

2.1.2 Nova II

Versatile Laser Power/Energy Meter

- Compatible with all standard Ophir thermal, BeamTrack, pyroelectric and photodiode sensors
- Large high definition LCD display
- Choice of digital or analog needle display
- 2 position kickstand
- Backlighting and rechargeable battery
- Analog output
- Log every point at up to 4000Hz with pyro sensors
- Non volatile data storage up to 59,400 points
- Laser tuning screen and power and energy log
- USB and RS232 interfaces with StarLab and StarCom PC applications, LabVIEW driver, COM Object Interface and ActiveX control (see pages 123-128)
- Soft keys and menu driven functions with on-line help
- Many software features such as density, min/max, scaling etc.



The Nova II is the most versatile and sophisticated handheld laser power/energy meter on the market. Just plug in one of the many Ophir sensors and you have a whole measurement laboratory at your fingertips. The Nova II has many on-board features such as laser tuning, data logging, graphing, normalize, power or energy density units, attenuation scaling, max and min limits. The Nova II can also display the power or energy with a high resolution simulated analog needle display.

The Nova II can be operated either by battery or from an AC source with the charger plugged in at all times. Its backlight allows illumination of the power meter in low light conditions.

The built-in USB and RS232 interfaces and StarLab and StarCom PC software allow on-line processing of data or processing previously stored data; results are displayed graphically on a PC. To support PC interfacing, LabVIEW drivers, Com Object Interface and ActiveX controls are provided.

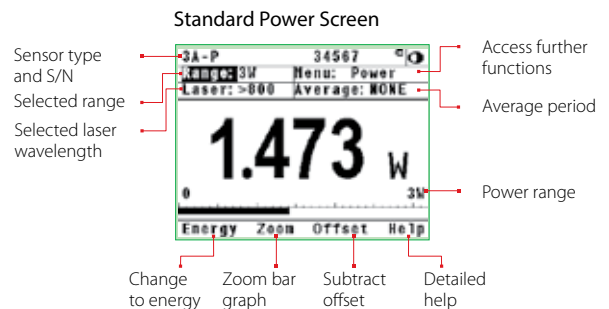


StarLab Software

Selected Screens

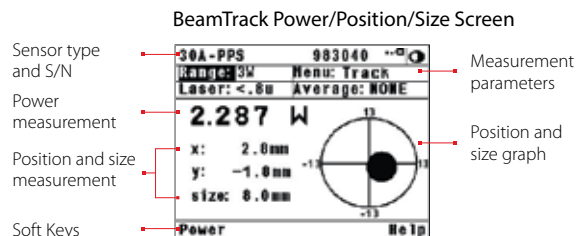
Digital Power Screen

- CW industrial, medical and scientific lasers
- pW to Multi kW with appropriate sensors
- Can average over selected period. Useful for unstable lasers
- Fast response bar graph



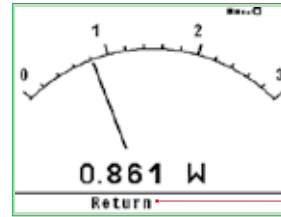
BeamTrack Power/Position/Size Screen

- Monitoring of laser beam size
- Accurate tracking of beam position to fractions of a mm
- Beam position and wander
- All the other features of standard power/energy meters



Analog Power Screen

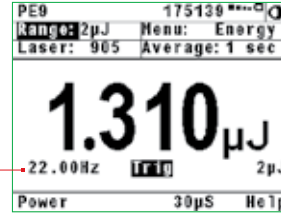
- Perfect for adjusting and maximizing laser power
- Large analog needle with small digital display as well



Choice of smaller display with range menu, laser and average headers

Energy Screen

- Pulsed energy sensors (single or repetitive) and thermal sensors (single shot only)
- Frequency measurement with pulsed energy sensors



Frequency → 22.00Hz → Energy range → 2 μJ

Energy Logging Screen

- Pyroelectric and thermal sensors
- Continuous scroll with up to 100 points on screen
- Full statistics
- Store data onboard and recall



Enlarge variation pulse to pulse

Additional Functions

- Press the menu choice on the main screen and many more options pop up as shown

Choose analog needle screen

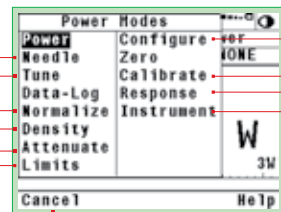
Laser tune screen with continuous graph

Normalize so present reading is 1.00

Enter beam diameter and read in units of W/cm² or J/cm²

Put in factor to read input power with attenuator or beam splitter

Set for alarm if preset min or max limits exceeded



Return to previous menu

Set startup configuration

Adjust sensor calibration

Adjust sensor response time

Adjust power meter parameters

Specifications

Power Meter	High legibility 320 x 240 pixel graphics LCD with switchable electroluminescent backlight. Large 18mm digits. High resolution analog needle also can be chosen.
Features	Many screen features including power with bar graph, energy, average, exposure, frequency, graphs, scaling, special units, and more. Complete on line context sensitive help screens.
Outputs	USB, RS232 and 1, 2, 5 and 10 volt full scale analog output.
Screen Refresh	15 times/sec
Case	Molded high impact plastic with two level kickstand.
Size	Folds to a compact 208mm Lx 117mm Wx 40mm H
Battery	Rechargeable NiMH batteries with typically 18 hours between charges. The charger can be ordered from your local distributor. The charger also functions as an AC adapter.
Data Handling	Data can be viewed on board or transmitted to PC: On Board: Non volatile storage of up to 54000 data points in up to 10 files. Max data logging rate 4000 ^(a) points/s. Transmitted to PC: Data transmission rate of ~500 points/s. RS232 baud rate of 38400.
Sensor Features	Works with Thermopile, BeamTrack, Pyroelectric and Photodiode sensors. Automatic continuous background cancellation with PD300 sensors. Submicrojoule and multikilohertz capability with pulsed energy sensors.
Program Features	Preferred startup configuration can be set by user. User can recalibrate power, energy, response time and zero offset.
Notes: (a)	The above refers to the rate of logging every single point in turbo mode. Above that rate, the instrument will sample points but not log every single point.

Ordering Information

Item	Description	Ophir P/N
Nova II	Nova II universal power meter for standard thermal, BeamTrack, pyroelectric and photodiode sensors	7Z01550
Carrying Case	Carrying case 38x30x11 cm. For power meter and up to three sensors	1J02079
Nova II USB Cable	USB to mini DIN cable (1 unit supplied with Nova II)	7E01205
Nova II RS232 Cable	D9 to mini DIN cable (1 unit supplied with Nova II)	7E01206
Battery Pack	Replacement battery pack for the Nova II	7E14007