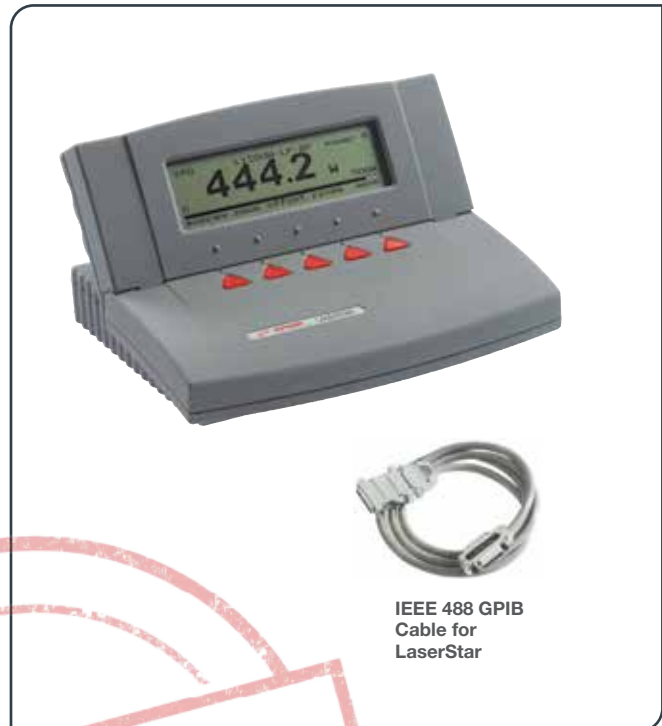


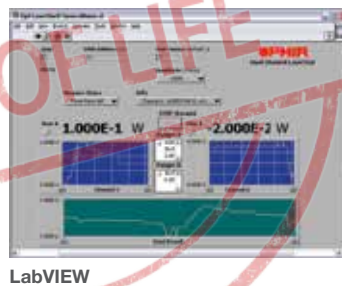
## 2.1.6 LaserStar

### Versatile Laser Power/Energy Meter

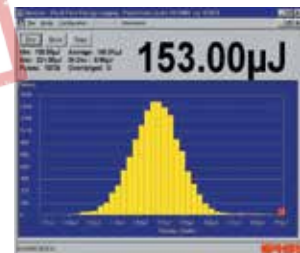
- Two models available: dual and single channel
- Single channel model can be upgraded to dual channel
- Compatible with all standard Ophir thermopile, pyroelectric, photodiode and RP sensors
- Large LCD display
- Backlighting and rechargeable battery
- Screen graphics and statistics (std dev, min, max)
- Analog output
- Built-in RS232 interface
- Log every data point at >1500Hz with pyroelectric sensors
- Non-volatile data storage up to 59,400 points
- Laser tuning screen and power log
- Audio sound for laser tuning and low battery
- RS232 interface with StarCom PC application software and LabVIEW driver (see pages 194-200)
- GPIB option (IEEE488.1)
- NIST traceable
- CE marked
- Soft keys, menu-driven



The LaserStar's dual channel capabilities enable the user to simply plug in any of Ophir's thermal, pyroelectric or photodiode sensors and measure the two channels independently, or a comparison between the two channels. Up to 10 data files (54,000 points total) can be stored for onboard review or downloading to computer even if LaserStar has been switched off. The built-in 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.



LabVIEW

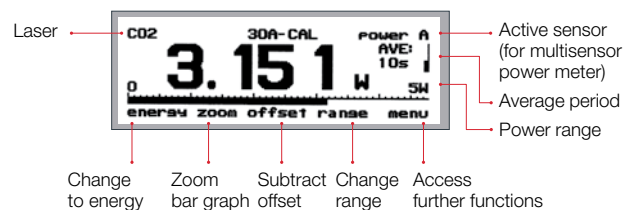


StarCom Software

## Selected Screens

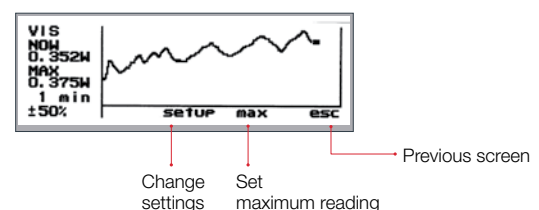
### Digital Power Screen

- 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



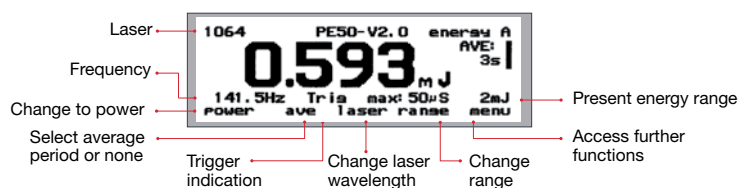
### Laser Tuning Screen or Power Log Screen (not shown)

