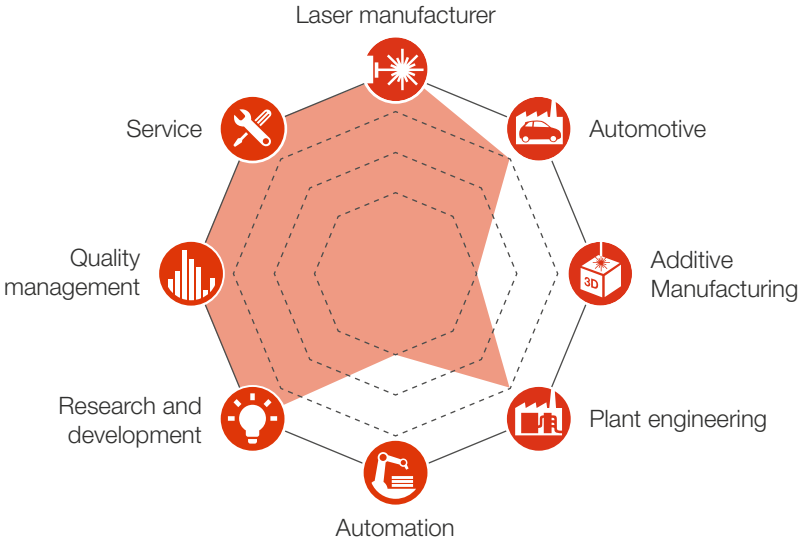
Other PRIMES Cube Models

Cube	standard model up to 12 kW
Cube L	laser power up to 20 kW
Cube L1	operating close to focus at up to 16 kW
Cube M	specifically designed for AM machines

MEASUREMENT PARAMETERS	CUBE XT
Power range	1 500 – 150 000 W [1]
Wavelength range	800 – 1 100 nm
Max. beam diameter on the absorber	120 mm
Max. power density on the absorber (approx. 58 mm underneath the protective window)	< 4 kW/cm²
Irradiation time (depending on laser power)	0.1 – 2.0 s [1]
Min. on/off times (duty cycle) for pulsed lasers (e.g. max. 10 kHz at 50 % duty cycle)	50 µs
Max. laser rise time	< 1% of irradiation time
Energy per measurement	3 000 – 50 000 J
Recommended energy per measurement	6 000 J
Total duration until measurement value output	< 35 s
DEVICE PARAMETERS	
Max. absorber temperature	120 °C
Max. angle of incidence perpendicular to inlet aperture	± 3 °
Max. centered tolerance	± 10 mm
Measurement accuracy	± 3 %
Reproducibility	± 1 %
SUPPLY DATA	
Power supply	Built in lithium-ion battery
Temperature range for charging the lithium-ion battery	0 – 45 °C
COMMUNICATION	
Interfaces	Micro-USB/Bluetooth®
Software (optional)	Cube App and LaserDiagnosticsSoftware (LDS)
DIMENSIONS AND WEIGHT	
Dimensions (L x W x H) (without connectors)	263 x 218 x 85 mm
Weight (approx.)	5 070 g

[1] The stated limit values are to be understood in correlation with the permitted maximum energy ($E = P \cdot t$).

Applications



Your benefit

The PRIMES Cube XT delivers fast, precise and the most reliable laser power measurements for CW and pulsed lasers with extreme power levels up to 150 kW. One ultra-compact device for powers from just a few watts to multiple kilowatts, delivering ± 3 % accuracy, independent of environmental conditions and user interference. No water cooling, quick to use, and fully mobile. View power, pulse duration and energy live, with full control at your fingertips.

- Unrivalled measuring accuracy and reproducibility
- Measure massive laser power levels up to 150 kW
- Fully portable – no cables, no water cooling
- Measure large laser beams up to 120 mm diameter
- Wireless operation via Bluetooth
- Built-in display and internal memory for measurement series

CONCLUSION

Measuring high-power or large-area laser beams has never been easier. The PRIMES Cube XT rises to every challenge the laser industry throws its way—thanks to its exceptional versatility. No matter the power level or application, the Cube XT delivers reliable performance you can count on. When it comes to laser power measurement, the PRIMES Cube XT is your go-to solution.

For further information please visit www.primes.de/cube

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