

2.1.7 NOVA

Compact and Durable Power / Energy Meter

- Compact and durable
- Compatible with all standard Ophir sensors: thermal, pyroelectric* and photodiode
- Single shot energy measurement with thermal sensors
- Optional RS232 interface with StarCom PC application and LabVIEW driver (see pages 192-198)
- Power and energy logging with graphical display and statistics
- Power averaging
- Easy to use soft keys, menu-driven
- Screen graphics
- Backlight and rechargeable battery
- Analog output
- EMI rejection

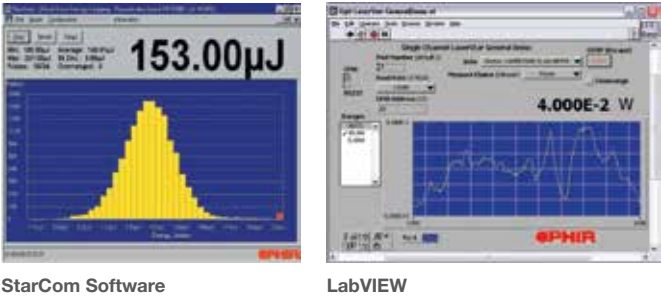
Compatible with the complete range of Ophir thermal (power and energy), pyroelectric and photodiode sensors, Nova is truly versatile: measuring power or energy from pJ and pW to hundreds of Joules and thousands of Watts. With the optional scope adapter, you can connect your pyro sensor to an oscilloscope and see every pulse up to the maximum frequency permitted by the sensor.

Smart connector sensors automatically configure and calibrate Nova when plugged in. Soft keys guide you through the screen graphics. Finished working? Your configuration can be saved for future use.

Nova's autoranging tune screen displays laser power graphically and displays maximum power. Zoom and time scale can be adjusted by user.



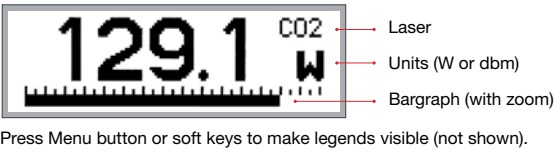
The optional RS232 interface and StarCom PC software allow on-line processing of data or processing previously stored data; results are displayed graphically on a PC. To support PC interfacing, LabVIEW drivers are provided.



Selected Screens

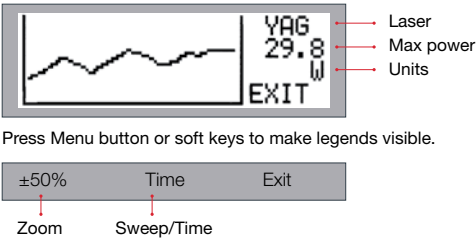
Digital Power Screen

- CW industrial, medical and scientific lasers
- pW to multi kW with appropriate sensors



Laser Tuning Screen or Power Log Screen (not shown)

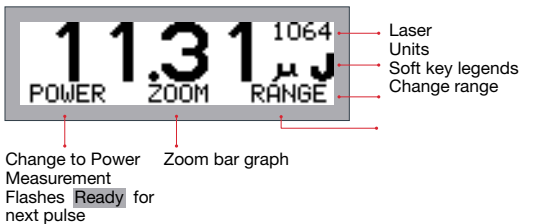
- Maximizing laser power
- User selected time period and zoom



* PE-C series of pyroelectric sensors are compatible with Nova, when used with an additional adapter (P/N 7Z08272) – see page 138.