- Maximizing laser power
- User selected time period and zoom
- Option of audio tune tone for maximizing laser power



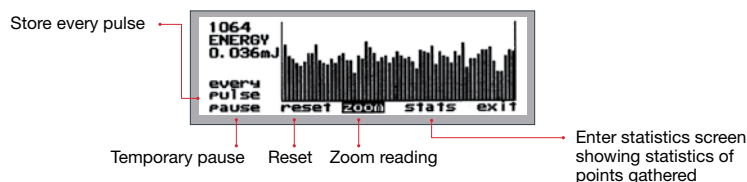
## Energy Measurement Screen

- Pyroelectric and thermal sensors - single pulse
- Pyroelectric frequency measurement



## Energy Log Screen

- Pulsed energy sensors
- Thermal sensors - successive single pulses
- Continuous scroll
- Energy statistics



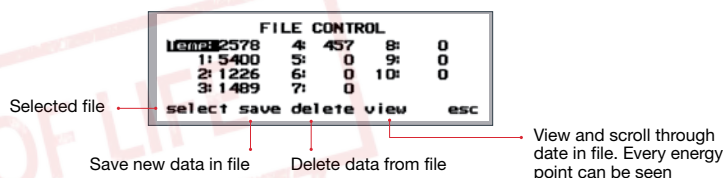
## Ratio Screen

- Two independent sensors
- Measure ratio, sum, difference
- Normalize one sensor to the other



## Data Storage and Transmission

- Non-volatile storage of power and energy logging data
- Store in up to 10 files and transmit to PC
- PC using StarCom Windows program provided



## Specifications

|                    |                                                                                                                                                                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Meter        | High legibility 64 x 240 pixel graphics supertwist LCD with switchable, electroluminescent backlight which operates from charger or battery. Large 17mm digits. Screen refresh 15Hz.                                                                              |
| Features           | Many screen features including: power with bargraph, energy, average, exposure, frequency, graphs and more.                                                                                                                                                       |
| Outputs            | RS232 and analog output 1V f.s.                                                                                                                                                                                                                                   |
| Screen Refresh     | 15 times/sec                                                                                                                                                                                                                                                      |
| Case               | Molded high-impact plastic with swivel display and EMI conductive shielding, to allow use even in proximity to pulsed lasers.                                                                                                                                     |
| Size               | Folds to a compact 194mm L x 228mm W x 57mm H.                                                                                                                                                                                                                    |
| Battery            | Rechargeable 18 hours between charges. The charger can be ordered from your local distributor. The charger also functions as AC adapter.                                                                                                                          |
| Multisensor Option | Two sensors can be connected and measure independently, or with a mathematical comparison. Also the ratio, sum or difference of the two can be displayed.                                                                                                         |
| Data Handling      | Data can be viewed on board or transmitted to PC:<br>On Board: Non-volatile storage of up to 54,000 data points in up to 10 files. Max data logging rate >1500 points/s.<br>Transmitted to PC: Data transmission rate of ~500 points/s. RS232 baud rate of 38400. |
| Sensor Features    | Works with standard Thermal <sup>(a)</sup> , Pyroelectric <sup>(b)</sup> , Photodiode <sup>(c)</sup> and RP sensors.                                                                                                                                              |
| Program Features   | Preferred startup configuration can be set by user. User can recalibrate power, energy, response time and zero offset.                                                                                                                                            |
| Compliance         | CE, UKCA, China RoHS                                                                                                                                                                                                                                              |

Note: (a) When operating with BeamTrack sensors, measures Power & Energy only

Note: (b) Limited functions for new Pyroelectric (PE-C series) sensors

Note: (c) Not including PD300RM sensors

## Ordering Information

| Item                              | Description                                                                                         | Ophir P/N              |
|-----------------------------------|-----------------------------------------------------------------------------------------------------|------------------------|
| LaserStar                         | LaserStar single channel universal power meter for thermal, pyroelectric, photodiode and RP sensors | 7Z01600                |
| LaserStar 2 Channel               | LaserStar with dual channel capability including ratio and difference measurement                   | 7Z01601                |
| RS232 Cable for LaserStar         | Cable RS232 D9 - D25 (1 unit supplied with LaserStar)                                               | 7E01121                |
| LaserStar Battery Pack            | LaserStar NiMH Battery update Kit                                                                   | 7Z14006A               |
| LaserStar IEEE Option             | IEEE GPIB adapter for LaserStar (see page 185)                                                      | 7Y78300 <sup>(a)</sup> |
| N Polarity Power Supply/Charger   | Power Supply/Charger AC/DC 12V 2A N-2.1x5.5 (1 unit supplied with LaserStar)                        | 7E05029                |
| LaserStar Analog Output Connector | Analog Output plug for LaserStar (1 unit supplied with LaserStar)                                   | 7Z11004                |

Note: (a) P/N 7Y78300 replaces P/N 78300