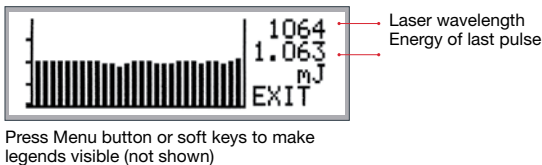
Energy Measurement Screen

- Pyroelectric and thermopile sensors-single pulse
- Pyroelectric frequency measurement (not shown)



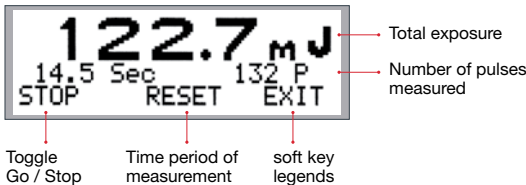
Energy Log Screen

- Pyroelectric sensors
- Thermopile sensors-successive single pulses
- Continuous scroll
- Energy statistics



Pyroelectric Exposure Screen

- Sum or average energies over user selected time period / number of pulses
- Medicine, photolithography



Average Screen

- Thermopile, photodiode and pyroelectric sensors (Does not operate with PE-C series of pyroelectric sensors)
- Periodic (1/3 sec to 30 sec) or continuous (10 sec to 1 hour) average for fast-changing or slow-changing laser



Specifications

| | |
|---|--|
| Power Meter | High legibility 32 x 122 pixel graphics supertwist LCD with switchable electroluminescent backlight. Large 12mm digits. |
| Features | Many screen features: including power with bar graph, energy, average, exposure, frequency, graphs, and more. |
| Outputs | RS232 and analog output 1V f.s. (optional) |
| Screen Refresh | 15 times / sec. |
| Case | Molded high-impact plastic with kickstand and EMI conductive shielding, to allow use even in proximity to pulsed lasers. |
| Size | Very compact: 205mm L x 95mm W x 39mm H. |
| Battery | Rechargeable 12 volts. 22 hours use between charges. The charger can be ordered from your local distributor. The charger also functions as AC adapter. |
| Data Handling | Data can be viewed on board or transmitted to PC: On Board: Max data logging rate >10 points/s Transmitted to PC: Data transmission rate of ~50 points/s. RS232 baud rate of 19200 |
| Sensor features | Works with standard Thermal ^(a) , Pyroelectric ^(b) and Photodiode ^(c) sensors. |
| Program features | Preferred startup configuration can be set by user. User can recalibrate power or energy. Response time. Zero offset. |
| Compliance | CE, UKCA, China RoHS |
| Note: (a) When operating with BeamTrack sensors, measures Power & Energy only | |
| Note: (b) In order to operate with the new Pyroelectric (PE-C series) sensors, Nova needs an adapter (see ordering information below) | |
| Note: (c) Not including PD300RM sensors | |

Ordering Information

| Item | Description | Ophir P/N |
|---|---|------------------------|
| Nova | Nova power meter for standard thermal, pyroelectric and photodiode sensors | 7Z01500 |
| Nova PE-C Adapter | Adapter to allow Nova to operate with PE-C series pyroelectric sensors. Plugs between Nova D15 socket and PE-C D15 plug | 7Z08272 |
| Carrying Case | Carrying case 38x30x11cm. For display and up to three sensors | 1J02079 |
| Nova RS232 assemblies - allow Nova power meter to communicate with PC and be controlled by PC | | |
| Nova RS232 Assembly | RS232 adapter with standard 2 meter cable (including software) (see page 183) | 7Y78105 ^(a) |
| Nova RS232 Assembly | RS232 adapter with 5 meter cable (including software) | 7Y71052 ^(b) |
| Nova RS232 Assembly | RS232 adapter with 8 meter cable (including software) | 7Y71051 ^(c) |
| Battery Pack | Replacement battery pack for Nova | 7E14005A |
| N Polarity Power Supply/Charger | Power Supply/Charger AC/DC 12V 2A N-2.1x5.5 (1 unit supplied with Nova) | 7E05029 |
| Standard Analog Output Connector | 2.5mm mono jack (1 unit supplied with Nova) | 7E02008 |
| Note: (a) P/N 7Y78105 replaces P/N 78105 | | |
| Note: (b) P/N 7Y71052 replaces P/N 781052 | | |
| Note: (c) P/N 7Y71051 replaces P/N 781051 | | |